

George J. Sheridan, Jr.

*The Social and Economic Foundations of Association Among the Silk Weavers of Lyons 1852-1870.* 2 vols. Dissertation, Yale University (1978)

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George J. Sheridan, Jr.  
August 26, 2008

The Social and Economic Foundations of Association

Among the Silk Weavers of Lyons, 1852 - 1870

A Dissertation

Presented to the Faculty of the Graduate School

of

Yale University

in Candidacy for the Degree of

Doctor of Philosophy

by

George Joseph Sheridan, Jr.

May 1978

To the founders and members of the  
Eastern Georgia Farmers' Cooperative,  
and to the memory of  
Pierre Léon

Key to Abbreviations

ACCL	Archives de la Chambre de Commerce de Lyon
ADI	Archives Départementales de l'Isère
ADR	Archives Départementales du Rhône
AML	Archives Municipales de Lyon
AMTL	Archives du Musée des Tissus de Lyon
AN	Archives Nationales
ATCL	Archives du Tribunal du Commerce de Lyon
BCCL	Bibliothèque de la Chambre de Commerce de Lyon
BML	Bibliothèque Municipale de Lyon
BMTL	Bibliothèque du Musée des Tissus de Lyon
BN	Bibliothèque Nationale

## ACKNOWLEDGMENTS

A book, and even moreso a dissertation, is never a lonesome product, even when the task of producing it is lonely. Many minds, many untapped energies and skills, and especially many living persons concur in its achèvement -- an appropriate French expression for "bringing to completion." This dissertation is no exception. In this brief reminder of the cooperative enterprise required to produce these volumes, I wish to express my gratitude to the many people who advised, supported, facilitated and followed this endeavor to its conclusion.

My two advisors, Robert R. Palmer in History and William N. Parker in Economics, were with this project nearly from the beginning and remained with it, ever supportive, ever conscientious, ever confident (I think) of its prospects, despite my meanderings in the archives of Lyons and in the cobwebs of an ever-demanding mind. Professor Parker encouraged my pursuit of the study of economy history 'at an early age' in my graduate career, he refrained from discouraging my early ambition to 'merge' the history of economies with the history of ideas, and he allowed me the freedom to test that ambition by exploring economy and association among the silk weavers of Lyons. Surely he must have wondered at times whither these explorations were leading and whether I had not lost my way in the underbrush of Lyonnaiseries. But he retained his ultimate confidence in my undertaking, responded with vigor to the more fertile ideas as they emerged and provoked me to define more clearly and to conceptualize more economically as these became possible. For his

confidence, his responsiveness and his provocation I am deeply grateful, as I am for his penetrating and scrupulously attentive reading of the initial draft of the dissertation.

Professor Palmer arrived later in my graduate career and agreed to "serve the function" of advising a dissertation in history and economics from the side of history. From that modest commitment more than five years ago until his recent and much regretted retirement, he has indeed served the function 'honorably' and 'expertly.' Professor Palmer represented for me the bedrock of sound judgment, without which no edifice of historical interpretation could abide for long, regardless of its documentary trim. His conscientious reading of my draft told me just when I was 'on' and just when I was 'off.' Despite his modest protests of ignorance of economic science, his comments on economic matters, as on matters social and statistical, were frequently illuminating. His encouragement throughout the research and writing was a sign for me to continue with confidence. I am most appreciative of his firm direction, of his many helpful comments and of his continuing support.

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During my stay in Lyons, the Centre d'histoire économique et sociale de la région lyonnaise (Université Lyon II) was most hospitable and helpful with material aid as well as with guidance in my research. Maurice Garden, director of the Centre, welcomed me to its monthly seminars, introduced me to scholars in my field and generously offered me the services of the Centre for some of the practical needs of research, especially those concerned with quantification. I am grateful to Monsieur Garden for this assistance and also for his invitation to speak to the Centre on the subject of my research on June 7, 1975. Yves Lequin, also of the Centre, became both mentor and comrade-in-arms in the long task of uncovering the sociological roots of labor movements in Lyons -- a task in which he was already eminently accomplished. His continuing interest in my work and his direction in seeking and finding sources made that task more lively and sometimes easier. I had the privilege of attending the defense of his fine thèse de doctorat and of reading the thèse soon thereafter, for which I also thank Monsieur Lequin.

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Many individuals associated with archives and libraries in Lyons made my research in the sources both possible and pleasant. I thank in particular Robert Lacour of the Archives Départementales du Rhône, Henri Ours of the Archives Municipales de Lyon and the staff of the Bibliothèque du Musée des Tissus de Lyon -- Monsieur Tuchscherer, Conservateur, Madame Emery, Librarian, and Monsieur Vial. My appreciation extends most warmly to the personnel of these archives and also to the personnel of the Archives and Bibliothèque de la Chambre de Commerce de Lyon and of the Archives du Progrès. Members of the staffs of the Archives Départementales de l'Isère and of the Musée Dauphinois were very receptive and helpful in the early stages of research, and to them as well I offer my gratitude.

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Few tasks of the kind undertaken here can reach completion without the devotion, encouragement and 'helping hand' of family and friends. My deepest personal gratitude is reserved for my parents, George and Katherine, for my brother Kevin and for my grandmother Anna. In this undertaking, as in all others in the past, their support and confidence was firm and persistent. During my stay in France, Louis Godinot and family gave me une autre famille while my own was miles away. For their warm reception on the day of my arrival and throughout the year and for their constant interest in my thèse I am very grateful. Don Blood remained interested in my work and in this project specifically, in a personal way, from the beginning of my graduate career. And the founders and members of the Eastern Georgia Farmers' Cooperative, with whom I worked closely during my year of VISTA service in 1969 - 1970, inspired my interest in the cooperative movement, from which the topic of this study was born. To them it is therefore dedicated in part. Other friends, most of whom must go unmentioned, provided inspiration or practical support out of which the building of this edifice became possible. Marion Boutelle and Arthur Haase deserve special mention for their generous practical assistance in facilitating my many

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George Sheridan Sr. typed most of the complicated tables in the text with diligence and care, for which his son offers a warm thanks, and Marion Boutelle aided very much in the final proofing and assembling of the text. Florence Thomas undertook the herculean task of typing most of these volumes and accomplished this task with dexterity, with elegance and with immense patience. Florence and Marion will be the last to see this dissertation in its raw, unbound form, and I thank them for seeing it to its very welcome end.

Eugene, Oregon

October 4, 1977

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## INTRODUCTION

Francois Fournier, master-weaver of silk cloths in Lyons, was well-known in the Croix-Rousse weaving district in 1866. Fournier was president of the Eighth Mutual Aid Society, a position which he had held since 1860 after having served five years as its treasurer.<sup>1</sup> In 1876, this society included among its members Joseph Benoît, a former deputy of the department of the Rhône to the National Assembly in 1848, and Hippolyte Commissaire, kinsman and political crony of the socialist veteran of 1848, Sebastien Commissaire.<sup>2</sup> Fournier apparently did not share their political opinions, for the police chief who recommended his appointment to the presidency of the organization in 1860 and again in 1865 noted not only his abstention from all political discussion but also his devotion "to the party or order."<sup>3</sup> In fact, Fournier, as one of the artisan notables of his quarter, had served from 1862 to 1865 on a local committee to distribute funds donated by the imperial family

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<sup>1</sup>Reports to Prefect of Rhône on candidates for president of the 8ème Société de secours mutuels de Lyon, 1860 and September 29, 1865, ADR, 5X-1954-Sociétés de secours mutuels, 1 à 10, No. 8.

<sup>2</sup>List of Members of the 8ème Société de secours mutuels de Lyon, 1876, ACCL, Petites sociétés de secours mutuels Carton 4: Subventions accordées, demandes de subventions, Documents divers (1827, 1854, 1865 à 1882); Joseph Benoît, Confessions d'un prolétaire (Lyon, 1871), ed. Maurice Moissonnier (Paris: Editions sociales, 1968), pp. 123, 295; Jean Gaumont, Histoire générale de la coopération en France (Paris: Fédération nationale des coopératives de consommation, 1923-24), I, 577.

<sup>3</sup>Reports to Prefect on candidates for president of 8ème Société, 1860 and September 29, 1865, ADR, 5X-1954-Sociétés de secours mutuels, No. 8.

among silk workers.<sup>4</sup>

Jean-Antoine Burlat was also a member and officer of the Eighth Mutual Aid Society. Probably more weavers in the city knew him than Fournier, because of his position on the Conseil des Prud'hommes, the local industrial court to which he had been elected as a delegate of the silk weavers in 1865.<sup>5</sup> Like Benoît and Commissaire, Burlat also "professe[d] secretly radical principles" in political affairs but "knowing how to bend to circumstances . . . [hid] his political and social tendencies to give his ambition a career."<sup>6</sup> Burlat was an activist of the cooperative movement, which generally steered away from any kind of political involvement. The producers' cooperative, the Association of Weavers, which he had helped to found,<sup>7</sup> had tried to halt the decline of the urban silk industry by giving weavers control of their own sources of raw material and conditions of work. Francois Fournier was also a cooperative leader in his neighborhood but offered his services to cooperative consumption rather than to cooperative production. He was one of the founders of the Provident Social Bread Shop in 1864.<sup>8</sup> This

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<sup>4</sup>Members of Committee of the Fourth Arrondissement, 1862-1865, ADR, 4M - Police administrative - Associations, affaires sociales 2, Société du Prince Imperial.

<sup>5</sup>Report of police commissioner to Monsieur le Sénateur (Prefect of Rhône) and to Monsieur le Procureur Impérial concerning elections to Conseil des Prud'hommes of Lyons, December 6 and 10, 1865, AML, F - Prud'hommes - Elections (1806 à 1871).

<sup>6</sup>Faure, La coopération lyonnaise jugée par l'ex-police impériale (Lyon, 1870), p. 3, ADR, 10M2-1 Associations des tisseurs.

<sup>7</sup>Ibid.

<sup>8</sup>Act of Incorporation, Boulangerie Sociale de Prévoyance, 1864, ADR, 9U - Sociétés: Constitutions et modifications, September 30, 1864.

consumers' association baked fresh bread for its five hundred members in 1867 and distributed the bread to them for prices slightly lower than those of private bread bakers.<sup>9</sup> Fournier also served as an administrator of the Emancipation of Consumers in 1866. This cooperative grocery provided its members food at "the best conditions of price and of quality" and aimed "to improve as much as possible the position" of these members by distributing to them profits earned on sales according to the amount of groceries they purchased.<sup>10</sup>

In 1867 the Master-Weavers' Club, the Cercle des chefs d'atelier, counted Fournier, already active as a leader in mutual aid and cooperative associations, among its most distinguished members.<sup>11</sup> This rather old organization of artisan notables traced its origins to the mutuelliste days of 1832. Most weavers old enough to remember those days recalled them, with a mixture of pride and resentment, as the golden age of the canuts (the popular term for silk weaver). Weavers then showed their employers, the merchant manufacturers, that they would not let themselves be 'exploited' by them, when the government refused the weavers its traditional protection from the free market. In November 1831, the weavers assumed control of the municipal government for three days, after

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<sup>9</sup> Report of Commissaire spécial de police Delcourt to Prefect of Rhône, January 28, 1867, ADR, 4M - Police administrative - Associations, coops 12, Boulangerie sociale de prévoyance.

<sup>10</sup> Act of incorporation and Article 1, Statuts, Emancipation des consommateurs, 1866, ADR, 9U - Sociétés: Constitutions et modifications, September 12, 1866.

<sup>11</sup> List of members of the Cercle des chefs d'atelier de la ville de Lyon, March 1867, AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870).

several merchant-manufacturers had refused to respect a tarif of minimum piece-rates negotiated by their representatives and decreed by the Prefect. Again in February 1834, the weavers' Society of Mutual Duty demonstrated by a week-long work stoppage of 20,000 looms that the weavers could and would demand enforcement of a 'just' level of piece-rates in all categories of their trade when the government left them to face the merchant-manufacturers alone.<sup>12</sup>

Although the Master-Weavers' Club (Cercle des chefs d'atelier) had been a separate organization from the Society of Mutual Duty (mutuellistes), it had the similar intention of "preventing arbitrary acts of the merchant-manufacturers, by employing the force of inertia. . . ."<sup>13</sup> In 1842 the newly authorized Club took upon itself the task of representing before the Prud'hommes the grievances of master-weavers in general on the question of wastes of silk thread incurred in weaving.<sup>14</sup> By the 1850's, however, the Club was apparently more concerned with problems of subordinate workers than with the defense of master-weavers' interests against the interests of merchants. In 1867, the Club continued to discuss occupational matters, but its earlier aggressiveness in conflicts between

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<sup>12</sup>République Française, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes, Office du Travail, Les associations professionnelles ouvrières (Paris: Imprimerie Nationale, 1901), II, 256; Robert J. Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge, Massachusetts: Harvard University Press, 1974), chapters 2 and 5.

<sup>13</sup>République Française, Les associations professionnelles ouvrières, II, 256-257.

<sup>14</sup>Dufour et al. to editor of Echo de la Fabrique de 1841, July 27, 1842, and response of editor, August 31, 1842, Echo de la Fabrique de 1841, July 31 and August 31, 1842.

masters and merchants was abated in favor of a simple guardianship of a certain artisanal notability.<sup>15</sup>

Jean-Antoine Burlat, though a prominent master-weaver in Lyons in 1867, did not belong to the Master-Weavers' Club. Unlike most of the members of this professional interest group, Burlat became very active in the 'resistance' movement of master and journeymen weavers in 1869 and 1870. This early trade-union movement inherited the program of the Society of Mutual Duty of 1831-1834. It aimed to raise piece-rates to acceptable levels by collective negotiation with the merchant-manufacturers and to enforce these levels by threatening strikes. In a general meeting of plain-cloth weavers on November 7, 1869, to discuss wage increases, Burlat proposed the formation of a permanent chambre syndicale of weavers and merchant-manufacturers to enforce the increases agreed upon by both groups.<sup>16</sup> A few months later, weavers of nearly all specialities of silk cloth in Lyons adopted the statutes of the Société civile de prévoyance et de renseignements pour le travail des tisseurs de la

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<sup>15</sup>This is my own conclusion based on several different 'readings' of this association, both literary and statistical. Among the literary sources are AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870), Cercle des chefs d'atelier, especially the report of police agent Pivolat on May 31, 1867. The major statistical source is a study of the number and type of looms of the members of the Master Weavers' Club living in the Croix-Rousse in 1866. The study is based on the census data for this district in 1866, in ADR, 6M - Dénombrement, 1866, Lyon 4ème Arrondissement, XVI-XVII. The study demonstrates an exceptionally large percentage of members with several fancy-cloth looms, as compared with an independent sample for the eastern portion of the district as a whole. See George J. Sheridan, Jr., "Idéologies et structures sociales dans les mouvements d'association ouvrière à Lyon, 1848 à 1877," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, no. 2, pp. 42-45.

<sup>16</sup>Report of Special Police Commissioner to Prefect of Rhône, November 8, 1869, AML, I2 - 47(B), Corporations: ouvriers en soie (1819 à 1870).

fabrique lyonnaise (SCPR). This first general resistance society in the silk industry since the days of mutuellisme developed out of Burlat's proposed chambre syndicale, modified to include only weavers.

In 1866, J.-A. Burlat and François Fournier both wove brocaded fancy fabrics on their two or three Jacquard looms, even though the demand for these luxury cloths was at its lowest ebb ever.<sup>17</sup> Most of their neighbors wove the simpler plain cloths instead, for the market for these was more stable, even though executing them required much less skill and therefore commanded a lower wage. The prominence of these two master-weavers in the world of workers' associations thus matched their singularity in the world of silk manufacture -- a singularity which gave them status as skilled artisans but also a relatively insecure economic position. The question naturally arises whether this apparent relationship between prominence in association and singularity in manufacture was merely coincidental or suggested a particular economic and social basis for these movements of association,

Both Burlat and Fournier also employed outside labor in their households to operate at least one of their looms. But their relationship to these outsiders was different in each case. Burlat had a contractual relationship with his worker, that is, one of employer to hired employee. This employee was a journeyman weaver who operated one of the two active looms in the household, for no one lived with Burlat except his wife, and women usually did not weave the fancy cloths.<sup>18</sup> This journeyman

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<sup>17</sup> ADR, 6M - Dénombrement, 1866, Lyon, 4<sup>e</sup>me Arrondissement, XVI-XVII.

<sup>18</sup> Jules Simon remarked that women who wove fancy silks earned less than men, not because they were paid less, but because they wove these silks more slowly than men. Their inferior productivity was, according to Simon, the result of "nature, which refused to them the force equal

lived in a garret or in an apartment with companions or with his own family. When the journeyman finished his piece, Burlat gave him one-half the wage paid for the piece by the merchant-manufacturer, Burlat kept the rest for shop and mounting expenses and for his own profit, if the former expenses did not absorb all of his portion.

François Fournier also had some of his weaving done by outsiders in 1866. But unlike the journeyman in Burlat's shop, at least one of these ate and slept with the Fourniers in addition to working at their side during the day. This was the seventeen-year-old boy Jules Convert, whom the census-taker noted residing in the Fournier household in 1866. Convert was apparently not related to the family, since his surname differed from the maiden name of Fournier's wife (Roux) as well as from the name 'Fournier' itself.<sup>19</sup> He was probably an apprentice living with the family for four years and learning how to weave fancy cloths under Fournier's direction. Whenever the young Jules worked more than a third of the journeyman's average 'day' (that is, day's work), he received a wage equal to one-half the piece rate for that extra work, just like any other hired weaver. Apart from this, François Fournier treated Jules' contributions to shop earnings and the expenses for his upkeep like those of his own two children living at home. The earnings belonged entirely to Fournier himself, and the expenses formed part of the home

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to our own." Fancy silks required greater physical force than plain silks. [See Jules Simon, *L'ouvrière* (Paris: L. Hachette, 1861), pp. 32-33.] Armand Audiganne observed that women wove nearly all the plain silks, since these required less brute strength. [A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon en 1852," *Revue des deux mondes*, 22e année - nouvelle période, XV (August 1, 1852), 513.] Presumably women wove the fancy silks only exceptionally.

<sup>19</sup>ADR, 6M - Dénombrement, 1866, Lyon, 4ème Arrondissement, XVII.

consumption paid out of the profits earned in the shop, Fournier's relationship to this young non-relative worker, in other words, was tutelar and not merely contractual.

Recalling Burlat's and Fournier's different patterns of involvement in association, subsequent to their common membership in the Mutual Aid Society No. 8, we might again pose the question of a possible relation between these patterns of association and the two masters' different social relationships with outsiders working in their households. Was the master-apprentice relation of Fournier's household, for example, a more traditional mode of labor intercourse, as compared with the 'modern' hired-labor contract illustrated by Burlat's relation with his journeyman? And if so, did Fournier's traditional social economy, against Burlat's modern social economy, somehow 'explain' the former's membership in the socially conservative Master-Weavers' Club and his preference for consumers' cooperation, against the latter's involvement in industrial resistance and in cooperative production?

These questions, and the earlier question of a possible relation between fancy-cloth weaving and association leadership, are among those which this study will undertake more systematically and in greater detail. In particular, this study will examine the 'structures' of economic and social solidarity among the weavers in their daily lives, and changes in these structures preceding or accompanying movements of socially-oriented, voluntary association. Its purpose is a better understanding of the 'social meaning' of these movements, as expressed in the aims, activities and patterns of organization of weavers' associations. In this way, by considering movements of association as

"carriers" of social ideology,<sup>20</sup> the study will contribute to the program outlined by Karl Mannheim as that of the sociology of knowledge; namely, the comprehension of "the concrete interplay of the differentiated forms of social existence with the corresponding differentiations" of ideological and utopian perceptions, feelings and values,<sup>21</sup>

The study begins with a discussion of the society and economy of silk weaving in their static, or 'structural,' state. This forms the subject of the first chapter, "The World of the Silk Weavers." Subsequent chapters then analyze economic and social change in the weavers' world, to understand the dynamic forces in their lives during the nineteenth century, especially from 1852 to 1870. One chapter focuses on the changing economy of the silk industry from 1815 to 1880. Succeeding chapters then explore the various social effects of this economic change during the Second Empire (1852-1870) -- the period of voluntary association of special concern. One of these chapters focuses on social change from 1852 to 1859, when workers' associations were limited largely to the mutual aid movement. The following chapters concern the 'crisis' decade of the 1860's, when several different forms of voluntary association emerged amidst a revival of the workers' movement. Various relationships between the movements of association and the

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<sup>20</sup>The analogy suggested here is that between associations, regarded as "carriers" of social ideology, and social groups -- such as peasants, nobles, bourgeois, or urban craftsmen -- described as "carriers" of religion and ethical mores in Max Weber's "Sociology of Religion." See, for example, Max Weber, Economy and Society, eds, Guenther Roth and Claus Wittich (New York: Bedminster Press, 1968), II, 468, 472,

<sup>21</sup>Karl Mannheim, Ideology and Utopia: An Introduction to the Sociology of Knowledge (New York: Harcourt, Brace and World, 1936), p. 200.

economic and social conditions of the silk weavers are pursued throughout the discussion of the latter and then given more concentrated attention in the concluding chapter. Since this study is only an initial attempt to relate the ideologies of association to economic and social change, these relationships are intended to be no more than suggestions for further investigation and reflection.

### The Categories of Social Analysis

The economic and social life of the silk weavers will be examined from five perspectives -- those of craft, household, class, neighborhood and polis (city, nation) -- and from the point of view of the master silk-weaver. Each of these five dimensions of the master-weavers' economic and social experience -- or 'collective solidarities,' as I will call them -- contributed to the formation of a social identity to which their voluntary associations appealed in organizational aims, activities and patterns of membership. Some aspects of this social identity were relatively permanent, based upon the solidarities of the weavers' experience considered in their static, or 'structural,' form. Other aspects derived from changes in the weavers' collective solidarities -- from 'dynamic' transformations of these ideal-typical structures. These changes often influenced the purpose and scope of voluntary association among the silk weavers of Lyons, especially during the decade 1860-1870.

The structural aspects of the weavers' social identity focused on a particular notion of the craft in which they worked. This was a luxury craft requiring the talents and training of artisan labor and embodied in the elegant silk product of the hand loom. The 'notability,' or distinction, of the craft was represented in a hierarchy of fabrics of

varying degrees of complexity of design, produced with techniques and labor correspondingly varied in sophistication and skill. At the summit of this hierarchy were the fancy cloths (étoffes façonnées), and the weavers trained to manufacture these cloths represented, more than any others, the 'ideal-type' of master silk weaver of Lyons. They were, in effect, the living symbol of the solidarity of all weavers in a trade of special distinction and renown.

These weavers wove silk cloths in a household environment that associated with this 'notable' craft solidarity a notion of the work process in which autonomy, 'entrepreneurship,' and familial ties were preserved and strengthened. The dependence of this household on the orders and piece-rates of a merchant-manufacturer, however, weakened this association and, with it, the identification of household and craft solidarities. Yet the sharing of such dependent status by all master-weavers of Lyons fostered the emergence of another solidarity, that of class, which distinguished the weavers as a whole from the employers in their own trade. A fourth solidarity, that of neighborhood, intersected and divided, in turn, the solidarity of class. Neighborhood distinguished weavers among themselves by the different traditions of settlement in their respective residential quarters, and also by the different extent of contact in these quarters between themselves and workers in other trades and conditions of employment. Craft, household, class and neighborhood were, finally, absorbed into a fifth solidarity, that of the polis, both urban and national. The polis gave to the weavers their identity as citizens of the city of Lyons and of the French nation, and it also provided a forum within which differences between themselves and others -- other tradespeople, other households (that is, other master-weavers),

other classes (that is, their merchant-manufacturing employers) and other neighborhoods -- could be mediated or resolved in a 'higher' social unity. The solidarity of the polis was most often fostered by the regular intervention of the local and national government in the weavers' economic and social affairs.

All five of these collective solidarities changed, or were affected by social and economic change, during the Second Empire, especially after 1860. In the weavers' craft, the 'elite' position of the fancy-cloth weavers was levelled to the 'common' position of the weavers of plain cloths (étoffes unies), by high unemployment and lower wages. The levelling of income between weavers of fancy cloths and weavers of plain cloths was matched by a corresponding standardization of social relations within their households. The internal social structure of fancy-weavers' households became very much like that of plain-weavers' households after 1860, whereas before then they had been very different. As the social characteristics of household solidarity became more similar between the two types, however, the nature of that solidarity changed for both. Once associated with a certain independence and 'entrepreneurship,' involving the employment of non-familial labor, the household became an assemblage of familial labor alone and more dependent on the orders and 'arbitrary decision' of the merchant-manufacturers. This dependence, especially the increased dependence of each household on a single merchant-manufacturer at a time, did not prevent frequent changes of employers, nor did it prevent the abandonment of the urban weavers as a whole by the larger merchant-manufacturing enterprises, in favor of the weavers of the countryside willing to work for lower wages. Associated with this dependence, in other words, was a

transformation of class relations between weavers and their employers and along with this transformation, a change in the weavers' own solidarity of class.

Such changes in class relations and class solidarity accompanied changes in the neighborhoods of Lyons where the weavers resided. These changes accentuated differences within the class of master silk-weavers. Industrialization, population growth and urban renewal -- the urbanization of Lyons, in short -- transformed the architectural, occupational and moral environment of the newer silk-weaving quarters, leaving the older quarters of weavers very different in these respects. This transformation created tensions between weavers in the two different sections of the city that became especially evident in their social movements. These tensions and those created by class conflict between weavers and their employers surfaced with less constraint than in the past from the 'mediating' authorities of the local and national governments. In the 'liberalizing' Empire of the 1860's, these authorities kept their distance in such economic and social matters, asserting less frequently than in the past the solidarity of polis over class and neighborhood. The weavers profited somewhat from this liberal attitude. Yet their attachment to the tradition of intervening government was too strong to permit their unqualified acceptance of laissez-faire in the labor market. Many of them continued to anticipate government assistance, and some actively sought to involve the authorities in their affairs. Most, in fact, probably hoped for a change in regime to make government more socially progressive and interventionist, in the interest of weavers and other workers as a whole.

### The Forms of Voluntary Association

This, however, was not the only response of the weavers to changes in the economic and social conditions of their trade. Many of them, taking advantage of the more liberal social policies of the government, organized various kinds of voluntary associations to help them face their changed conditions with greater confidence and strength. Four kinds of socially-oriented associations involved silk weavers as their prominent laboring type in Lyons. These were the mutual aid societies, cooperative associations, educational-recreational-professional clubs, and societies of 'resistance' (embryonic trade unions). Each of these had a different purpose or set of purposes, each had a particular history extending back several decades at least, and each formed the nucleus of a particular social movement among the workers of Lyons under the Second Empire.

Mutual aid societies provided financial assistance for sickness, infirmity and old age and arranged funerals for its members, with funds collected as entry fees and monthly dues. Inheriting the traditions of confrèrie and compagnonnage of the Old Regime, these societies were organized in Lyons soon after 1800 and thus had a relatively long history. They received a new lease on life from the patronage of Napoleon III in 1852 and thus formed the 'starting point' of the Second-Empire movements of voluntary association. Cooperation had a more recent history. It originated in the reform programs of French utopian socialists during the first half of the century, and was practiced by small groups of workers in the early 1830's. But it did not become a mass movement until the Second Republic (1848-1851), and it became the center of the workers' movement only in the 1860's. By then its ideological roots lay elsewhere than in utopian socialist schemes, Second-Empire cooperation, or

"association," as it was called, resembled instead the recent ventures of English and German workers, especially the Rochdale Pioneers, who set down the principles of modern cooperation in 1844, and the credit-union organizers under the leadership of the German liberal Schulze-Delitzsch, who were active in the 1850's and 1860's. Consumers', producers' and credit cooperatives following these models mobilized the savings of workers into share capital giving them ownership and control of their own retailing, manufacturing and lending enterprises. Cooperative association replaced mutual aid as the leading force of the workers' movement in France after 1860, in alliance with the budding liberal movement which inspired much of the cooperative program.

Closely associated with cooperation was the organization of workers' clubs for educational, recreational and professional aims. Small groups of master silk weavers had formed clubs for exchange of information concerning their trade and for technical advancement as early as 1832.<sup>22</sup> The club 'movement' expanded in the 1840's and blossomed under the Second Republic as a form of both political and social association. After the brutal suppression of workers' clubs by the army and police following the coup d'état of 1851, the 'social' club movement revived in the 1860's and merged with another political movement at the end of that decade. Besides promoting professional concerns, workers' clubs of this later decade also gave much attention to the development of basic education and to recreation programs for their members. In the silk weavers' quarters of Lyons, cooperative societies and clubs were

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<sup>22</sup> République Française, Les associations professionnelles ouvrières, II, 256-257.

often complementary. Clubs frequently formed under the inspiration or active sponsorship of cooperative stores, and some clubs explicitly recognized the promotion of the cooperative movement as one of their aims.<sup>23</sup>

The resistance movement, by contrast, differed from cooperation in its aims and its methods, and resistance and cooperative societies generally guarded their organizational and ideological distance from one another, at least among the silk weavers of Lyons. Resistance societies were organized by workers in particular trades, such as silk-weaving, to maintain minimum levels of wages and piece rates by the threat of strike. Industrial resistance had an especially 'heroic' tradition in Lyons, recalling in particular the mutuelliste movement of the early July Monarchy (1831-1834). During this period, the master silk weavers' Society of Mutual Duty and the journeymen's Society of Ferrandiniers joined in a common struggle to prevent the decline of piece-rates after the government revoked the tarif (minimum schedule of piece-rates) negotiated with the merchant-manufacturers in October 1831. The struggle culminated in a general strike of silk weavers in February 1834 and in the April uprising of that same year. The uprising was provoked by the government's law on associations, which united the 'social' concerns of

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<sup>23</sup>The Beehive Club (Cercle La Ruche), for example, was set up by members of the grocery cooperative of the same name (La Ruche) in 1868. (Report of Special Police Commissioner to Prefect of Rhône, September 19, 1868, ADR, 4M - Police administrative - Associations, cercles ouvriers noncatholiques gr 6, cercle de la Ruche à Lyon.) The Club of Cooperative Solidarity (Cercle de la solidarité coopérative) was organized in the same year for the purpose of "the development of the cooperative idea." (Article 1-1, Projet des Statuts, Cercle da la solidarité coopérative, 1868, AML, I2 - 45.)

the silk weavers with the 'political' concerns of the Lyons republicans over the issue of voluntary association. The government thus politicized a movement originally limited to industrial matters.<sup>24</sup>

Since 1834, industrial resistance generally had a spotty record, suspected and usually repressed severely by the authorities. After 1868, however, the government adopted a more tolerant attitude towards strike associations, and societies of resistance emerged again in full strength, this time among all trades and not only among the silk weavers. Resistance in fact took over from cooperation and from the club 'movement' the leadership of the workers' movement in Lyons after 1869. Although the silk weavers kept their resistance societies very closely within the 'industrial' limits permitted by the authorities, most other trades and some silk workers extended their aims to political action, largely under the aegis of the International Workingmen's Association. This action began as an anti-imperial movement in May-June 1870, in alliance with the Radical democrats of Lyons, but became rapidly anarcho-socialist after the fall of the Empire in early September 1870. By that time the political movement had absorbed club organization as well as industrial resistance among many trades, and politics thus became the leading force in the workers' movement of Lyons.<sup>25</sup>

These various movements of voluntary association reflected the structures and changes of social identity -- and of the collective solidarities forming this identity -- in their aims, their activities

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<sup>24</sup>Bezucha, The Lyon Uprising of 1834, chapters 4-6.

<sup>25</sup>Maurice Moissonnier, La première internationale et la commune à Lyon (Paris: Editions sociales, 1972), pp. 175-271.

and their patterns of leadership and membership. The state of the craft, for example -- its prosperity, the quality of its products, the status and earnings of its variously skilled weavers -- concerned the resistance and cooperative movements throughout their history, especially after 1860, when the urban craft and its fancy-cloth weavers in particular were threatened with permanent decline. The active role of fancy-cloth weavers as leaders in the cooperative movement and the rapid extension of industrial resistance from the city to the countryside, to prevent any further migration of the craft towards the latter area, demonstrated the concern of these movements with this threat to the traditional foundations of craft solidarity. Preservation of the household economy of the weavers was another aim of the same movements, and strengthening of household solidarity by discipline and 'moralization' of relations among its members was enjoined repeatedly on members of mutual aid societies and silk-weavers' clubs. The restoration of the entrepreneurial role of the master-weaver in the household economy was an implicit aim of consumers' cooperation after 1860, when the master was losing that role in silk weaving during the economic 'crisis' of that decade. And the restoration of autonomy from the 'arbitrary decision' of the merchant-manufacturer was another intention of cooperation -- of producers' cooperation especially.

This last concern united the interests of household solidarity, as these were traditionally conceived, with the interests of class. The solidarity of class, evident in the weavers' struggle for autonomy through producers' cooperation, was largely a reaction to their sense of abandonment by the large merchant-manufacturers to the interests of rural weaving -- the major fact explaining class relations during the

1860's in Lyons. But consumers' cooperation, the most successful branch of the cooperative movement in Lyons, also weakened the solidarity of class by appealing to neighborhood solidarity at the same time. The cooperative movement therefore receded in favor of industrial resistance when the issue of class became paramount again at the end of the Second Empire. Resistance appealed without ambiguity to the common class interests of all weavers. Thus it asserted class solidarity as the most important element of their social identity, as it had done in the early 1830's, the golden age of the workers' movement of Lyons.

Industrial resistance in trades other than silk weaving was rapidly absorbed in the semi-revolutionary internationalist movement at the end of the Second Empire, under the leadership of the Lyons branch of the International Workingmen's Association. Workers' clubs also became forums of political discussion. Politics thus followed social action during the late Second Empire as it had done in the early July Monarchy. The different extent of sharing in this politicization among the silk weavers reflected initially some of the same socio-economic differences in their neighborhoods evident in consumers' cooperation. Very soon, however, politics commanded the attention of nearly all silk weavers, although usually still outside the framework of their socially-oriented voluntary associations. By September 1870, when the Empire fell and the republican Commune was established in Lyons, the political movement dominated the workers' movement. The only important differences within the latter concerned the political preferences of the workers -- whether Radical democrat or anarcho-socialist -- and the relationship of political organizations to social associations -- whether one of domination and control, or one of mutual exclusion and autonomy. The divisions among the silk weavers concerning these issues

again reflected differences in their neighborhood environments. Even more fundamentally, however, these divisions reflected differences in their various conceptions of the polis and of the government of that polis -- whether or not the latter should intervene in economic and social affairs to assert this 'higher' solidarity above all others. These differences were in turn the product of an ambivalent recent experience of actual government intervention, during a decade that witnessed the inversion or the weakening of other solidarities in the world of the weavers, especially the solidarities of craft and class.

#### Choice of the Subject

The choice of the silk weavers of Lyons as the social group examined in this study and the selection of the Second Empire as the period of primary focus were largely accidental. I 'discovered' the silk weavers of Lyons in prior research on the French cooperative movement, and I 'discovered' the Second Empire as a period especially rich in documentary sources concerning both the weavers' economic and social conditions and their movements of voluntary associations. I also wished to avoid unnecessary overlap with previous work by scholars on the earlier period, in particular the work of Fernand Rude and Robert Bezucha on the early 1830's<sup>26</sup> and the work of Mary Lynn McDougall on the period 1834-1852.<sup>27</sup> The overlap with Yves Lequin's Ouvriers de la région lyonnaise dans la seconde moitié du XIXe siècle (1848-1914)

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<sup>26</sup>Fernand Rude, L'insurrection lyonnaise de novembre 1831; Le mouvement ouvrier à Lyon de 1827-1832 (Paris; Editions Anthropos, 1969)); Bezucha, The Lyon Uprising of 1834,

<sup>27</sup>Mary Lynn McDougall, "After the Insurrections: the Workers' Movement in Lyon, 1834-1852" (unpublished Ph.D. dissertation, Department of History, Columbia University, 1974),

proved not to be serious,<sup>28</sup> because of the latter's focus on the conditions and social movements of all workers in a region including eight departments, in contrast with the present study's more intensive concentration on workers in a single craft within one city of that region.

There was, however, some design in my choice, at least implicitly. The silk weavers of Lyons were among the most socially aware and even socially self-conscious 'working-class' groups in France -- and on the European continent, for that matter -- during the nineteenth century. Their social ideologies, their modes of association and the expression of their perceptions and aspirations in written word were therefore likely to be ample and discriminating. The economic and social conditions of their daily lives, moreover, were, if not typical, at least relevant to those of most continental European workers prior to 1870. Their modes of work, like those of most other workers on the continent, were artisanal and semi-autonomous, and the demand for many of their products was luxury or semi-luxury in nature. Some skill was still necessary for the manufacture of these products, and such skill still commanded a wage premium in most labor markets and a certain status in local society. Demand for standardized, mass-produced commodities and for the proletarian factory labor to manufacture these commodities -- labor that was unskilled, entirely dependent on a wage

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<sup>28</sup>Yves Lequin, Les ouvriers de la région lyonnaise dans la seconde moitié du XIXe siècle (1848-1914) (Lyon: Presses universitaires de Lyon, 1977), based on the author's thesis, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975).

for subsistence and lacking autonomy in the work process -- was still exceptional in mid-nineteenth century Europe, as economic and labor historians are recognizing increasingly.<sup>29</sup> Such demand, however, increased rapidly after 1850, not only in the traditional industries of mass production, such as cotton textiles, but also in the older luxury manufactures, such as woollens and silks. In this way too, therefore, the experience of the silk weavers of Lyons was relevant to that of most other workers in Europe.

The design implicit in the choice of the Second Empire as the period of focus derived in part from a related consideration. This period concentrated most of the changes in economic and social structure of the Lyons silk industry which it shared with many other European industries, especially textiles, and which resulted from the spread of 'common' product demand and of technologically 'extensive' methods of mass production (methods extending to more and more aspects of productive technique). Equally important, the Second Empire in France witnessed the emergence of more varied forms of workers' voluntary

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<sup>29</sup>See, for example, E. J. Hobsbawm, The Age of Capital, 1848-1875 (New York: Charles Scribner's Sons, 1975), chapter 12 (especially pages 208-209) and Peter N. Stearns, "The European Labor Movement and the Working Classes, 1890-1914," in Harvey Mitchell and Peter N. Stearns, Workers and Protest: The European Labor Movement, the Working Classes and the Origins of Social Democracy, 1890-1914 (Itasca, Illinois: F. E. Peacock Publishers, 1971), pp. 120-221 (especially pp. 144-45), for a general discussion of labor in nineteenth-century Europe. For a discussion of labor in individual countries, see, for example, Peter Mathias, The First Industrial Nation: An Economic History of Britain, 1700-1914 (New York: Charles Scribner's Sons, 1969), pp. 206-207, for Great Britain; Bernard H. Moss, The Origins of the French Labor Movement, 1830-1914 (Berkeley, California: University of California Press, 1976), p. 8, for France; and Theodore S. Hamerow, The Social Foundations of German Unification, 1858-1871 (Princeton, New Jersey: Princeton University Press, 1969), pp. 78-80, for Germany.

association than ever before, and, in Lyons at least, left abundant documentation concerning individual associations to explore this variety and its corresponding ideological complexity in some detail. The convergence of this 'flowering' of association among the Lyons silk weavers and of fundamental changes in their economic and social conditions suggested a coincidence of socio-economic differentiation with a high level of discrimination in the weavers' social perception. Such a coincidence made this period especially fruitful for the investigation of relations between ideology and economic and social change.

The choice of the point of view of the master-weaver -- of the male master in particular -- was, finally, also related intimately to the actual conditions of the silk industry and to the actual patterns of association. The male master was traditionally the 'ideal-type' of the silk weaver of Lyons and remained so in much of the folklore and social ideology of the weavers throughout the nineteenth century. Movements of voluntary association, moreover, most frequently involved master-weavers as the overwhelming majority of members. When these movements reached the masses of the silk industry as well -- the journeymen, apprentices and female masters and workers -- they were usually directed by male masters, and their aims were also set by the latter. Focusing on the master's point of view thus simplified even further the task of relating ideology to economic and social experience, without distorting seriously either the significant changes in economic and social conditions or the actual patterns of voluntary association.

#### The Method of the Study in Perspective

Both the subject of this study and the elementary conceptual framework within which this subject is examined emerged independent of any

particular theoretical or empirical model. The final product nevertheless bears a certain methodological resemblance to a few recent works in American and European history. A critical comparison of the method of this study with those of these recent works will elicit a more precise notion of the present method in itself as well as its distinctiveness relative to others which have been tried with success.

Two works that cast an illuminating vision on the method of this study are Charles Tilly's Vendée and Stephan Thernstrom's Other Bostonians.<sup>30</sup> Each of these is concerned with an 'in-depth' analysis of social structure and social change. Each conceives the 'problem of society' in a different way, however, in order to develop this analysis. The present study bears a strong resemblance to both in their respective concepts of society, but the manner of resemblance is different in each case.

In The Vendée, Tilly differentiates the rural society of southern Anjou according to certain units of collective encounter and exchange: class, neighborhood, parish, economy and government (seat of power). The same individuals participate in each of these units in a different social position -- whether of rank, role or geographical location. These units thus form the different 'realms' within which their loyalties, beliefs, patterns of interaction, etc. are formed and preserved. This method of 'cutting the social pie' and of conceiving the forums of varied social interaction resembles the present

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<sup>30</sup> Charles Tilly, The Vendée (Cambridge, Massachusetts: Harvard University Press, 1964-1976); Stephan Thernstrom, The Other Bostonians: Poverty and Progress in the American Metropolis, 1880-1970 (Cambridge, Massachusetts: Harvard University Press, 1973).

study's description of social identity as the product of five collective solidarities. Like The Vendée, the present study conceives individuals 'living socially', at once, in certain delimited and distinct fields of collective encounter and exchange. Both works conceive this simultaneous experience of different kinds of social intercourse as fashioning a particular social character -- a particular regional (rather sub-regional) character in The Vendée, a particular craftsman's character in the present study.

The major difference between Tilly's work and this study concerns the subject to which such social character is attributed in each case. In The Vendée the subject is a place -- the Mauges, the Val-Saumurois -- while in the present study the subject is an individual, or rather the ideal-type of an individual -- the master silk weaver of Lyons. Because of this difference of subject, the points at which the units of collective experience or solidarity intersect are different in each case. In Tilly's work, these intersect at the subregion, where the units of class, neighborhood, parish, economy and government merge to form a particular subregional identity. In the present work, these intersect at the point of the ideal-typical master weaver, in whom the solidarities of craft, household, class, neighborhood and polis together fashion a particular craftsman's identity. The standard by which identity is assessed in each case depends on the ultimate purpose of each work. In Tilly's work, the standard is urbanization -- the problem of urbanizing versus urbanized state -- and the purpose is the explanation of the political choice of one sub-region for counter-revolution and of the other for revolution during the French Revolution of 1789-1793. In the present study, the standard is more diffuse -- the

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cohesion or division of collective solidarity in each of five units, and among all five together -- and the purpose is more general -- understanding the social meaning of voluntary association among the weavers. Perhaps because of this greater diffuseness of standard and generality of purpose -- and also perhaps because of the subordination of place to individual, rather than the reverse -- the present study is causally less tight and thematically less purposeful than The Vendée.

In this focus on the individual rather than on the place, the present work approaches more closely the mobility studies of Stephan Thernstrom, especially The Other Bostonians. Thernstrom's study of geographical, occupational and property mobility in "a great metropolitan center"<sup>31</sup> is ultimately concerned with individuals, despite the aggregate nature of the quantitative analysis. The social categories into which he divides the Bostonian male working population, such as class, stratum, geographical origin and generation, intersect at the point of the individual. Each sub-population defined by each of these social categories is divided again according to the social attribute or attributes described by one or several of the other categories, in succession, thus illuminating more precisely individual variations within the population as a whole. This 'web-like' analysis of social structure is quite different from Tilly's 'strand-like' description of different social units -- of class, neighborhood, parish, economy and government -- as separate features of the population of each subregion, without subdividing one unit by another to describe the individual where several different features intersect. Only in his discussion of neighborhood

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<sup>31</sup>Thernstrom, The Other Bostonians, p. 4.

does Tilly undertake a 'web-like' analysis of the intersection of class, neighborhood and economy, at the point of the individual, and his analysis largely re-enforces the significance of class differentiation in describing the societies of southern Anjou. For the most part, then, Tilly is more concerned with the particular social character of each place (sub-region) and therefore with the intersection of the different social units there. Thernstrom's concern, on the other hand, is the mobility of the individual Bostonian and not so much the effects of the different patterns of mobility of many individuals on the character of Boston as a whole, distinguishing it -- as Tilly distinguished the Mauges in southern Anjou -- from other cities or regions.<sup>32</sup>

This concern with the individual permeates the present study as well. It explains the frequent differentiation, in the following pages, of each unit of collective solidarity according to the social attributes described by others, in the manner of Thernstrom's 'web-like' analysis. The purpose of such differentiation is the illumination of the individualized master-weaver's simultaneous experience of craft, household, class, neighborhood and polis. Like Thernstrom's study, this one also lacks a single, clearly-defined problem and thus dispenses with a concise, convenient thesis as well. Instead, this study seeks a perspective from which to understand the changing economic and social experience of the silk weavers as a whole that neither obscures nor reduces to a predominant causal factor the individual variations in that process.

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<sup>32</sup>Of course, Thernstrom's analysis of the ethnic, religious and racial factors are 'strand-like' among themselves. But even these are differentiated in 'web-like' fashion, by occupational, generational and geographical refinements and even by further discrimination within each of the latter categories whenever possible.

In this way, the method of this study resembles Thernstrom's effort to understand social mobility in the American city in a new and fruitful way, one that restores the multitudinous and intersecting causality explaining the individual urban worker's success or failure in realizing the American dream.

This recognition of a formal analogy with The Other Bostonians does not ignore the radical difference in content between this commendable work and the present study. The process of mobility described by Thernstrom in his study of Boston is merely skeletal. It lacks the fiber of events, ideas, institutions and personalities that give flesh to Tilly's study of the Vendée and to Thernstrom's earlier book, Poverty and Progress.<sup>33</sup> In The Other Bostonians, we learn much about the progress or regress of different social types from one rung of the ladder of occupational and class mobility to another, but we learn little about the manner in which these different social groups reached their final social position, why they sought a higher position, and what they felt in seeking and reaching it, or failing to reach it. We learn little even concerning the economic and social system, or logic of social action, within which mobility became possible or impossible, and little concerning the 'rationality' towards that system that directed or guided the individual classes, races, age groups, and so forth in the process of changing (or failing to change) their social positions. The present study, by contrast, has been moulded from such content, including both institutional-situational detail and the rationality of systems and individual responses

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<sup>33</sup>Stephan Thernstrom, Poverty and Progress: Social Mobility in a Nineteenth Century City (New York: Atheneum, 1974).

in the economic and social experience of the master silk weaver. The analyses of household structure and class position, for example, are intended in the present study to add empirical content to this contextual fiber, and not merely to provide a 'correct' framework for understanding rigidly structured social processes. For this reason, much of the detail of fact and explanation has the same purpose as narrative description in the 'traditional' writing of history -- to provide the reader with a taste and feel for the phenomenon being described.

The focus of the present study on a single craft and the special attention given the master-weaver in that craft have facilitated this task of describing 'reason and fact' with precision and even with some nicety. Concentration on a single trade proved similarly fruitful -- eminently so, in fact -- in Joan Scott's Glassworkers of Carmaux.<sup>34</sup> In her book, Scott achieved a truly felicitous combination of causal analysis and narrative description, with some of the best features of both Tilly's conception of social units and Thernstrom's analysis of social mobility. Scott's division of workers' society into craft, class and (urban) neighborhood enabled her to explain and illustrate precisely how mobility, especially geographic mobility, weakened or strengthened class solidarity and workers' community among the glassworkers of Carmaux, and between themselves and the miners of the same town. Scott's sensitivity to the 'rationality' of each of these three categories -- to the coherence of the glassworkers' economic and social experience to the particular group

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<sup>34</sup>Joan Wallach Scott, The Glassworkers of Carmaux: French Craftsmen and Political Action in a Nineteenth-Century City (Cambridge, Massachusetts: Harvard University Press, 1974).

identity defined by each -- and her implicit sense of the logic of their convergence and divergence within a particular economic and social milieu provide a lucid framework for describing their political and syndical action as the result of very explicit causes. Her exposition of this rationality and logic through concrete example, and her attention to personal detail throughout, nevertheless give this work some of the flavor of enlivened description, and not only of causal analysis. As a result, her work reads with the charm and interest of a narrative, when its intent is in fact no less purposive than that of Charles Tilly's Vendée.

The present study has not yet attained the perfection and elegant simplicity of The Glassworkers of Carmaux. Its conceptualization of social identity, its understanding of the 'rationality' of collective solidarities forming this identity and its will to embody structural understanding with institutional-situational detail nevertheless give it a certain inner affinity and resonant sympathy with Scott's work. Yet the present study also differs from the latter by explicating in greater detail and perhaps more conscientiously each of the various dimensions of social identity in the weaver's world -- craft, household, class, neighborhood and polis. The present study is also less tied to the explanation of a single event, or set of events, than Scott's work. Perhaps largely for this reason, it is also less 'reductionist' than The Glassworkers of Carmaux in explaining the transformation of the craftsmen's ideology. In Scott's work, for example, the transformation of the glassworker's primary social identity from craft to class was largely the result of "settlement" induced by mechanization. Such a tendency towards mono-causal explanation is similar to Tilly's understanding of revolutionary

politics in the Vendée as the effect of different degrees of urbanization. The deliberate evasion of such mono-causal explanation distinguishes the present study, more than any other factor, from both of these otherwise highly commendable works.

The interest and utility of the following study of the social and economic origins of association among the silk weavers of Lyons is thus intended to be as much methodological as descriptive. The method draws from some of the same concepts of society as Charles Tilly's Vendée, in his manner of distinguishing units of social solidarity, and as Stephan Thernstrom's Other Bostonians, in his manner of isolating the relevant social individual. The method of this study seeks, moreover, to embody the formal categories and social objects it thus delineates with the flesh of concrete institutional, ideological and situational detail and with the blood of rational understanding of observed or projected economic and social behavior, akin to Joan Scott's sensitive diagnosis of political and syndical action among the glassworkers of Carmaux. But this methodological affinity with these other studies, and with the trends of recent social history which they represent, endures only to a certain point. Beyond this point, the following study departs. The nature and extent of that departure, and its utility for the study of social history, will emerge from the critical discussion which the author hopes this work will inspire, not only on its own contents but also on the field of sociological labor history to which this study offers a modest contribution.

## CHAPTER I

### The World of the Silk Weavers

In 1852, the French sociologist A. Audiganne remarked that the master silk weaver of Lyons "treat[ed] his work like a kind of religion."<sup>1</sup> In 1859, another French sociologist, Louis Reybaud, made a similar observation. The master weaver, wrote Reybaud, had "more than a natural talent for his work; he ha[d] a passion and gusto for it"<sup>2</sup> besides. Both impressions referred to a major truth about the master silk weavers of Lyons: Their world -- the world which concerned them most and which they knew best -- was the world of their work. Their work signified to them not only a means of earning a living, a certain technique, or a certain system of industry. It was also the source of their personal pride and social status, and it meant family and community -- community of class, neighborhood and city -- besides. From their work emerged the weavers' sense of their 'roots', of their identity in society, and towards their work converged the interests of their political and social ideologies, and the activities of their voluntary associations.

Certain aspects of the work of the weavers were so familiar to them, because of their constant presence or repetition in their daily

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<sup>1</sup>A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon in 1852," Revue des deux mondes, 22<sup>ème</sup> année - nouvelle période, XV (August 1, 1852), 517.

<sup>2</sup>Louis Reybaud, Etudes sur le régime des manufactures. Condition des ouvriers en soie (Paris, 1859), p. 129.

lives, that the weavers regarded them as permanent features of their work experience. These included their experience of craft activity, household economy, class relations, neighborhood encounter and relations with certain established institutions intervening in industrial affairs, especially the authorities of local and national government. The semi-permanent appearance of these features gave to their world a structure that seemed to endure throughout most of the economic and social changes of the nineteenth century. This semi-permanence, and an apparent internal coherence of the socio-economic traits associated with each of these features, justify calling the latter 'collective solidarities.' Thus the weavers' world was structured around the five collective solidarities of craft, household, class, neighborhood and polis.

The first four solidarities were all associated with traits that persisted through fluctuations in the silk industry of Lyons, both regular ('cyclical') and exceptional ('catastrophic') fluctuations. These were the solidarities that structured the 'regime of order' in the fabrique. The fifth solidarity, the polis, emerged out of the experience of 'cyclical' change in the industry -- change that was regular or at least frequent and thus created a 'regime of disorder'. The solidarity of the polis was the product of institutional efforts to control this 'regime of disorder', thus giving the fabrique a predictable, 'structured' response to the regular 'crises' -- as these changes were called -- to which it was subjected periodically. In the following sections, each of the five collective solidarities will be examined at length and in turn, the first four as structuring the order of the fabrique, the fifth as emerging out of its disorder and giving it structure under the stress of change. In this way, the master-weavers' world of work will figure

as they experienced it most often -- in its semi-permanent, more or less enduring form.

## I. The Order of the Fabrique

### A. The Nature of the Craft: Origins of Occupational Solidarity

Silk weaving was a highly-skilled craft. Technique therefore occupied a central place in the daily life of the weaver. Technique meant both proficiency in certain learned skills and flexibility in applying these skills and native talent to ever-new combinations of silk fabrics. Such proficiency and flexibility were important because the silk industry supplied a market of luxury goods dominated by fashion, and fashion placed a premium not only on refinement and elegance but also on novelty. Fashion became in fact increasingly identified with novelty by the mid-nineteenth century, when it was both more accessible to the mass consumer and more susceptible to their demand for cheaper goods. For the weaver, novelty meant incessant variability -- variability in the cloth orders put out to him by the merchant-manufacturer, variability in the tools and techniques needed to execute these orders, and variability in the knowledge and skills required to weave new fabrics well.

Silk cloth had two basic components giving it respectively utility and form. These were the fond, or body of the fabric, and the design. The fond consisted of the simple interlacing of the warp and the weft to form a solid knitted cloth. It made the fabric useful as clothing, furniture covering or ornament. The design, on the other hand, gave the cloth aesthetic appeal. Design consisted of the particular color and texture patterns woven into the fabric in the same operation as the fond, and of particular graphic representations, or brocades, woven in a separate

technical operation from the execution of the fond. While the fond could change only in size, the design could vary in image and form as well. Technically then, it was the seat of variation in fabric fashion, the locus of the complexity of hand-loom weaving.

This complexity became evident to the weaver at every stage of the weaving process. Each type of silk cloth called for a particular number, color, size and elasticity of warp thread inserted through his loom -- or mounted -- in a particular way. Each required a different combination of comb (peigne) and lisses with appropriate slits and loops through which the strands of warp were threaded according to the prescribed design of the cloth. Brocade weaving required threading through the loops of hundreds of small chains as well. The weaver had to adjust rollers and the large battant of the loom to thread and loop combinations to insure even tension in the fabric and to prevent breaks in the thread during weaving. While weaving he had to activate the lisses, throw the shuttle and pull and push the battant in the order required by the particular design, meanwhile adjusting the position of the cloth, the loom mechanisms and the position of his body in order to execute the fabric with a minimum of faults. When the weaver finally completed the order and returned the woven cloth to the merchant-manufacturer, the latter calculated his piece-rate according to the type of design as well as the size of the fond. The merchant deducted a portion of the total wage for losses of thread produced by the weaving ('wastes'), when these exceeded the standard minimum allowance. These wastes varied not only with the dexterity and attention of the weaver but also with the complexity of the cloth and the quality of the silk thread.

The simplest silk cloths -- the taffetas, Gros-de-Naples, satins --

required no special preparation for the design other than that associated with the weaving of the fond. In other words, the designs of such cloths varied by combinations of threads inserted into the loops of the same combs and lisses which guided the execution of the fond during the weaving. Such cloths were called étoffes unies, or plain silk fabrics. They constituted most of the silk orders in Lyons, capital of silk weaving in nineteenth-century Europe. Even these simple cloths, however, varied widely in complexity of mounting and weaving. In 1866, for example, a simple taffetas required threading 4,960 strands of warp between 1,240 comb teeth, four strands per tooth, and through 360 loops of lisses, while a satin pour apprêt called for 10,560 individual warp threads of three different colors inserted between 1,320 comb teeth, eight strands per tooth, and through 480 loops of lisses. The weaver had to 'fit' only 26 tosses of the shuttle into a centimeter of taffetas silk, but 30 tosses into a centimeter of satin.<sup>3</sup> Satin cloth was therefore not only more difficult to mount than taffetas but also more susceptible to faults during weaving, because of the greater number and density of the threads composing it.

More complex than most étoffes unies, however, were the étoffes façonnées, the fancy, or brocade, silk fabrics. In these cloths fabric design reached its perfection. Design in the unis was limited to patterns of texture and color repeated along the length of the cloth, but in the façonnés it might include several different graphic representations of animals, flowers, people or geometric combinations along the length of the same fabric. This brocade was achieved by means of the ingenious Jacquard

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<sup>3</sup>F. Peyot, Cours complet de fabrication pour les étoffes de soie (Lyon: Louis Perrin, 1866), pp. 24 ff. (BMTL, B.31).

loom. In this loom, a separate punched card, which was read mechanically at the top of the loom, dictated each set of thread movements along the width of the cloth. A complex system of cords and chains translated the reading to the warp threads. Since each chain had to be threaded separately with warp before the weaving could begin, mounting the Jacquard loom was a very costly, time-consuming process. Not infrequently the number of lisses on this loom was also larger than on the plain loom, and foot pedal operations during weaving were therefore more complicated. The larger number of warp strands and individual threadings for fancy cloths also made these fabrics more susceptible to breaks in the thread and to other faults in weaving. In 1866, the professor of weaving theory Peyot listed eight faults to which fancy cloths were subject in addition to the standard faults of weaving plains.<sup>4</sup> Fancy weaving therefore required a very high proficiency of mounting and weaving. Such skills generally earned high piece-rates but only at the risk of losses of time and resources because of the costly mounting and the difficulties of weaving these cloths. Fancy weavers also risked unemployment and sudden loss of mounting investment from rapid changes in fashion, to which the étoffes façonnées were especially sensitive.

Not surprisingly, fancy weaving enjoyed high status in the world of the silk weavers. In 1860, Pierre Dronier, a journeyman weaver, listed as reasons for the prosperity of Lyons in its "days of glory" the talents and tools of fancy weaving "on which depend the perfection" of Lyons' celebrated dress fabrics.<sup>5</sup> Among these talents were the ability

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<sup>4</sup>Ibid., pp. 155-56.

<sup>5</sup>Pierre Dronier, Essai sur la décadence actuelle de la fabrique lyonnaise (Lyon: Nigon, 1860), p. 8. (BMTL, C.1559.)

of the master-weaver to "adjust the loom, which has much influence on the beauty of the craftsmanship" and the deftness of the journeyman weaver who "by his skill, gives to the cloth the qualities depending on workmanship which the merchant desires, and avoids at the same time the faults" particular to fancy weaving. "The richer the fabric, the more the dresses are covered with such varied designs which the genius of our Lyons artists generate each day, the more Lyons becomes unbeatable and, by that fact, becomes prosperous."<sup>6</sup>

Weavers of fancy cloths were thus elite artisans in the silk-weaving communities, and 'natural' leaders of movements of association in those communities. Pierre Charnier was a fancy-cloth weaver with four Jacquard looms in 1827, when he organized the first weavers' resistance society, the Society of Mutual Indication.<sup>7</sup> Members of the Master Weavers' Club, inheriting the fraternal traditions of this society in a later period, were largely masters of fancy silks in 1866.<sup>8</sup> And most leaders of the weavers' mutual aid societies and especially of the cooperative societies of production and consumption in Lyons wove fancy fabrics in the same year.<sup>9</sup> Many of the movements of association in Lyons, the cooperative movement in

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<sup>6</sup> Ibid., pp. 10-11.

<sup>7</sup> Fernand Rude, "L'insurrection ouvrière de Lyon en 1831 et le rôle de Pierre Charnier," Révolution de 1848, 35, No. 164 (March, 1938), 24; Fernand Rude, L'insurrection lyonnaise de novembre 1831; le mouvement ouvrier à Lyon de 1827-1832 (Paris: Editions Anthropos, 1969), pp. 124-40.

<sup>8</sup> George Sheridan, "Idéologies et structures sociales dans les associations ouvrières à Lyon, de 1848 à 1877," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, No. 2, 24-25, 42, 45.

<sup>9</sup> Ibid.

particular, in fact had a special appeal to fancy-cloth weavers. They provided these weavers a means of preserving their traditional elite status in their communities and of restoring their privileged economic position in their craft.

Fancy silks, like plain cloths, varied in complexity of design from the more simple to the more elegant. The range of variation was in fact larger than that of plain silks, because of the extra combinations of brocade. Difficulty of mounting and weaving these cloths increased with the complexity of design. The relatively simple petits façonnés substituted the Jacquard cords and chains for the lisses and thereby eliminated a whole set of warp thread loops, saving much time in mounting. Such petits façonnés for vests and ornaments had patterns of graphic images woven in as weft. The grands façonnés were, however, more typical of the genre étoffes façonnées. In these, cords and chains apart from the lisses embroidered the design separately into the fond of the cloth. Some 2,000 to 10,000 punched cards circulating like a chain over the large Jacquard loom gave the commands which insured exact execution of the brocaded design. Mounting such a loom was long and costly, lasting from several days to more than a month. A Florentine grand façonné required, for example, threading 6,776 warp strands between 1,100 teeth of the comb, through 552 loops of chains and finally through 6,776 loops of ten lisses in varying combinations of thread size and color.<sup>10</sup> Weaving such a fabric required close attention to the order of activating the lisses and throwing the weft, the color of which might change several

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<sup>10</sup>F. Bert, 'Florentine,' "Théorie de la fabrication des étoffes de soie enseignée par F. Bert de Lyon," 1842, BMTL, MSS.

times, as well as careful pulling of the battant and leaning in such a way as to prevent unevenness of the fabric, compensating for unbalanced pulling by the wooden rollers of the loom.<sup>11</sup> Parisian tailors used the fancy fabrics made by such processes for cutting some of their finest women's dresses. The most elegant étoffes façonnées were used for covering furniture and for ornamenting palaces and churches. These 'furniture and church cloths' were in fact among the most complex pure silks woven and required the best talents in the industry.

Besides distinctions based on the kind of design woven into the fabric, other properties, such as texture, differentiated one range of silk cloth styles from another. Each range of silks had its own technical requirements, including particular loom and weaving skills, and therefore distinguished certain groups of weavers by the nature of their professional competence. Texture, for example, was most important for distinguishing smooth silks from velvets. Velvets had patterns of furrows, humps and fluff produced by weaving iron rods in the place of weft thread at designated locations along the fabric. When the humps were kept in the cloth, as for velours frisé, the rods had to be pulled out of the cloth after weaving, an operation requiring great physical strength. For velours coupé, the humps were slit evenly by a knife or razor to produce a smooth fluff, and the rods were subsequently removed with little effort. Velours ciselé had some areas frisé and others coupé.<sup>12</sup> Velvet weaving required a particular kind of loom and a

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<sup>11</sup>For a description of body adjustments and special procedures for avoiding certain faults in weaving, see "Instructions de Fabrique" for a Gros-de-Naples plain silk in Peyot, Cours complet, pp. 145-46.

<sup>12</sup>I wish to thank Monsieur Vial of the Bibliothèque du Musée des Tissus de Lyon, Professor of Weaving Theory at the Ecole de Tissage of

different range of skills than those of smooth-silk weaving. Velvets could be woven either uni or façonné, but the technological requirements for each were intensified at the extremes in comparison with plain and fancy weaving of smooth silks. Plain velvets (velours unis) were among the simplest, least elegant products of the industry and demanded the least skill to weave. Fancy velvets (velours façonnés), however, were among the industry's most exquisite creations and employed some of the best weavers, trained by long years of experience.

Texture distinguished not only velvets from smooth silks but also solid from 'aerated' cloths, like gazes, and from chiffon-like fabrics, like crêpes. Each of these also required a special loom and accessory mechanisms, and each had its range of simple, plain styles to rich or brocaded fashions. The lace-like tulle and the ribbon-like passementerie represented the technological limits of silk weaving in Lyons. The looms and the organization of labor for these specialties in fact differed so much from the technology and organization of the dominant silk styles that the only concrete tie with the latter was the use of silk thread.<sup>13</sup> Shawls (châles) represented a 'limit' in another sense, that of technical complexity. The shawl loom was by far the largest and the most intricate mechanism in the silk industry, and the mounters and weavers of shawl fabrics were an elite even among the skilled fancy-cloth weavers.

The spectra of cloth composition along the two axes of design and

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Lyons, for his description of the different types of velvets and techniques for velvet weaving. (Discussion with Monsieur Vial, April 1975,)

<sup>13</sup>Ribbon weaving also used silk thread, but its technology was different from that of most silk weaving of Lyons. Ribbon-weaving was concentrated in the St.-Etienne and St.-Chamond regions of the Loire and Haute-Loire.

texture thus ranged from the simple to the complex, from the coarse to the fine, and from the banal to the exquisite. To each composition corresponded a level of skill for mounting and weaving. Such skill included the technical intelligence to understand complex mounting prescriptions, the manual dexterity to thread loops or to adjust the cloth properly during weaving, the ability to read and coordinate the simultaneous directions for foot, hand and body movements in proper order, and the sheer physical endurance to sustain a balanced movement of the battant. Rarely did the weavers specify the elements of skill which they imagined as the mark of a superior craftsman among their number. They knew this mark more by its product than by its components -- a 'perfect' fabric, a work of art. Naturally they honored this mark as a sign of professional grace, for they knew that they owed to it the superiority of their industry. Professional skill in executing complex design and texture gave the silk weavers, in other words, a sense of distinction of their trade, in which they shared a unique craft identity. This craft pride became especially evident when the entry of less skilled or less conscientious workers into the trade threatened quality of manufacture. In 1848, for example, the master-weaver Vernay, president of the Master-Weavers' Club, recalled his fellow craftsmen to the dignity of their profession by encouraging them to restore care and perfection to their work:

. . . among the large number of workers of the Lyons manufacture, [are] several [who are] prejudicial to its prosperity by unfaithfulness or by negligence. They do not give to their work all the desired care, to obtain a beautiful cloth, necessary to support the superiority of our product over foreign products. Master and worker must

strive unceasingly towards this goal, as much because of honor as of interest. . . .<sup>14</sup>

Within this common craft identity, however, particular occupational identities also formed around the different techniques and skills required for executing the various combinations of design and texture of silk cloths. These occupational identities emerged in patterns of representation on the local industrial court, the Conseil des Prud'hommes; in the several proposals for establishing industrial commissions; and in the resistance organizations which sought to negotiate and enforce acceptable piece-rates for each cloth specialty. Such definitions of occupational groups always distinguished weavers of fancy cloths from weavers of plain silks, and usually also set velvet weavers apart from weavers of smooth silk fabrics. In 1850, the master-weaver Weichmann divided the industry into six cloth specialties which he proposed as the basis of representation of weavers and merchant-manufacturers on a special reform commission to correct certain abuses in the trade. These were looms à lisse (plain smooth silks), plain velvets, fancy velvets, furniture and church cloths, shawls and fancy smooth silks.<sup>15</sup> In March 1834, some members of the weavers' resistance organization, the Society of Mutual Duty, proposed the creation of syndicats to gather information on piece-rates paid for each cloth specialty. The members proposed

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<sup>14</sup>Vernay, chef d'atelier, La vérité au sujet du malaise de la fabrique des étoffes de soie à Lyon. Moyens d'y remédier. Mémoire pour servir à l'enquête (Lyon; J.-M. Bajot, 1849), p. 9. (BMTL, C. 1559)

<sup>15</sup>Weichmann, 'Création d'une Commission spéciale,' "Mémoires recueillis par le citoyen Weichmann, chef d'atelier, rue du sentier, no. 8 à la Croix-Rousse," April 2, 1850, AN, F12-2203 (2); Machines à tisser (1844 à 1866).

organizing these syndicats on the basis of fourteen 'categories,' or specialties of silk cloth, each syndic or group of syndics representing a different category.<sup>16</sup> The revival of organized resistance in 1869-1870 brought a similar resurgence of such occupational groups among the silk weavers. Several groups of various sizes and bases of formation (cloth design, texture, function, merchant-manufacturer, etc) first organized separately to agree on acceptable piece-rates and to negotiate increases with the merchant-manufacturers in their specialty. When these several groups finally joined their efforts to enforce these increases, their two large resistance federations traced eleven cloth specialties, forming the basis of occupational representation within these organizations. These were plain velvets, for which the weavers organized a separate federation, the Corporation des tisseurs de velours unis, ville et campagne and the ten 'categories' of the Société civile de prévoyance et de renseignements pour le travail des tisseurs de la fabrique lyonnaise: taffetas and other simple plain silks; fancy silks; furniture and church cloths; gilets and fancy velvets; satins and plain armures (complex plain silks); grenandines, crêpes and gazes; scarfs and belts; shawls au quart; velvets frisés and peluches; and two-piece velvets.<sup>17</sup> On the basis of such occupational solidarity, the weavers made their entry into the budding craft-union movement.

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<sup>16</sup>Duviard, Berthelmer and H. Roux, "Création Des Syndicats," March 27, 1834, AN, CC558: Cour des Pairs: Evénements d'avril 1834, Lyon, dossier Mutuellisme.

<sup>17</sup>Ministère du Commerce, de l'Industrie, des Postes et Télégraphes. Office du Travail, Les associations professionnelles ouvrières (Paris: Imprimerie nationale, 1899-1904), II, 269, 278-79.

## B. The Order of the Domestic Economy

Throughout most of the nineteenth century, these various silk cloths were woven in households. In these households, home and shop formed a single unit under the head, the chef d'atelier, or master-weaver. The fiscal census of the Croix-Rousse weaving district underlined this unity of home and shop by classifying the rents paid by master-weavers as "home rents," rather than distinguishing these from "shop rents," as it did for cobblers and tailors, for example.<sup>18</sup> Within the household, the master-weaver combined the functions of father and manager. Outside he combined those of entrepreneur and laborer, for he owned his own looms and tools but wove the raw silk consigned to him by the merchant-manufacturer (fabricant), according to the specifications of fond and design ordered by the latter, and received a piece-rate from the fabricant for the completed fabric. The economic and social position of the master-weaver in the order of the fabrique was therefore essentially ambiguous.

### 1. The Order Within: The Solidarity of the Household

This ambiguity was evident in the relations between the master and the persons living and working in the household. When weavers and publicists reflected on the virtues of the domestic organization of the industry of Lyons, they conceived the ideal household enterprise as an affaire de famille. In 1845, the publicist Kauffmann, for example, remarked:

Here the family exists in its most complete form, and its various members render to one another constant mutual service,

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<sup>18</sup> AML, Recensement, Croix-Rousse, 1847,

Everyone works, it is true . . . but at least the members of the family are not separated; the father watches over the child, the wife over both of these with her heart of spouse and mother.<sup>19</sup>

Yet the budgets of master-weavers gathered by the weaver Weichmann in 1848-50 clearly separated shop affairs from home affairs and identified the former with the life of industrial production, the latter with family consumption. Shop earnings from piece-rates on woven fabrics (façon brute) less shop expenses, left "to the family" a net surplus "to live all the year," or a net deficit to be paid out of savings.<sup>20</sup>

The distinction between shop and home was primarily the result of the introduction of outsiders into the work of the household. In the typical household with three looms, the weaver and his family worked alongside outsiders on the weaving of the fabric and on various auxiliary tasks of weaving, such as mounting the piece and tying broken threads. In Weichmann's budgets, nearly all shop expenses consisted of costs of employing outside labor for weaving and auxiliary tasks.<sup>21</sup> This introduction of outsiders did not destroy the unity of home and shop implicit in the familial ideal of the household. But it complicated that unified notion by absorbing outsiders, in varying degrees, into the life of the home, under the paternal authority of the master, and by drawing the family into the orbit of budgeted labor, under his management

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<sup>19</sup>Kauffman De la fabrique lyonnaise (Lyon: Midan, 1846), p. 37. (BMTL, Soieries N7/537).

<sup>20</sup>Weichmann, 'Inventaire d'un Atelier d'uni . . . Conclusion des Salaires d'Atelier,' 'Inventaires de métiers. Aidant à faire les inventaires d'Atelier, définissant les salaires d'ouvriers hommes ou femmes,' "Mémoires recueillis. . .," April 2, 1850, 2<sup>ème</sup> Partie, Chapitre 2.

<sup>21</sup>Weichmann, 'Compte d'inventaire,' ibid.

of the shop.

We might distinguish three orders of 'social solidarity' in masters' relations with outsiders: state (état), function (task), and affective solidarity (feeling of kinship, paternity).<sup>22</sup> The order of state situated weavers in the household according to three hierarchical levels of training and status: apprentice, journeyman and master. This order was the most formal, regulated by the law of July 3, 1806, which instituted the Conseil des Prud'hommes, successor of the master-guards of the guild Community of the pre-revolutionary regime. The order of function identified the outsider by task, for the whole range of work performed in and for the household. Functional differentiation of tasks was not regulated with the same legal formality as levels of state. Only dévidage and ajustage were discussed in the first published code of the customary precedents of the Council (its Usages) in 1872.<sup>23</sup> The order of affective solidarity, finally, distinguished workers in the household by the degree of felt attachment between them and the master-weaver. Affective solidarity determined the extent to which they were absorbed under the master's paternal authority.

The order of state traditionally focused on the position of the master. The states of apprentice and journeyman were preparatory stages for the mastership, and masters provided the training of apprentices and work experience for the journeymen. Beginning at the age of fourteen, male and female apprentice weavers spent four years with a single master,

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<sup>22</sup>These are my own terms.

<sup>23</sup>Articles 26, 71-72, Usages du Conseil de Prud'hommes de la ville de Lyon pour les industries de la soierie (Lyon: L. A. Bonnaviat, 1872), pp. 13, 21-22. (BMTL, C. 1558 - N7/592c).

after which they received the cong  d'acquit, permitting them to stand for a weaving examination at the Conseil des Prud'hommes.<sup>24</sup> During those years the master provided their food, board and laundry in his household, besides professional training in his shop, in return for a portion of the apprentice's labor; namely, one-third of the day's work of a trained weaver plus "sweeping the shop on holidays and Sundays and providing at least two pails of water per day,"<sup>25</sup> Beyond the one-third of the day's weaving labor, the apprentice earned one-half the piece-rate for himself, just like the journeyman weaver.<sup>26</sup>

According to the law of 1806, apprenticeship was a necessary preparation for the state of journeyman, except for children of masters, who were exempted from this formal preparation. The latter could not hire out as journeymen, however, before the age of eighteen without the express consent of their parents.<sup>27</sup> Journeymen served a period of three years before they were eligible to set up shop and to weave on their own account.<sup>28</sup> The Conseil des Prud'hommes had the right to examine them in their cloth specialty before licensing them to become masters.<sup>29</sup> Unlike

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<sup>24</sup>Articles 29-30, "Extrait des Minutes de la Secr taire d'Etat, au Palais de St. Cloud le 3 juillet 1806 . . . Conseil des Prud'hommes," AML, F2 - Fabrique de soies - R glement - Tarif - Affaires diverses (1810   1874). Abbreviated: Conseil des Prud'hommes, Law of 1806). I wish to thank Monsieur Berthelon for having transmitted to me a copy of this law.

<sup>25</sup>Weichmann, 'Apprentissage,' "M moires recueilles. . . ."

<sup>26</sup>Jules Simon, "L'apprentissage," Le Progr s (Lyon), February 13, 1865.

<sup>27</sup>Article 33, Conseil des Prud'hommes, Law of 1806.

<sup>28</sup>Article 42, ibid.

<sup>29</sup>Article 51, ibid.

apprentices, they could work for several masters but were responsible for finishing the piece of one and acquitting all debts to him before moving on to another. The law of 1806 required them to secure a livret d'acquit from the police in which these debts were recorded, although the law was not always strictly enforced.<sup>30</sup> Journeymen received one-half of the piece-rate for the cloth they wove from the master, who sometimes also lodged and fed them for a fee. Such 'living-in,' however, became less common during the nineteenth century, and the position of the journeyman weaver consequently became little different from that of the hired laborer.

During the nineteenth century, the rather rigid regulation of states steadily loosened. Master-weavers frequently took on apprentices without contracts, and negligence of responsibilities by both parties became a common 'plague' of the Fabrique, especially in periods of high demand or of severe economic crisis.<sup>31</sup> In 1850, the master-weaver Weichmann complained that masters in the countryside were contracting apprentices for six months or less, instead of the standard four years.<sup>32</sup> Journeymen, moreover, were not always accomplished apprentices. Much of the weaving in Lyons was undertaken by a 'floating population' of

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<sup>30</sup> Article 36, ibid. For evidence of lack of enforcement of the law on livrets, see Article 1, "Règlement de la lère Société de bienfaisance mutuelle et Secours à Domicile de Maîtres-Fabricants d'étoffes de soie dites de Villeneuve de la Croix-Rousse," (project 1822), ADR, 5X-1954-Sociétés de secours mutuels, Sociétés de bienfaisance (1811 à 1833), lère Société de la Croix-Rousse.

<sup>31</sup> Felix Bertrand, Report of President of Conseil des Prud'hommes de Lyon to Prefect of Rhône, June 29, 1854, ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870); Weichmann, 'Apprentissage,' "Mémoires recueillies, . . .,"

<sup>32</sup> Weichmann, ibid.

unskilled journeymen weavers who migrated in and out of the city according to the fluctuations of demand for silk products.<sup>33</sup> Few if any of these had completed their apprenticeship. Skilled journeymen, on the other hand, frequently found their position little better than that of ordinary manual laborers during economic crises, and their access to the mastership was less assured than in the actual, or romanticized, conditions of the ancien régime. In the 1850's, however, these same journeymen were known for their 'insubordination,' when their labor was strongly demanded, as they lost both their traditional deference to the master, founded on the hierarchical order of state, and their sense of responsibility for the quality of their work. The position of the master, in turn, lost its central place in this order as the journeyman defied his claims to superior status and authority. "The most able journeymen, who know that they are needed," observed Audiganne in 1852, "are sometimes the most insubordinate; they accept the master-weaver neither as master nor as equal, but as a renter of looms. . . ."34

Besides weaving itself, the order of function distinguished the various auxiliary tasks both preparatory to the actual operation of the loom and simultaneous with this operation. The merchant-manufacturer contracted specialized workers to perform some of these tasks, such as silk throwing, dyeing, card punching and finishing; and master-weavers therefore had little professional contact with these workers. But many other tasks required masters to seek the direct services of specialists.

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<sup>33</sup>Robert Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge: Harvard University Press, 1974), pp. 22-23.

<sup>34</sup>A. Audiganne, Revue des deux mondes, XV (August 1, 1852), 516.

Among these were the dévideuses, with whom masters often had the most extended contact. Dévideuses rolled the weft thread on bobbins according to color, texture and quantity, after the master received this thread from the fabricant. During the nineteenth century, many dévideuses worked in their own homes for several masters at once, on a contract basis, and a few even set up small shops and hired young apprentice dévideuses to roll the silk on their machines. But masters frequently had their own dévidoirs and employed these female laborers in their own homes. After dévidage, masters gave the bobbins to a canneteuse, who inserted the weft bobbins into the shuttles. Like the dévideuse, the canneteuse sometimes worked by contract outside the household of the master, but more frequently he employed her to work in his own shop.

Mounting the loom required an even more specialized crew. First the plieur attached the warp threads prepared by the ourdisseuse to the rollers of the loom. The piqueur de peigne then passed the warp through the teeth of the comb, and the remetteuse threaded the warp through the lisses, prepared beforehand by the lisseuses. The master-weaver might even employ a specialist to mount the loom for the more complex fabrics, or he might simply direct the workers himself and employ such a monteur de métiers to supervise only the more difficult tasks. The master might employ a young lanceur to throw the shuttle during weaving and also call upon the services of female tordeuses, purgeuses, and rattacheuses to tie broken threads, to remove knots, and to provide other assistance to the weaver at the loom. The more complex cloths required more auxiliary labor than the simpler cloths. Few shawl weavers, for example, could mount a loom alone, and they were especially hurt in 1853 when dependable

lanceurs were in short supply,<sup>35</sup>

The order of affective solidarity distinguished the bonds between masters and their workers formed by moral and affective attachment from those which, in the words of Louis Reybaud, "necessity imposes."<sup>36</sup> The former usually, although not necessarily, developed from a community of eating, sleeping, recreating and praying in the household of the master, sanctioned by custom, contract or both. In nearly all cases of a highly developed affective solidarity within the household, the master served as father to his workers as well as 'boss.' Affective solidarity usually emerged, in short, out of a heightening of the master's paternal responsibility and authority rather than out of a levelling of his status to that of his subordinates by the egalitarian strength of friendship.

Affective solidarity differentiated most acutely three kinds of workers in their relationships with the master: apprentices and other child workers, dévideuses and journeymen weavers. Masters apparently treated their non-relative child laborers differently according to the function they performed. Contracted apprentice weavers, for example, received much different treatment than lanceurs. Besides providing apprentices food, lodging, laundry and professional training, masters were expected to "exercise on them a surveillance both conscientious and caring, stimulating in these young people this love of all that is

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<sup>35</sup> Letter from Pierre Matras and Jean Bas to Prefect of Rhône, July 22, 1853, AML, F2 - Fabrique de soies - Règlement - Tarif - Affaires diverses (1810 à 1874),

<sup>36</sup> Louis Reybaud, Etudes . . . Condition des ouvriers en soie p. 139.

good. . . ."37 'Good' masters therefore gave their charges religious and moral instruction as well as professional training. Towards lanceurs they recognized no such obligation. These children aged ten to sixteen years were "submitted to what one might call forced labor . . . ," most often in the very complicated shawl-weaving.<sup>38</sup> They were usually orphans or abandoned children "whose parents are completely destitute," Forced to eat on their meager incomes of four to six francs per week, they were frequently found roaming around the army barracks near the city limits "to eat the remains of the soldiers' soup,"<sup>39</sup> A police commissioner of the Croix-Rousse claimed that the master-weavers "ought to look after these young people, as members of their own family,"<sup>40</sup> But the master shawl weavers felt so little personal concern for their lanceurs that the most they demanded in their favor was the establishment of a state-run residence to house and feed them during periods of unemployment. Even this measure was motivated by the desire to insure an ample supply of lanceurs for the masters when business prospered again.<sup>41</sup>

Apprenticeship itself, however, did not guarantee paternal concern on the part of the master, especially when it was not regulated by contract. The poor Savoyard children who "were tempted away from the

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<sup>37</sup>Weichman, 'Apprentissage,' "Mémoires recueillis, . . . ."

<sup>38</sup>Letter from Baussuge, Mayor of Fourth Arrondissement of Lyons to Prefect of Rhône, August 16, 1853, AML, F2 - Fabrique de soies . . . (1810 à 1874).

<sup>39</sup>Report of Police Commissioner, First Quarter, Fourth Arrondissement of Lyons to Prefect of Rhône, July 23, 1853, AML, ibid.

<sup>40</sup>Ibid.

<sup>41</sup>Letter from Matras and Bas to Prefect, July 22, 1853, AML, ibid.

protection of their family" by paid recruiters in the early 1850's to work as apprentices on the looms of "unscrupulous" Lyons masters without contract were not much better off than the lanceurs. When "the moment of unemployment" arrived, these so-called apprentices were simply released as "useless hands,"<sup>42</sup> Apprentices with contracts that eventually had to be annulled by the Conseil des Prud'hommes because these children were "too young and too weak" did not have very conscientious masters either. Their masters simply imposed on them "an exploitation all the more reprehensible since it alters the health of these youths,"<sup>43</sup> The experiences of such apprentices were very different from those of the journeymen weavers who told Jules Simon in 1864 "that they miss the time of their apprenticeship,"<sup>44</sup> The difference was one of affective solidarity. In the latter case, the masters were diligent fathers and teachers, in the former, exploitative employers, or "speculators [rather] than pères de famille,"<sup>45</sup>

Master-weavers also had varying degrees of affective attachment to the dévideuses working in their shops. Dévideuses à gage, that is, those on annual contract with the master, were most likely to enjoy the strong paternal attachment of the master. They ate, lodged and worked in his household, at his expense, and received free linen and laundry plus

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<sup>42</sup>Bertrand, Report of President of Conseil des Prud'hommes, June 29, 1854, ADR, U - Prud'hommes de Lyon.

<sup>43</sup>Felix Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes de Lyon, année 1855 (Lyon: C. Bonnaviat, 1856), p. 10, ADR, ibid.

<sup>44</sup>Jules Simon, "L'apprentissage," Le Progrès, February 13, 1865.

<sup>45</sup>Weichmann, 'Apprentissage,' "Mémoires recueillis. . . ."

an annual income of 200 to 300 francs,<sup>46</sup> Their position was very much like that of domestic servants, for they worked on "all the heavy tasks of the household" besides their specialized task of dévidage.<sup>47</sup> The master-weaver César Maire claimed that the dévideuse à gage was "almost considered as a member of the family and that her moral position had nothing to offend the most delicate sensibility."<sup>48</sup> Jules Simon, the liberal republican deputy, apparently agreed, for he considered the dévideuse à gage the "most fortunate" of her kind.<sup>49</sup>

The day-laboring dévideuse, who worked for a wage on the dévidoir of the master, was less likely to participate in the life of family to the the same extent. Masters therefore felt less responsibility for these workers and sometimes even denied them part of their earned wage. In June 1854, the president of the Conseil des Prud'hommes noted the increase in conflicts between master-weavers and dévideuses for insufficient or delayed payment of wages for dévidage. "The dévideuse, poor worker, lives only by her daily work. By keeping back her wage, they [the masters] often put them in the most complete state of destitution."<sup>50</sup> Masters were even known to take advantage of the impoverished condition of these female workers to exploit them sexually. In "certain shops,"

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<sup>46</sup> Jules Simon, "L'apprentissage," Le Progrès, February 13, 1865.

<sup>47</sup> Ibid.

<sup>48</sup> Letter from César Maire to editor of Le Progrès, February 25, 1865, "A propos d'apprentissage," Le Progrès, February 26, 1865.

<sup>49</sup> Simon, "L'apprentissage," Le Progrès, February 13, 1865.

<sup>50</sup> Bertrand, Report of President of Conseil des Prud'hommes, June 29, 1954.

reported the president of the Council in 1855, "abusing the precarious position of the dévideuse, certain master-weavers think themselves authorized to dispose of an income justly earned to serve needs to which their lack of decency leads them. . . ."51

Relationships between masters and journeymen were the most complex, in the order of affective solidarity, because of the long traditions of differential status attached to these two positions and because of the erosion of differences in status, without an equalization of economic opportunity, during the nineteenth century. In the traditional image of the Grande Fabrique of the ancien régime, the compagnon lived and worked with his master almost like a son. He fulfilled his compagnonnage in the expectation of setting up as a master-weaver on his own, perhaps marrying a daughter of his master to shorten his period of service and to inherit loom and shop. In the nineteenth century, many fewer journeymen seem to have had such filial attachment to their masters, as they moved out of the shop into their garrets and appeared in the master's shop only to work the loom during the day. Yet even during the nineteenth century important differences existed among the journeymen in their relations with masters. The most important was that between the 'floating population' of relatively unskilled rural journeymen weavers and the skilled craftsmen who wove in the best professional traditions of the compagnon of the old regime. The first flooded the inns and garrets of the weaving quarters during periods of high demand and returned as quickly to the farms in the nearby countryside during the slow seasons

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<sup>51</sup>Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes, année 1855, p. 10.

of the fabrique.<sup>52</sup> Their relations with the masters were ephemeral and indifferent, if not hostile. Such were the journeymen who "have become nomads," according to Jules Simon, "running from shop to shop, doing their task alongside the master during the day, without taking him for a confidant, without giving him affection and without demanding [any] from him. . . ." <sup>53</sup>

The second type of journeyman trained diligently as an apprentice to an expert master and after completing his apprenticeship, worked hard for several years in order to save enough to set up shop on his own. This second type was not necessarily more 'confidential' with his master than the 'floating' journeymen. He might simply rent a loom from the master, working at his own pace on thread consigned directly to him by the fabricant.<sup>54</sup> Or like most journeymen weavers in the 1850's, he might work by day under the direction of the master, with thread consigned to the latter, for one-half the piece-rate, take his evening meal at a restaurant or inn and return to his own room at night. Instead of considering the master as a 'father,' this journeyman might even treat him with disdain. Such behavior was characteristic of those highly-skilled workers about whom Audiganne remarked that "one remains amazed by the habitual inversion of roles; it is the master-weaver who seems to obey [the journeyman]."<sup>55</sup> A few skilled journeymen, however,

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<sup>52</sup>Bezucha, The Lyon Uprising of 1834, pp. 23, 45,

<sup>53</sup>Jules Simon, L'ouvrière (Paris: L. Hachette, 1861), p. 30,

<sup>54</sup>Bezucha, The Lyon Uprising of 1834, p. 45.

<sup>55</sup>Audiganne, Revue des deux mondes, XV (August 1, 1852), 517,

continued to enjoy "this almost familial life" praised by the journeyman Pierre Dronier in 1860, where the worker

took his meals with the master-weaver, had less habit of frequenting the inns; he imbibed, in this almost familial life, better principles, and saw better examples; he was more diligent at work, and took off less what we now call Holy-Monday. . . .<sup>56</sup>

In 1848, many journeymen apparently 'lived in' with their masters in this fashion, for the budgets of master-weavers collected by Weichmann at that time all reported a standard eighteen francs for upkeep of the bed of the workman and laundry."<sup>57</sup>

Affective solidarity between masters and their non-relative subordinate workers was thus primarily a matter of sentiment nurtured by community of eating and sleeping. In the accounting mentality of the master-weaver, budgeting affairs of home and shop, however, absorption of outsiders into the life of the family followed another, more rigid pattern taking no account of affective attachment. This pattern can be traced in the budgets of master-weavers by a simple criterion; namely, the extent to which food and lodging of outsiders belonged to the home consumption of profit earned by the shop, rather than to shop expenses reducing the profit. According to this criterion, master-weavers usually accounted food and lodging of all journeymen weavers and of temporarily-employed auxiliary workers -- remetteuses, purgeuses and tordeuses -- as part of shop costs and considered upkeep of apprentices and dévideuses as part of the home consumption, or the family budget.

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<sup>56</sup>Dronier, Essai sur la décadence actuelle, p. 8.

<sup>57</sup>Weichmann, 'Compte d'inventaire,' 'Inventaires de métiers,' "Mémoires recueillis. . . ," 2ème Partie, Chapitre 2.

The master-weaver Falconnet clearly allocated lodging of journeymen to shop expense in his letter to the Englishman John Bowring in 1832:

When there are three looms the master generally works one of them, and the profit of the other two may give him about 900 f. per annum; he pays for rent an average of 150 f.; he lodges his workmen, which costs him yearly 80 f.; and there remains for himself and family, 670 f. . . .<sup>58</sup>

Weichmann's budgets for the 1840's did the same, itemizing "wear and tear, upkeep of the bed of the workman, and laundry" as a standard expense of 18 f. per year per loom.<sup>59</sup> Journeymen's food either formed part of shop costs, as a portion of their wage, or was simply paid the master as a separate transaction: "The companion is sometimes fed by the master, and pays from 45 c. to 55 c. per day for his meals . . . ."<sup>60</sup> Rarely was the journeyman's food considered part of home consumption. Food for the temporary auxiliary workers had the same status in the master-weaver's budgets. The Weichmann budgets listed "the food of the remetteuse and purgeuse 2 f." and "Food of the tordeuses, at 1 f. each" as expense items of the shop.<sup>61</sup> Because masters systematically considered all outlay

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<sup>58</sup>"Translation of a Letter from Falconnet, a Weaver, one of the Prud'hommes of Lyons to Dr. Bowring, May 14, 1832, reported in the testimony of John Bowring, Esq., to the Select Committee on the Silk Trade, June 18, 1832, Great Britain, House of Commons, Report from Select Committee on the Silk Trade With the Minutes of Evidence, an Appendix and Index, ordered by the House of Commons to be printed, 2 August, 1832 (London, 1832), p. 556, question 8930.

<sup>59</sup>Weichmann, 'Compte d'inventaire,' "Mémoires recueillis, . . ."

<sup>60</sup>"Extracts of a Communication from Charnier, à Chef d'Atelier and Prud'homme of Lyons, dated 16th May 1832," reported in the testimony of Bowring, June 18, 1832, Report from Select Committee on the Silk Trade, p. 557, q. 8930.

<sup>61</sup>Weichmann, "Compte d'inventaire," "Mémoires recueillis, . . ."

for table and bed of these journeymen and auxiliaries as business rather than personal expenditure, their formal relations with these workers were simply contractual, no matter how strongly the community of eating and sleeping might have wedded masters' affections to them.

The master paid the food and lodging of apprentices and dévideuses, on the other hand, out of his personal, or home budget. In an accounting sense at least, these workers were part of the weaver's family.

"Apprentices generally mess in their masters' homes," wrote the master-weaver Pierre Charnier in 1832, "who provide them with food, fire and light."<sup>62</sup> In 1850 Weichmann stated that it was "the responsibility of the master-weaver to feed [them], to do their laundry, to furnish heat and light. . . ."<sup>63</sup> Neither Charnier nor Weichmann, who commented at length on the apprenticeship question, included the costs for these items as shop expenses in their otherwise thorough budgets of master-weavers. The reason for their silence is clear. These costs were borne by net profits, that is, by the personal family budget of the master. Apprentices were, in short, part of the family during their period of apprenticeship.

Evidence for masters' accounting the upkeep of the dévideuse as part of home consumption is also indirect, based on the silence of otherwise thorough budgets. The budgets of Charnier and Falconnet in 1832 did not mention the dévideuse at all, and those of Weichmann in 1850 itemized only her wage for dévidage as shop expense.<sup>64</sup> We know

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<sup>62</sup>"Extracts of Communication from Charnier," Bowring, Report from Select Committee on the Silk Trade.

<sup>63</sup>Weichmann, 'Apprentissage,' "Mémoires recueillis. . . ."

<sup>64</sup>Letter from Falconnet and Communication from Charnier, Bowring, Report from Select Committee; Weichmann, 'Compte d'inventaire,' ibid.

from the fiscal censuses of the Croix-Rousse that devideuses frequently lived in the household of the master-weaver and presumably also ate there. Jules Simon made this quite explicit in his article on apprenticeship in 1865. The "most fortunate [dévideuses]," wrote Simon, "make an annual contract for food and lodging with an income which varies from 200 to 300 francs,"<sup>65</sup> For all their "hard days . . . almost always charged, besides their work, with all the heavy tasks of the house,"<sup>66</sup> such dévideuses à gage seem to have been treated like apprentices in the accounting of their upkeep, budgeted as home consumption rather than as shop expense. Apprentices and dévideuses were therefore 'transitional states' between family and business, or home and shop, labor, in the master's management of his household.

Such movement of outsiders into the home was matched by a corresponding movement of family members into the shop. Family members contributed to the earnings of the shop, without adding to shop expenses by means of a wage, as did non-transitional outside labor. In the accounting mentality of the master weaver, family labor increased net earnings in a very special way -- by reducing the shop costs associated with auxiliary functions rather than by adding to the income of the shop. In Weichmann's budgets, for example, estimated expenses for cannetage, montage des métiers, and piquage de peigne were first debited in the expenditure column of the account for each loom, then subsequently credited as "Costs returning to the profit of the Shop inventory" in a

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<sup>65</sup> Simon, "L'apprentissage," Le Progrès, February 13, 1865.

<sup>66</sup> Ibid.

parallel column labelled Doit, when the family performed these tasks.<sup>67</sup> The totals in this latter column, for the four looms per shop, were then added to the profits from each loom as part of the overall shop profits of the master-weaver. The latter accounted his own labor for auxiliary functions in the same way, as reductions of costs rather than as additions to income. Among these tasks were "Half-days lost for retournage, and for returning the article," number of "trips to the [fabricant's] store, not having received [the article] the day of returning," and "accidental trips." These items were accounted first to expenditure, then to 'saved' costs (Doit) for each loom.<sup>68</sup> To the extent that the master could legally and morally assign any of these tasks to 'transitional-state' workers (apprentices and dévideuses), he increased his earnings in the same way on their labor, that is, by reducing costs of the shop.

Income to the household, or revenue, on the other hand, consisted entirely of the wage for woven fabric. Only the weaver at the loom earned such revenue in a strict accounting sense. Two different conceptions of maximizing this revenue were common among the master silk weavers of Lyons. One of these, the 'artisanal' attitude, as I will call it, conceived of revenue maximization on a loom-by-loom basis. The other, the 'entrepreneurial' attitude, considered revenue maximization from the perspective of all occupied looms in the household-shop together. To some extent, all masters shared both attitudes most of the time, but some were more often 'artisanal' in their conception, and others more 'entrepreneurial,' according to their respective economic positions and

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<sup>67</sup>Weichmann, 'Compte d'inventaire,' "Mémoires recueillis. . . ."

<sup>68</sup>Ibid.

according to the prevalent conditions of the silk-weaving economy as a whole. I will therefore speak of these attitudes as characteristic of two different types of masters -- 'artisanal' masters and 'entrepreneurial' masters -- even though all master-weavers shared both conceptions somewhat.

'Artisanal' masters believed that they maximized revenue on a loom-by-loom basis by doing the weaving themselves and by concentrating the auxiliary tasks performed by the family around the loom on which they wove. This was, I believe, the sense of Weichmann's somewhat cryptic observation concerning "looms operating by the hands of the master-weaver":

considering that those [masters] who have only one or two [looms] are aided [by the family] and exceed the very mediocre day's work, those who have 3 or 4 [looms] are in the opposite situation unless he [the master] surrender their [sic] looms to an unoccupied worker, which is always an additional expense. . . .<sup>69</sup>

According to this notion, master and family produced more by concentrating his weaving and their auxiliary labor on one loom operated by themselves alone than by dispersing their efforts -- his supervision and their auxiliary work -- among several looms operated by outsiders. Such an attitude reflected these 'artisanal' masters' perception of themselves as self-employed workers, supervising only their own labor, and of the labor of their families as primarily an extension of their own personal labor, rather than as a separate contribution to the earnings of the shop. As Weichmann's observation suggests, such 'artisanal' masters had only

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<sup>69</sup>Weichmann, 'Inventaire d'un Atelier d'uni . . . Règle Général à tous les Inventaires,' 'Inventaires de métiers,' "Mémoires recueillis. . .," 2ème Partie, Chapitre 2.

one or two occupied looms. Occupying more than this number of looms caused additional expense to the household-shop, either the 'expense' of spreading family weaving labor among more than two looms (presuming none of this labor was superfluous on the two looms), or the expense of hiring outside labor to occupy these additional looms. In the view of these 'artisanal' masters, the earnings from these extra looms were less than those that could have been made by concentrating the labor of the family as auxiliary to that of the master and by hiring no outside labor,<sup>70</sup>

In contrast to these 'artisanal' masters, 'entrepreneurial' masters hired outside (non-family) labor and allocated both family and non-family labor among the different tasks of the household (both weaving and auxiliary tasks) in order to occupy additional looms. For such masters, the additional 'expense' of hiring outside labor and of dividing the efforts of master and family among three or more looms, when considered on a loom-by-loom basis, was more than compensated by the extra earnings of the household-shop, when the work of all looms was considered together as a single enterprise. These masters, unlike the 'artisanal' masters, regarded themselves primarily as managers of their household-shops, supervising family and non-family labor, 'free' resident (family or

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<sup>70</sup>This view contains many errors, of course. For example, whether or not the extra earnings on additional looms more than compensated the expense of hiring non-family labor at the prevailing wage depended on factors such as the level of the piece-rate for fabrics woven on additional looms as compared with that for fabric on the master's loom, the relative cost of mounting the extra looms, the wages of outside hired labor as compared with the 'subsistence' wage of family labor, and the kind of work (weaving or auxiliary) for which family labor and hired labor were used respectively on the additional looms. The view presented here merely represents a mentality of master-weavers (which some would call 'petty-bourgeois') and should not be regarded as 'correct' in an economic sense.

transitional-state) and hired resident (journeyman) and non-resident labor together. Instead of trying to maximize the revenues of each loom separately from all others, such 'entrepreneurial' masters were more concerned with maximizing profits of the entire household. In order to maximize profits, they had to balance the relative gains of applying hired labor as against 'free' labor and of all labor to weaving as against auxiliary tasks on all looms in the household at once. The economic gains from substituting 'free' family or transitional-state labor for hired labor in weaving cloths for which their skill was not significantly different, consisted first, of the portion of the wage of the hired laborer above that needed for his subsistence, which he extracted by his customary half share of the piece-rate, and second, of the portion of the risk, or potential loss, of mounting an unprofitable fabric, which the 'free' worker had to bear in his level of upkeep (that is, standard of living) along with the other members of the family. The master, his family and transitional-state laborers bore this risk entirely when the weaver was hired. Both the surrender of the portion of wage above subsistence and the participation in the risks of mounting the fabric involved a degree of exploitation of the labor of family, apprentices and dévideuses. Such exploitation was limited in the long run by the opportunity of their leaving the household and weaving elsewhere for a wage. Institutional constraints, especially the apprenticeship contract, made this opportunity unavailable for apprentices during their period of apprenticeship, although the same contract limited the masters' legal exploitation of their labor to one-third the day's work of an ordinary trained weaver. The weaver's children were similarly prohibited from abandoning their parents' shop before the age of eighteen to work

elsewhere, without the formal consent of their parents.<sup>71</sup>

Economic theory would tell us that the master had to compare these gains from substituting family and apprentice labor for hired labor in weaving with those from applying the same 'free' labor to auxiliary tasks. Presumably 'free' labor was relatively unspecialized for these tasks and therefore could be applied to them, without any loss in relative efficiency, only when they were simple and usually only when they were applied over a small number of looms. For the more complex tasks of thread preparation and mounting and for services accessory to a large number of looms, the losses of efficiency in speed or dexterity, as compared with the efficiency of specialized hired workers, more than offset the wage portion above subsistence costs of the 'free' worker which was saved by not paying a wage.

Following the same theoretical model, choice of cloth type also influenced the most profitable allocation of 'free' and hired labor between weaving and auxiliary tasks besides determining the gross revenues of the shop. For the more complex cloths, like the fancy silks or shawls, gains from substituting 'free' for hired labor on weaving were higher than for plain silks, because of the larger skill rent in the piece-rate -- hence the larger wage portion above subsistence in the half share given to the journeyman -- and also because of the larger mounting cost and risk of failure of the fancy styles, subject to continual variations of demand. Since the 'free' laborer shared the latter risks with his master, the advantage of employing him was that much greater. Yet because of the high level of skill required for these

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<sup>71</sup>Article 33, Conseil des Prud'hommes, Law of 1806.

tasks, child weavers -- apprentices and masters' children under eighteen years of age, whose labor could be exploited -- were less likely to have had adequate training for the task. For the older children, the 'opportunity cost' of remaining at home was high in work on the fancy silks, where a higher wage could be earned outside the home. Complex cloths also required more specialized skill for the auxiliary tasks of mounting, which relatively unspecialized family labor was less able to provide. The gains from substituting family for hired labor in these tasks, when possible, however, were greater than for less complex silks, since the skill rents of specialized mounters as well as the length of time for which their services were needed, were presumably larger.

The choice of cloth was especially significant, however, for determining the revenues of the shop. More complex cloths generally earned higher piece-rates per unit of woven fabric but also required more investment of time and funds in mounting. These cloths were usually also slower to weave, because of the frequency of breaks in threads. A more important consideration, however, was the anticipated demand for such styles once mounted. The weaver needed to be assured of a minimum order of fabric to compensate his mounting costs and to earn a profit on his investment besides. Yet because of the premium on novelty in the silk markets of the nineteenth century, the fabricant often could not guarantee this minimum order. The master therefore had to balance the anticipated earnings from weaving complex cloths -- for which demand was generally irregular, weaving slower but compensation per unit woven high -- against the gains derived from weaving the plain articles "whose manufacture, better assured than that of fancy cloth, demand[ed] moreover less care,

less attention, less fatigue" but also received a smaller wage,<sup>72</sup> The master also had to compare these earnings with the relatively higher reduction in costs from exploitation of 'free' labor, within the limits mentioned above. His choice was restricted, finally, by the machine technology of his shop -- by the kinds of looms which he possessed. Plain-fabric looms, for example, could not weave fancy cloth, and fancy-fabric looms could weave plain cloth but with much greater difficulty, "because, besides the faults that are made by the lisses, there are still all those produced by the mechanics [of the Jacquard loom]."<sup>73</sup> Such limitations of weaving technology could be removed in the long run by changing the number and type of looms.

Such long-run changes crossed the static world of decision and choice analyzed so far, into the dynamic world of reproduction (or simple survival) and accumulation. In this second world the weaver's dominant concern was the simple maintenance of his home -- the reproductive economy where the aim of production was limited to the needs of family consumption -- or the expansion of his shop, by the progressive acquisition of a surplus over the needs of family subsistence. The first 'reproductive' behavior was usually the only option for most master-weavers in periods of low demand and unemployment and the second an attraction to the privileged few masters in times of prosperity. From either perspective, reproductive or accumulative, masters had control of certain variables in the internal order of their domestic economy, to

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<sup>72</sup> Louis-René Villermé, Tableau de l'état physique et moral des ouvriers employés dans les manufactures de coton, de laine et de soie (Paris: J. Renouard, 1840), I, 379.

<sup>73</sup> Peyot, Cours complet de fabrique, p. 155.

increase earnings, on the one hand, or to reduce costs, on the other. The main variable in the earnings equation was the number and type of looms. This determined the range of cloth selection as well as the shop's potential 'intensity,' or volume of output, for each type of article. The main concern in choosing looms was the anticipated duration and stability of demand for non-interchangeable (in a loom-technology sense) cloth varieties. The cost and time consumed in mounting and weaving fancy silks and other complex cloths required a sufficiently long period of employment to amortize the investment in mounting and the slowness in weaving. To the extent that fancy employment promised to be long and stable, the incentive was strongest to substitute fancy looms for plain looms. To the extent that such duration of employment was not assured, however, only the adventuresome or the privileged could be lured into the risky market for fancy silks. In either case, the long-run decision concerning earnings concentrated on employment more than on the piece-rate, and employment was a variable outside the control of the master-weaver.

Decisions to reduce costs in the long run were rather different in this respect. Such decisions focused primarily on the size and type of the labor force which the master could allocate to weaving and to auxiliary tasks in his shop. Two types of labor, as we have seen, were most important to his calculus -- hired labor and 'free' labor. Although the master had no control over the hired labor force, except incidentally by affective solidarity in individual cases, he did control his 'free' labor. The latter consisted of family members and 'transitional-state' workers -- apprentices and dévideuses. The master could change the input of family labor in two ways, by increasing or decreasing its size and by

altering its professional character. Fertility limited increases in size, and social and moral constraints against abortion and infanticide limited decreases in size. Silk weavers had other means of altering family size, however, which were socially acceptable. Among these were adoption of abandoned children or even reclaiming children previously abandoned by the same weaver, to add to the size of the household, and nursing out their infants to the nearby rural countryside, where they often died,<sup>74</sup> or abandoning them in a special deposit box at the hospital, to reduce family size.<sup>75</sup> Changing the professional character of the family labor force included training the wife or daughter in the more complex remettage or tordage of fancy silks, or apprenticing the same to another master in order to introduce the cloth specialty of the latter into the shop. By taking on an additional apprentice -- though the law of 1806 permitted no more than two apprentices per master<sup>76</sup> -- or an additional dévideuse à gage, the size of the transitional labor force could be increased.

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<sup>74</sup>Maurice Garden, Lyon et les lyonnais au XVIIIe siècle (Paris: les Belles lettres, 1970), pp. 116-33. Garden's high mortality rates for children of Lyons sent out of the city for nursing in the countryside during the eighteenth century, especially before 1760, seem to have been not exceptional in the nineteenth century either. Between 1852 and 1857, 9 of 26 persons (35%) who died in the village of Avenières in the Department of Isère were children, aged 16 months or less, who had been born in Lyons. (Three of these were no older than nine days.) These were probably children nursed out to this village from Lyons. [ADI, Q - Tables des mutations après décès, Bureau de Morestel, 6 (1852 à 1857).]

<sup>75</sup>See Elisabeth Veber, "La misère à Lyon sous le Second Empire" (unpublished D.E.S. under the direction of Pierre Leon, Faculté des Lettres et Sciences Humaines, Université de Lyon, December 1967), available in the collection of mémoires de maîtrise of the Centre d'histoire économique et sociale de la région lyonnaise, Université Lyon II, No. 126. A more systematic, comparative study of abandoned children in Lyons is the subject of Janet Potash's dissertation in progress for the Department of History, Yale University.

<sup>76</sup>Article 17, Conseil des Prud'hommes, Law of 1806.

Such decisions to increase the size of family and transitional labor, and to change the professional character of family labor, depended on the anticipated state of employment. The major cost of such decisions was the provision of upkeep during periods of unemployment or of relatively inefficient employment relative to the necessary tasks of the shop.

The costs of unemployment of family and transitional-state labor were more particularly the costs of general unemployment in the industry rather than specific unemployment for a single type of cloth, as in the earnings' decision to change to fancy looms. Excess labor of any quality, unlike excess fancy looms, could be substituted downward more easily. More highly-skilled family labor could be applied to less skilled weaving of plain silks or to less specialized auxiliary tasks, when the demand for the better fabrics became slack, and family labor was generally less rigid than loom technology in transfers between cloths of varying complexity. Moreover, the master had more leverage in reducing costs during times of unemployment than he had in increasing earnings. These costs consisted of expenses of upkeep of the family and transitional-state workers, and as head of the household, he could reduce these expenses by decreasing the standard of living of the family, apprentices and dévideuses.

Such leverage of the master-weaver in maintaining the inner order of his household long maintained the myth of his autonomy. "The master-weaver, owner of the tools of work, has greater independence than the laborer forced to attend to work outside his home," wrote the publicist Kauffmann in 1845. The "conditions of work can thereby be negotiated between himself and the merchant-manufacturer on more equal, therefore more just grounds. The dignity of man thus gains by this truly superior

organization of industry,"<sup>77</sup> The master was proud of this presumed independence and felt no obligation to anyone either for his work or for his ideas. He had "the pretense and the arrogance to depend on himself alone. . . ." <sup>78</sup> So proud was he that he would not accept outside help unless he were in dire need, and even then only reluctantly and without gratitude. "Alms, sir," said the old weaver to the inquisitive social observer Louis Reybaud, "alms, never! As long as work is possible, no alms!"<sup>79</sup>

Poverty does not invoke the right to assistance; on the contrary, if you come to its aid, it receives the gift without feeling and without demonstrating the least appreciation. . . .<sup>80</sup>

Many considered this independence a source of creativity and therefore of the superiority of the fabrique of Lyons. "In the Lyons shop, the master is a creator, at least in a certain order of ideas . . . the master weaver executes [the pattern] by translating the idea, by fixing sometimes what is indetermined, unresolved."<sup>81</sup> As a result, "three quarters of the greatest discoveries of the fabrique are due to workers, of which several [are] for the theory of cloths, and the organization of the loom."<sup>82</sup> Louis Reybaud remarked that each master-weaver had his

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<sup>77</sup> Kauffmann, De la fabrique lyonnaise, p. 37.

<sup>78</sup> Reybaud, Etudes . . . Condition des ouvriers en soie, p. 140.

<sup>79</sup> Ibid., p. 132.

<sup>80</sup> Audiganne, Revue des deux mondes, XV (August 1, 1852), 518.

<sup>81</sup> Kauffmann, De la fabrique lyonnaise, p. 37.

<sup>82</sup> Philippe Thierrat, Du malaise de la classe ouvrière et de l'institution des prud'hommes appliquée à l'augmentation du travail dans la fabrique lyonnaise (Lyon: J. Nigon, 1848), p. 13. (BMTL, C. 1559).

own private invention "to which he attach[ed] a price and which he [kept] from the eyes [of others]." <sup>83</sup>

Yet independence alone did not insure the superiority of the industry of Lyons, for this superiority also depended on the order within the shop. "The good organization of our shops, the superiority of manufacture, are the essential conditions which should preserve for the Lyons fabrique the supremacy that distinguishes it," declared the president of the Conseil des Prud'hommes in 1865. Such organization meant "this spirit of order and morality" which kept apprentices obedient to their masters, and masters conscientious in fulfilling their duties to these underlings. <sup>84</sup> This spirit insured the growth and preservation of 'morality,' frequently lauded as a virtue of the domestic organization of the silk industry of Lyons:

The lessons of morality flow from example; all enjoy prosperity together; together all endure the privations which the lack of work imposes all too often. Tribulation will not be less bitter, [nor] pain less acute because it is shared; but if suffering should give rise to some harmful, dangerous thought in the heart of one of the members of the group, the others would either smother it by their warnings, or prevent it by their authority from translating into facts. <sup>85</sup>

Regarded from within, therefore, the household of the master-weaver seemed not only to concentrate most of the activity of the industry but also to preserve the independence of the master, his superior craftsmanship and creativity, and the moral integrity of the silk workers in general.

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<sup>83</sup> Reybaud, Etudes . . . Condition des ouvriers en soie, p. 30.

<sup>84</sup> Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes, année 1855, p. 11.

<sup>85</sup> Kauffmann, De la fabrique lyonnaise, p. 37.

The moral significance of the household economy among the weavers was evident in the frequent concern with the preservation of this economy, and of the order within the household-shop, in the aims of weavers' voluntary associations. In 1827, for example, Charnier's Society of Mutual Indication sought to correct the "insubordination of . . . subordinate workers" in the household-shops by enforcing apprenticeship contracts and laws concerning livrets for journeymen (records of work history and indebtedness).<sup>86</sup> In 1848, Xavier Pailley's proposal for the centralization of putting-out in an association of silk weavers and merchant-manufacturers stressed the preservation of the domestic organization of the industry by means of such an association.<sup>87</sup> The producers' cooperative of silk weavers, organized in 1863, was supposed to have the same effect. According to Jean Monet, administrator of the society, the "centralization of . . . efforts through work" in the association would foster the prosperity of the "small shops" without undermining their independence or their sound moral influence. "[T]he stimulation brought about by emulation among our small shops, where the work is directed by a master," declared Monet, "is, in our eyes, one of the reasons for the superiority of our industry."<sup>88</sup>

## 2. The Order Outside: The Ambiguous Autonomy of the Household

This image of the self-sufficient household and the independent master

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<sup>86</sup> Fernand Rude, L'insurrection lyonnaise de novembre 1831, pp. 125-26.

<sup>87</sup> Citoyen Xavier Pailley, Système de réforme industrielle ou projet d'association entre tous les citoyens qui concourent au commerce et à la fabrication des articles de soieries (Lyon: Chanoine, 1848), p. 6 (BMTL, C. 1558).

<sup>88</sup> Testimony of Jean Monet in the enquiry concerning cooperative societies, January 12, 1866, as reported in Eugène Flotard, Le mouvement coopératif à Lyon et dans le Midi de la France (Paris, 1867), pp. 415, 422-23.

was largely a vestige of the past. The type of weaver it described best had nearly disappeared since the mid-eighteenth century. This was the master-weaver-merchant, who wove his own thread and sold his own fabric, without the intervention of the merchant-manufacturer. A mémoire addressed to the crown by the master-weavers in 1731 cited the existence of only 750 of these master-weaver-merchants at that time, when the merchants were trying to eliminate them by having the government force weavers to opt for the title of master or merchant.<sup>89</sup> Although the merchants' campaign was immediately unsuccessful, they managed to introduce a large fee for the title of merchant into the rule of 1744, which governed the industry for most of the century. Thenceforth the size of this intermediary group of independent masters dwindled.

By the nineteenth century nearly all weavers acquired their silk thread, their fabric orders and some of their accessory tools from the merchant-manufacturer (fabricant). They also received from the fabricant a piece-rate for their labor which provided the only revenue of the shop. Even the patterns for cloths were determined outside the master-weaver's shop. The designer was an employee of the fabricant, and as early as 1832, the weaver was not "consulted as he formerly was . . . with respect to the pattern."<sup>90</sup> To a very large extent, therefore, the master-weaver depended upon the merchant-manufacturer's aesthetic and commercial ingenuity for employment and on the earnings of the merchant-manufacturer for the piece-rate. Outside the household, in other words, the weaver was no longer master of his own affairs but subject to the vicissitudes of product

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<sup>89</sup> Au Roi, et à Nos Seigneurs de son Conseil, 1731, p. 2. (BML, Fonds Coste 23245).

<sup>90</sup> Bowring, Report from Select Committee, p. 560, q. 8948.

demand, labor supply and availability of raw silk transmitted to him through the fabricant.

The nature of the master's relations with the fabricant were rather complex. Fabricants transferred to master-weavers the risks of unused loom, shop and family (and 'transitional') labor during periods of unemployment, but depended entirely on the capital and labor supply of the latter when orders were large. The former was part of the merchant-manufacturer's well-known tendency of taking fewest chances for the greatest profits.<sup>91</sup> It was also reflected in putting-out fancy silks only to order<sup>92</sup> as well as in accumulating only small stocks of silk thread. The second was the result of the highly skilled character of the trade. As long as the fabricant marketed his product on the basis of excellence in quality -- and most did, to some extent, for such was the main advantage of the producers of Lyons over international competitors -- he depended on a body of skilled labor and conscientious direction that was relatively inflexible in the short run. Because the looms came only with the labor, weaving capital as well as weaving labor was also fixed in the short run.

Minimization of risk in capital and labor gave the relative advantage to the fabricant in setting piece-rates and working conditions when demand was slack, but inflexibility of skilled labor and of corresponding looms transferred this advantage to the master, when the demand was extremely high. Since demand fluctuated periodically -- both seasonally and cyclically -- between highs and lows, there was no reason in principle that

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<sup>91</sup>Reybaud, Etude . . . Condition des ouvriers en soie, p. 191.

<sup>92</sup>Bowring, Report from Select Committee, pp. 554-55, q. 8918; p. 558, q. 8938.

advantage should concentrate with either one or the other. Yet we know that in fact it usually favored the fabricant and only exceptionally the master. The reasons for this must be sought in the structure and the uncertainty of demand for silk fabrics rather than in its intensity.

The relative strength of the master-weaver in periods of high demand was the non-substitutability of his skill, learned over several years of practice, and of talent, which were neither technologically decomposable into simpler skills nor easily replaced by someone else. This skill and talent truly gave the master strength, however, only for the fancy cloths and for the more complex plain cloths on which fabricants made their reputation. The simpler plain silks could be woven by unpracticed apprentices and by unskilled rural journeymen, and therefore labor shortages for weaving these could only be temporary, the result of a long period of unemployment inducing the emigration of journeymen, for example. For the better fabrics, weavers commanded a higher wage, because of their scarce skills, but could become nevertheless strongly dependent on fabricants for several reasons. First, fancy cloths were costly to mount, long and difficult to weave. Unless weavers had large reserve funds, they frequently had to borrow advances on their piece-rates from the fabricants. Such loans were recorded on the livret d'acquit of the loom occupied by the fabricant. Until this debt was acquitted in full, the master could not accept orders for that loom from another fabricant, without the permission of the first,<sup>93</sup> Debts also resulted from excess waste of silk thread during manufacture beyond a customary maximum,<sup>94</sup>

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<sup>93</sup>Articles 55, 108, Conseil des Prud'hommes, Law of 1806,

<sup>94</sup>Articles 20-21, Usages du Conseil de Prud'hommes, 1872.

little more than a moral guarantee from the fabricant of the amount of woven cloth for which a single mounting job would suffice. "It frequently happens, though the order is given, that the buyer refuses to take the goods,"<sup>97</sup> and in such a case, the master was left with an unredeemable investment. Orders for samples, to market new designs among prospective clients, made matters even worse for the master. The fabricant, "always interested in the production of novelty,"<sup>98</sup> could make a fortune if the sample succeeded, while the masters received "only the advantage of having continuous work for some time." But if the design failed,

the merchant manufacturer will make a minimal loss that a more fortuitous combination can cover.

As for the master-weavers, not only do they lose the prospect of the work for which they had hoped, but they are obliged to argue with the merchant for the re-imburement of their costs of mounting, for the confection of the sample and for the wage of their lost days' [work].<sup>99</sup>

Dependence of fancy-cloth weavers on their fabricants was thus fostered in several ways. Debts incurred with these fabricants for mounting and living expenses, through advances on unrealized piece-rate, prevented these weavers from controlling their own affairs until these debts were repaid. Concern with continuity of orders of the same style, because of large mounting costs, compelled them to remain with the same fabricants as long as possible, even though such a solution did not eliminate the need for further advances from the same fabricants following

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<sup>97</sup> Bowring, Report from Select Committee, p. 560, q. 8950.

<sup>98</sup> Ibid., p. 560, q. 8948.

<sup>99</sup> Petition of Tray et al. to Emperor, August 1860,

Because of the complexity of the Jacquard loom and the large number of threads for fancy silks, these silks were especially likely to produce a great quantity of wastes.

Even more important, large mounting costs and time for fancy silks placed a high premium on continuity of orders of the same style. Because the style was in fact an art product of a particular merchant-manufacturer, this meant continuity with the same fabricant. Such continuity was in the interest of both master and fabricant. The master needed to redeem his initial investment and sought as much additional return from it as possible without changing the design on his loom. The fabricant valued the knowledge and expertise of the weaver gained in the process of weaving the first piece, on which the fabricant could capitalize even more on subsequent pieces.

But in fact changes in style were frequent for fancy cloths, because of the extreme variability and uncertainty of demand for them. The master usually felt the burden of these changes more than the fabricant. Even though masters had, by custom, the right to orders worth ten times the cost of mounting the fabric,<sup>95</sup> defending this right against recalcitrant fabricants, by calling them before the Conseil des Prud'hommes, had a high price; namely, the chance of losing future orders from these and possibly also from their colleagues. "Whatever might be his rights, and even when he renounces them partially by agreement, he is no less stigmatized as a troublesome worker, he is blacklisted in the fabrique and finds work only with difficulty."<sup>96</sup> Consequently, in practice the master had

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<sup>95</sup> Article 5, ibid.

<sup>96</sup> Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860, ACCL, Soieries Carton 41 - I - Législation - Usages (an 8 à 1936), 13 - Pétition remise à l'Empereur, à son passage à Lyon, par les ouvriers en soie.

forced terminations of weaving orders of a particular style, before the mounting investment in that design was recovered. Both indebtedness and concern for continuity of weaving orders therefore made masters dependent on their fabricants' personal 'generosity' in sharing the risks of fluctuating demand for fancy cloth. Fabricants sensitive to the reputation of their cloths, for their part, could not afford to lose good workers by making them bear all risks, or by leaving them entirely to their own resources when demand faltered. They were therefore willing to extend and even increase the indebtedness of these workers by continued advances. As a result, much of the negotiation on these matters was personalized, regulated more by the norms of a 'moral' economy applied individually and guided largely by the preferences of the merchant-manufacturer.

This tendency to individualize master-fabricant relations was especially re-enforced by the complex determination of the piece-rate for fancy cloths and for complex plain silk fabrics. Since these cloths varied so frequently in style and consequently in technical requirements for weaving and mounting, there was little chance of standardizing the whole range of rates as for the simpler plain cloths. The margin of negotiation of the level of the piece-rate depended, moreover, on the cost of elements beyond the control of either fabricant or master and often not predictable before the cloth was woven. For the fabricant the major element of this kind was the cost of silk thread, which he usually could anticipate only when he ordered a sample from the master. Expenses for silk thread constituted the largest item of the total cost for the fabric, as the following breakdown of costs for 500 ells of satin manufactured in Lyons in the early 1830's clearly demonstrates:

<u>Item</u>	<u>Cost</u>	<u>% Total Cost</u>
500 ells, warp and weft thread	1718 f. 50 c.	62.9
Throwing, " " " "	317 95	11.6
Dyeing, " " " "	105 35	3.8
Winding and warping the warp	66 00	2.4
Weaving	475 00	17.4
Finishing	50 00	1.8
Total	2732 f. 80 c.	

Source: Testimony of John Bowring, June 18, 1832, concerning the conditions of the silk industry of Lyons, in Great Britain, House of Commons, Report from Select Committee on the Silk Trade (August 2, 1832), question 8942, p. 559.

Silk thread was an agricultural product subject to climatic and other variations influencing the rearing and feeding of the silk worm. It was harvested during the summer, after the worms spun their cocoons. Its price was therefore variable, and fabricants could only anticipate this price (based on projections of the next silk harvest) when they prepared new designs and negotiated orders with clients. This uncertainty was eliminated when the fabricant finally put out an order for a successful design, but then he was committed to the piece-rate based on the wage for the sample -- if not contractually, at least 'morally.' The weaver was sure to resist if the fabricant tried to compensate for higher raw-silk prices than he had anticipated, by paying the weaver a lower piece-rate for the ordered cloth than for the sample. For the master-weaver, the major uncertainty was the mounting cost and especially the weaving time and difficulty for a newly-designed fabric. Some of these elements were sufficiently standardized to make adequate estimates, but many difficulties and extra costs were not foreseen when the piece-rate was agreed upon before the initial mounting of the fabric. Both fabricant and master might have been interested in revising the piece-rate, when these uncertainties were

eliminated, after the samples were completed. But even then their interests frequently diverged rather than harmonized, and in any case the rule of individualized negotiation, order by order, for each new style, was all the more strongly confirmed.

'Common' (less-complex) plain silks were generally less subject to such uncertainties and therefore their piece-rates were more easily standardized. Weavers of these silks also depended less, in principle, on any single fabricant for their orders. Standardization of piece-rates and cloth styles for these fabrics, as well as low mounting costs, reduced the advantage or necessity of remaining with the same fabricant and facilitated transfers from one merchant-manufacturer of plain silks to another. But weavers of simple plain fabrics, offering less weaving skill, were also less valuable individually to the fabricants and were therefore abandoned by them more readily, when demand for plain cloths fell. These weavers were less able to isolate their piece-rate from short-run changes in labor supply, moreover, because of the flexible pool of 'floating' journeymen and eventually because of the countryside weavers, both of whom were capable of weaving the simpler fabrics. Weavers of plain silks were therefore especially prey to the "speculator" who "acts as if it were the last day to exploit [his] fortune," who "raises up against his colleagues a competition more ruinous than loyal. . . ." <sup>100</sup>

Fabricants of this type often 'gnawed' at the meager piece-rates of these plain-cloth weavers by failing to return their weft bobbins, <sup>101</sup> and

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<sup>100</sup>Weichmann, 'Causes de la décadence de l'industrie,' "Mémoires recueillis. . . ."

<sup>101</sup>Bezucha, The Lyon Uprising of 1834, p. 44.

by cheating on the measures of terminated fabric with cannes à coulisse, "whose length is arbitrary."<sup>102</sup>

The dependence of fancy-cloth weavers on the economic 'patronage' of individual fabricants and the susceptibility of plain-cloth weavers to the unscrupulous competition of several fabricants at once, simply underscored how little the master-weavers controlled their own affairs. Their position was in fact ambivalent, one of "'double character' . . . --employer on the one hand, employee on the other."<sup>103</sup> The master-weaver Weichmann illustrated this 'double character' most vividly for the law concerning wastes of silk thread:

the master-weaver is given two positions by virtue of the same law and this in order to take advantage of that [position] which accuses him most strongly. Thus he is treated as an entrepreneur, when he claims the tirelle or the waste allotment due by virtue of the unrepealed law. The prud'homme dismisses his demand because of an agreement written on his livret, whether or not he can read it. . . .

He is treated as a worker when he is summoned before the correctional police court for having material, even weft which, as entrepreneur, he could return or keep, after having regulated his accounts.<sup>104</sup>

A similar ambivalence was evident in the surveillance of the looms of the master-weaver and his workers by the commis of the fabricant during mounting and weaving. Although the master directed his own shop in principle, the commis had the right to inspect his work and to suggest or order changes as he saw fit.

Largely because of their 'double' position, masters harbored

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<sup>102</sup>Petition of Tray et al. to Emperor, August 1860.

<sup>103</sup>Bezucha, The Lyon Uprising of 1834, p. 22.

<sup>104</sup>Weichmann, 'Usages,' "Mémoires recueillis. . . ."

ambivalent sentiments toward the merchant-manufacturers. Louis Reybaud remarked that the enthusiasm of the weaver for his craft done well submerged any antagonism between master and fabricant. Rather the master shared in the fabricant's own pride in the superior product without demanding personal recognition. He "enjoys the triumph of the fabricant as his very own. He will have neither the honor nor the profits from it, [but] such does not matter; he will have the knowledge that it was his work."<sup>105</sup> Yet the same observer noted "the secret animosities and thoughts of revenge" directed against the merchant-manufacturers by the same workers,<sup>106</sup> because of their success and the master's poverty and insecurity. The master felt that he did not

receive in the profit, the part which is legitimately his, that he is harmed, sacrificed, abandoned without defense to speculators who abuse his strength when it is convenient for them and, at the moment this convenience disappears, abandon him without pity.<sup>107</sup>

The behavior of the fabricants only re-enforced such ambivalent sentiments. They were known both for their benevolent paternalism towards their workers and for their cold, seemingly heartless abandonment of their labor when demand slackened. The fabricant Claude-Joseph Bonnet gave his weavers prizes for good work in November 1867, and C. Cottin, a relative of Bonnet, allocated 10% of his budget of the same year to charitable works, among them the charities of Lyons which soothed the miseries of the silk workers impoverished by the recent economic crisis.<sup>108</sup> Yet

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<sup>105</sup> Reybaud, Etudes . . . Condition des ouvriers en soie, pp. 129-30.

<sup>106</sup> Ibid., p. 22.

<sup>107</sup> Ibid., p. 140.

<sup>108</sup> "Chronique locale," Le Progrès, November 20, 1867; Henri Pansu, "L'analyse de la fortune et des livres de compte de ménage: l'exemple d'un

observers unanimously remarked about the cold, aloof demeanor and the rather heartless professional calculations of the same class of fabricants. The "fabricants are . . . very positive, very reflective, little-outgoing personalities, who like to close themselves in the circle of their family and to wall up their existence. . . ." <sup>109</sup> During periods of economic crisis, noted Reybaud, they did not mix feeling with calculation, for some even released their workers before the market had fallen completely. <sup>110</sup> In 1852 the newly-appointed prefect of the Rhône Vaisse reported to his superior that the lack of personal relations between workers and employers was the source of much of the antagonism between the two:

The population of the countryside, the working population of the cities are left too much to themselves. The lack of many relations, of frequent contact with the upper classes seems to maintain a separation that harms the passion for equality, essence of the national character. <sup>111</sup>

Weavers demonstrated their ambivalent attitudes towards the merchant-manufacturers in their movements of association. The Society of Mutual Duty (the mutuellistes), for example, expanded its membership in the early 1830's largely in antagonism to the merchant-manufacturers, to prevent their exploiting the weavers by lowering piece-rates in times

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grand bourgeois lyonnais de la fin du XIXe siècle," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1973, no. 3, p. 67.

<sup>109</sup> Audiganne, Revue des deux mondes, XV (August 1, 1852), 533.

<sup>110</sup> Reybaud, Etude . . . Condition des ouvriers en soie, p. 191.

<sup>111</sup> Report from Vaisse, Prefect of Rhône, to Minister of Interior, July 4, 1852, AN, Fic III Rhône 5, Comptes-rendus administratifs (An III à 1870).

slack demand for silk cloth. Yet the Echo de la fabrique, the house organ of the mutuellistes, praised attempts to conciliate the two classes by means of philanthropic associations involving the merchant-manufacturers as 'honorary members.'<sup>112</sup> The cooperative movement of the 1860's stressed the importance of workers' autonomy from capitalists and government in achieving the material and moral "emancipation" of the working class.<sup>113</sup> In fact, the strong appeal of the cooperative movement to the silk weavers of Lyons lay in its promise to return the ownership and control of their trade to themselves, liberating them from their dependence on the 'capitalist' merchant-manufacturers.<sup>114</sup> Yet most weavers accepted readily the participation of 'capitalists' -- including presumably merchant-manufacturers -- in their producers' cooperative, the Association of Weavers, after 1866.<sup>115</sup> Though jealous of their independence and aware of their fundamental differences with their employers, the silk weavers of Lyons thus nevertheless welcomed conciliatory gestures from the latter and even tailored their own associations to accommodate such collaboration. The persistence of such a collaborative mentality even amidst the resurgence of antagonism between the two classes was especially

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<sup>112</sup>See, for example, the article praising an association de prévoyance proposed by Benjamin Rolland of Lyons, "Projet d'association de M. Benjamin Rolland," Echo de la Fabrique, April 29, 1832.

<sup>113</sup>'Mémoire adressé par les associations coopératives de la ville de Lyon, à MM. les membres de la Chambre de Commerce,' in Eugène Flotard, "Bulletin coopératif," Le Progrès, December 25-26, 1865.

<sup>114</sup>This argument is made in Chapter VI.

<sup>115</sup>"Assemblée générale de l'association des tisseurs," Le Progrès, November 15, 1866; "La patience, c'est la réussite," Le Progrès, November 23, 1866.

apparent in the frequent reception of merchant-manufacturers as 'honorary members' in mutual aid societies of silk weavers throughout the nineteenth century.<sup>116</sup>

### C. The Formation of Class Solidarity

Such promotion of collaboration through voluntary association did not alter the essential dependence of weavers upon the merchant-manufacturers in their daily relations of work. The degree of actual dependence varied, however, according to the economic position of particular master-weavers and of particular fabricants. Individual masters could reduce their dependence on any single fabricant by allocating their various looms among several simultaneously. Fabricants in turn had less power over a single weaver when his marginal contribution to the enterprise was relatively high, because of the relatively small number of total looms occupied by the fabricant and/or because of the relatively large investment in raw silk, dyeing, and other auxiliary services per loom. Fabricants also had less freedom to make their weavers more dependent on them (by extending credit, for example) when their ties with the silk merchant, upon whom they depended for their costly raw material, were less certain and their profit margins subsequently lower. Distribution of resources and productive factors among weavers and fabricants, taken as groups rather than as individuals, conditioned, in short, the range and intensity of class relations between the two.

Although class did not necessarily absorb or dominate all other types

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<sup>116</sup>See the dossiers of individual mutual aid societies for a demonstration of this, in ADR, 5X - 1954 - Sociétés de secours mutuels.

of relations in the silk industry (kinship, neighborhood, craft, etc.), class identity and class consciousness nevertheless represented an important aspect of social intercourse among silk weavers and between them and the merchant-manufacturers. This section focuses primarily on class identity among master-weavers and within the silk-weaving craft rather than within society at large. Such identity had two 'components': the masters' perception of the fabricants as the 'other' class, that is, as 'representatives' of a collective body apart from themselves, rather than as individual persons; and the masters' perception of themselves as a class in relation to the fabricants, that is, as a mass unified by a common position of dependence or strength vis-à-vis the fabricants, rather than as separate individuals or groups of individuals without a common identity. To assess the nature and extent of class solidarity based on this common identity, this section will analyze the various degrees of dependence of each weaver on each single fabricant formed by their work relation, and the networks of contact and communication between each weaver and the class of fabricants, on the one hand, and between each weaver and the class of weavers, on the other hand. The section will then evaluate, for different cloth specialties and scales of enterprise, the objective foundations of comparison and communication, formed by these networks, upon which a subjective awareness of class (class consciousness) could be developed among master weavers in the two-fold sense of awareness of the fabricants as collective and other, and awareness of themselves, the weavers, as collectively related to the fabricants, by conflict or collaboration in their occupational lives.

Relations between masters and fabricants differed widely according to the number of looms owned by the master. Masters with only one loom

were little more than the paid laborers of the fabricant who occupied this loom. Each weaving order established a wage relation with a single employer alone, for the contract on the loom coincided entirely with the personal obligation to weave and the right to a wage of the master-weaver. The loom was no more than part of his "labor power."<sup>117</sup> Debts incurred on that loom forced the master into exclusive dependence on the single fabricant, and losses from prematurely-terminated orders or from semi-legal 'gnawing' at the piece-rate could not be compensated by earnings on other looms, nor by shifting to fabricants 'established' on other looms.<sup>118</sup> Masters with several looms could reduce their exclusive dependence on one fabricant, and thus their pure laboring condition, by occupying the looms with orders of two or more different fabricants. In 1845, for example, some households with six looms worked for three or four fabricants at the same time.<sup>119</sup> In such cases the livret kept on each loom or with each fabricant did not represent the full extent of personal obligations and rights of the master-weaver. Although the

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<sup>117</sup>Karl Marx, Capital: A Critique of Political Economy, trans. Samuel Moore and Edward Aveling (New York: International Publishers, 1967), I, 167-76.

<sup>118</sup>The weaver could of course change fabricants on the same loom -- if he was not indebted to his present fabricant -- whether he had one or several looms, simply by re-entering the labor market to search for an alternate employer. This was very different, however, from re-allocating resources within the shop, by shifting the labor or at least the earnings from one fabricant to another already occupying looms in the shop. In the first case, the master depended entirely on his labor-power, embodied in his single loom and person, to provide his subsistence, thus relying personally and integrally on the labor market for his physical existence. In the second case, his personal need and his offer of labor power did not thus coincide, for the earnings from the other looms in the shop provided at least part of the former, and the latter was offered only to the extent that it was idled by the termination of the order, or by the insufficient piece-rate, of the original fabricant.

<sup>119</sup>Kauffmann, De la fabrique lyonnaise, p. 39.

weaver was personally liable for the debts incurred on each loom, these debts usually could not be transferred by one fabricant from his loom to a loom occupied by a different fabricant. Masters could therefore 'rationalize' their management of earnings and obligations over all looms by allocating the earnings of 'strong' looms, occupied by one fabricant, to debt repayment of 'weak' looms, occupied by another -- or by allocating the former to subsistence while the latter was amortized in a more favorable future -- in order to avoid becoming entirely dependent on continued employment at less advantageous conditions by a single fabricant. Masters could also rationalize their choice of fabricants, according to the terms proposed by each, for a single cloth category in which their offers were competitive, and therefore avoid reliance on the exclusive terms of any single merchant-manufacturer. Weavers with several looms, in short, could behave on the market as contractors offering their services to the highest bidders, rather than as mere laborers depending entirely for their subsistence on a single employer.

Besides these considerations concerning the distribution of looms among fabricants in the household of the weaver, the marginal contribution of each weaver to the earnings of the fabricant also influenced the strength of dependence, or bargaining power, between the two. Fabricants occupying very few total looms had a greater stake in the contribution of the last weaver hired than those occupying a very large number of looms. The costs of transition of the last cloth order from a known 'good' (or 'adequate') weaver to an unknown substitute were relatively higher for the few-loom fabricant than for the many-loom fabricant, relative to the total earnings of the establishment. These relative transition costs were even higher when the fabric was complex, because of

the smaller degree of substitutability of weaving labor at the margin -- the result of its skill and its higher 'learned efficiency' acquired through previous working experience with the design of the fabricant -- and because of the larger investment in mounting, in preparatory operations such as dying, and in 'reputation' for weaving on time. The bargaining strength of the individual weaver of the few-loom fabricant and the incentive of the latter to extend advantages to such a weaver (credit, premium on piece-rate, etc.) was therefore greater than that of the weaver of the many-loom fabricant, all other factors (such as cloth type, availability of labor, etc.) remaining equal. This was true for the individual weaver even when he needed the intervention of the entire group of weavers to acquire these benefits, through collective demand. Although the many-loom fabricant had more total investment to lose from an effective group action by his weavers than the few-loom fabricant, the individual weaver of the second could organize more rapidly and more solidly than the individual weaver of the first, since the size of the total group of weavers to organize was smaller in the second case.

The advantage of weaving for a many-loom establishment derived more from the resources which such an establishment could acquire, from which the demands of the weavers could be financed, than from the bargaining position of the weavers themselves. These resources were 'available' for bargaining, moreover, by the action of the group of weavers as a whole, not by that of any single weaver, because the fabricant had no incentive a priori to share his resources apart from a collective demand menacing the continued production of cloth (a strike). These resources were not simply the effect of economies of scale in production (from dyeing in bulk, for example) or in marketing. They were also, probably

largely, the result of relatively privileged access to the silk merchants upon whom the fabricants depended for their valuable raw material. Silk merchants extended credit on their purveyed thread besides insuring its quality and volume. Some merchants, like the Guerin family in the early part of the century,<sup>120</sup> became bankers and provided loan capital to 'worthy' industrialists before the 'democratization' of commercial discounting by the Bank of France and the rise of commercial and joint-stock investment banking after 1848.<sup>121</sup> Fabricants therefore had a strong vested interest in establishing close personal relations with these silk merchants, as by marriage, in order to secure their silk thread at reasonable cost paid on favorable credit terms, and to acquire the type of raw or thrown thread most appropriate to the peculiarly-designed fabric for which they were reputed.

Entry into the class of fabricants, and establishment in that class on a permanent footing, probably depended more on favored access to the silk merchants than on any other single factor. The security and the economic benefits of such privileged access enabled a fabricant to take best advantage of the opportunities of the market by expanding output extensively -- that is, by large-volume production, profiting from economies of scale -- or intensively -- that is, by concentrating on refinement and luxury for elegant designed fabrics, in order to capture high unit profits. The relatively larger profit margins over those of fabricants without access to the best merchants and therefore dependent

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<sup>120</sup> See Jean Lebasse, Le commerce des soies à Lyon sous Napoleon et la crise de 1811 (Paris: Presses Universitaires de France, 1957).

<sup>121</sup> Rondo Cameron et al., Banking in the Early Stages of Industrialization (New York: Oxford University Press, 1967), pp. 107-109, 124, 126.

on thread of inferior quality, acquired at relatively costly terms of credit, gave the privileged fabricants a larger resource base to extend benefits to their weavers, when the latter could demand such by their relative scarcity in the labor market or by their effective organization. Fabricants putting out to many looms presumably had favored access to one or several silk merchants, as did the few fabricants employing fewer looms who concentrated on very elegant fabrics. These could therefore acquire surplus resources for which their weavers could bargain. Fabricants of simpler cloths with few looms, on the contrary, probably did not have the same leverage with silk merchants and therefore acquired fewer surplus resources available for negotiation with their weavers.

Just as the class of master-weavers consisted of individuals with different degrees of dependence on a single merchant-manufacturer, the class of fabricants thus included some who were 'in' with the silk merchants and some who depended on the competitive market for their silk thread and expanded only at great risk. The former tended to concentrate large bodies of skilled and unskilled weavers attached to their 'houses' as to a patriarchal domain, or small bodies of highly skilled weavers 'belonging' to the house as much in the capacity of artists as of laborers. Such fabricants earned relatively large surpluses above costs for which their weavers could bargain, in the first case (many-loom fabricants) as a group, in the second case (few-loom, high fashion fabricants) as individuals. Relations between fabricants and their master-weavers were personalized in both cases, in the first, in the more distant, paternalistic manner of lord to peasant, in the second, in the more intimate manner of patron to artist. Among the fabricants with many looms, plain and fancy, or with few fancy looms, competitive relationships tended to be

oligopolistic on the labor, raw material or product markets -- or on several of these -- because of their nearly joint monopoly of factors on one or several of these markets and the distribution of these resources among relatively few competitors.

The fabricants with less-privileged access to sources of silk thread tended to occupy fewer looms with the simple, inferior cloths, because such size and quality of output was all their high-risk situation and low-profit margin could bear. Some of these even tried to short-circuit their unprivileged access to sources of thread by engaging in the illegal, disreputable trade of piquage d'once -- buying stolen thread on the sly from dyers, throwers, dévideuses and even weavers who thus supplemented their meager earnings with unreported wastes of thread. Since this black-market thread was cheaper than the market supplies offered by the silk merchant, these unfavored fabricants could compensate partially their lack of access to the sources of their 'betters.' Among these fabricants occupying few looms of the simpler sort, competitive conditions tended to be 'free' and 'pure' -- the economic language for severe and harsh. Profit margins were therefore low and opportunities to raise these by 'speculating' on the piece-rates of the weavers were temptations resisted only with difficulty when labor was abundant. As a result, even though the marginal laborer was relatively more important as a factor of production, compared to the marginal laborer of the many-loom fabricant of simple cloths, this weaver was relatively unimportant as an individual. A mere increase in the supply of labor on the outside market immediately reduced the internal value (internal to the fabricant's establishment) of the relatively unskilled individual weaver to near zero. The few-loom fabricant of simple fabrics also had

less moral investment in his own personal authority and respectability vis-à-vis his workers. In fact, he could not afford the occasional doles required for maintaining such authority, because of his low profit margins, and he did not need such authority for achieving his economic goals, because of the relative ease of substituting labor available in abundant supply for his low-scale operation. Whatever sense of responsibility he had towards his weavers was not enforced, therefore, by his interests with regard to them. Governed by the 'imperious' rule of external competition, his relations with them tended rapidly to lose that personal dimension which was the pride and privilege of the fabricant with many plain-cloth looms, or with few fancy-cloth looms.

While all large-scale merchant-manufacturers clearly belonged to the class of grands fabricants -- rich, influential and privy to the knowledge and credit of the silk merchants -- not all small-scale manufacturers were necessarily petits fabricants operating under the regime of cut-throat competition. Only small-scale manufacturers of the simpler, plain silk fabrics were subject to such a regime. Fabricants of the more elegant cloths usually were grands, by wealth and reputation, despite the few workers to whom they put out their orders. A police agent's survey of fabricants in 1866 suggests the extent of difference in size of enterprise between merchant-manufacturers of the more elegant silk fabrics and manufacturers of plain silks. The survey specifies cloth type for a majority of fabricants questioned -- for 76 of 125 fabricants responding (60.8%) to be exact.<sup>122</sup> The median number of looms per fabricant in each

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<sup>122</sup>"Soieries (Fabricants et Mds de)," February 15, 1866, AML, I2 - 47(B), Corporations: ouvriers en soie (1819 à 1870), No. 148.

of six different cloth categories (plus a seventh 'undefined' category accounting for the remaining 39.2% of fabricants whose cloth type was not specified) indicates the loom and worker size of the majority of establishments concentrating on that type of cloth. Comparison of the median and the mean for each, moreover, suggests the extent to which large-scale manufacturers were significantly larger than the majority of fabricants in the category. The excess of mean over median measures this difference. (In no case was the mean smaller than the median.) Table 1 summarizes these data for the seven categories and for the overall sample of 125 fabricants. Graph 1 then plots the median-mean comparison for each category. Two lines provide a useful perspective on the positions of each cloth type: the solid line, the perspective of the entire sample, the broken line, the perspective of perfect coincidence of median and mean values, indicating no significant difference between the size of relatively large-scale manufacturers and the majority of fabricants in the category.

Table 1

Median and Mean Number of Looms per Fabricant, for  
Selected Cloth Specialties, 1866

<u>Symbol</u>	<u>Cloth Category</u>	<u>Number of Fab</u>	<u>Number of Looms</u>	<u>Median L per Fab</u>	<u>Mean L per Fab</u>
UF	Unis-Façonnés	7	2,060	120	294.3
V	Velours	11	660	40	60.0
NI	No Indication	49	5,146	40	105.0
F	Façonnés	6	411	37.5	68.5
A	<u>All</u>	<u>125</u>	<u>12,796</u>	<u>30</u>	<u>102.4</u>
U	Unis-Taffetas	15	2,605	30	173.7
C	Châles	9	825	25	91.7
AE	Ameublement-Eglise	10	267	22	26.7

Source: "Soieries (Fabricants et Mds de)," February 15, 1866, AML, I2-47, No. 148.

Graph 1

Comparison of Median and Mean Number of Looms per Fabricant, for Selected Cloth Specialties, 1866

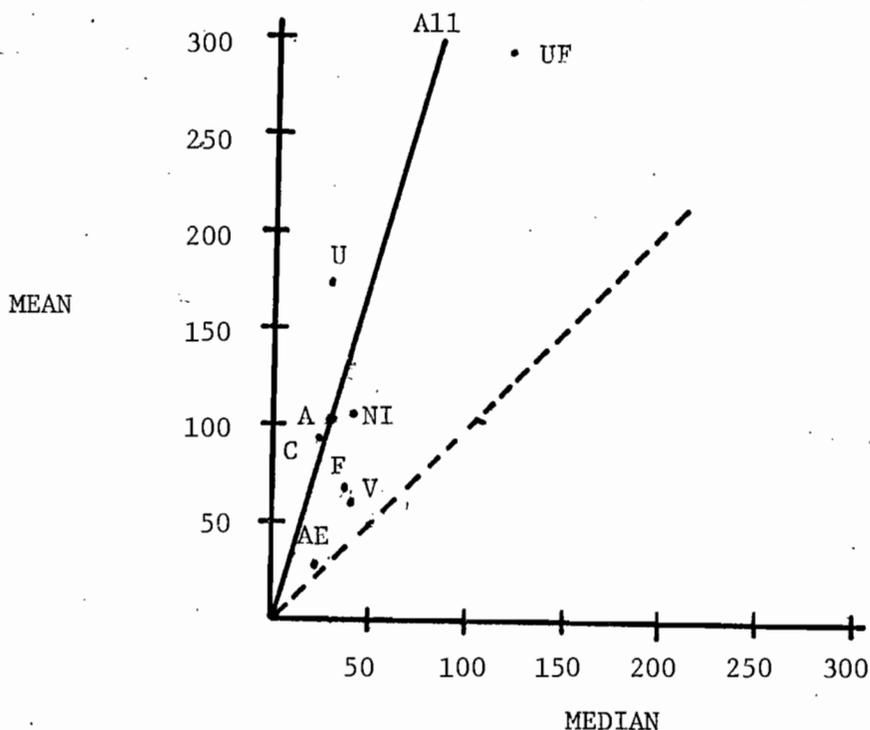


Table 1 indicates that the fabricants of the highly luxurious shawls (C) and the furniture and church cloths (AE) were concentrated at lower scales of manufacture than the generality of fabricants in the sample (A). In these cloth categories, small scale in terms of number of looms merely covered a very large scale, or intensiveness, of investment of resources and artistic skill in each loom occupied. The fabricants in these categories sold very few cloths, but the margin of profit on each sale was quite high. To the extent that these profits, or a portion of them, were re-invested in the enterprise, such re-investment concentrated on intensifying the quality of production -- seeking more novel, elegant combinations of design and texture -- rather than on expanding the quantity of output. The demand for this product was small and probably relatively inelastic to price increases for better quality,

Specialization on fancy cloths woven with the Jacquard loom (F) seems, on the contrary, to have increased the scale of manufacture slightly above the norm of the sample (A), and the combination of plain and fancy specialties in the same establishment (UF) increased median scale to the exceptionally high level of 120 looms, larger than any other category. Fancy cloths apparently earned sufficiently large profits to expand production extensively to additional looms -- both fancy looms and especially plain looms -- without absorbing a very large percentage in re-investment for the marginal loom occupied, as seems to have been true with the employment of additional shawl and furniture-church cloth looms. Putting out plain cloths alone (U), however, was more commonly associated with a lower scale of manufacture, equal to that of the norm for the sample (A), since profit margins were usually reduced by competition among most plain-cloth fabricants and additions to marginal looms therefore more difficult.

Graph 1 suggests that the few plain-cloth fabricants (U) putting out on a large scale were more likely to exceed the scales of manufacture of the majority of plain-cloth fabricants by a much greater margin, than the exceptionally large fancy-cloth (F), or combined fancy and plain-cloth (UF), fabricants exceeded the scale of most fabricants in their specialties. This is evident from comparison of the Mean/Median ratio of each category with that of the entire sample, represented by the solid line. To the left of this line, this ratio is greater than that of the sample norm, suggesting a greater than average tendency of very large-scale manufacturers to raise the mean number of looms occupied above the median. This is especially true of the plain-cloth category (U). To the right of this line, the Mean/Median ratio is less than that of the

sample norm, approaching the value of unity (broken line), suggesting a less than average tendency of large-scale fabricants to skew the distribution away from the median scale value. The two fancy-loom categories (F and UF) are both in this position. The very luxurious category of furniture and church cloths (AE) and the velvet category (V) are also in the same region. In fact these are closest to the broken line (Mean/Median = 1) representing very little difference in scale between relatively large-scale manufacturers and the median. Since furniture and church cloths were among the most elegant of the fancy cloths, their position on the graph seems to confirm the impression that fancy-cloth manufacture tended to erode any radical differentiation of scale between large and small putting-out establishments. Following this same argument, we might infer that the velvet category (V) contained several fancy-velvet fabricants, or at least several combined fancy and plain velvet fabricants, which reduced the difference between mean and median values for velvet manufacture and therefore situated velvets to the right of the solid line and close to the broken line (Mean/Median = 1). Only in the exclusive plain-cloth category was putting out on a large scale truly distinctive, where it was generally more difficult to achieve.

The probability of dependence of master-weavers on single fabricants, on the one hand, and the probability of large vs. small scale of manufacture among fabricants, on the other hand, illumine the particular kinds of relations between these two agents of production in the silk industry of Lyons, with respect to two issues. These are the extent to which such class relations were experienced by the master-weaver as relations to several fabricants as opposed to one fabricant and the extent to which an individual master-weaver shared such experiences with

other weavers, through contacts established in the same way -- that is, in the occupational relationship between master-weaver and fabricant. Such issues concern, in short, the extent to which masters encountered fabricants as a class, on the one hand, and the extent to which masters encountered one another collectively, developing an awareness of themselves as a class, on the other hand.

The first issue concerns the individual weaver's discrimination, on the basis of his own experience with the fabricant, between idiosyncracies and common patterns of behavior among fabricants -- between the personal and the general, the individual and the class character of the fabricants who employed him. Such discrimination based on personal experience intensified with the number of fabricants whom the weaver encountered as employers of his looms. This number increased both with the number of looms occupied by several different fabricants at once and with the frequency of changes of fabricants occupying each loom.

Master weavers with only one or two occupied looms, working for one of the exceptionally large plain-cloth enterprises -- such as the maison Bellon, which occupied 1600 looms in Lyons in 1866<sup>123</sup> -- most likely had a very low level of discrimination based on direct encounter with the fabricants. These weavers depended on the single large enterprise for each weaving order, or set of orders, and probably remained with the same enterprise as long as they continued to weave plain cloths. The latter tendency resulted from the relatively greater benefits which such an establishment could extend -- such as higher piece-rates, continued cloth orders and favorable credit terms for advances on the wage -- as

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<sup>123</sup>Ibid.

compared with small-scale, plain-cloth enterprises. The only comparable alternative to weaving for the same large enterprise was weaving for another large enterprise, but oligopolistic competition on the labor market among the few large plain-cloth fabricants probably minimized differences in benefits among them.

Weavers with three or more occupied looms in their households were more likely to have a high level of discrimination of the collective character of the fabricants than weavers with fewer active looms working for large plain-cloth establishments. Presumably the former could diversify their loom employment among several different fabricants at once and thus encounter several directly at the same time. In practice, this was least likely to happen among the many-loom weavers of medium or small fancy-cloth establishments. These weavers probably remained with the same fabricant as long as possible because of the premium on permanent individualized relations between masters and fabricants, sometimes reinforced by indebtedness of the former to the latter for sums advanced for large mounting costs. This premium was largest among the medium or small fancy-cloth establishments because the greater marginal contribution of each individual weaver to the enterprise -- as compared with the marginal contribution of each in the large fancy establishments and of each in the small plain establishments -- gave the fabricant more incentive to keep good weavers by extending them benefits. Many-loom weavers of the relatively large fancy-cloth establishments, and of the larger combined fancy-plain enterprises, were more likely to weave for several fabricants at once, or at least to change fabricants often, because of the low marginal value for such establishments of 'personalizing' relations with any single master-weaver.

Many plain-cloth weavers, finally, discriminated highly among fabricants by changing them often. These weavers could have had very few or many occupied looms. In both cases, such instability was most likely in the case of their employment by the very small-scale, highly competitive plain-cloth establishments rather than by the large plain-cloth enterprises. None of these small fabricants had any special interest in keeping the same weavers when labor was abundant. These weavers therefore passed from one fabricant to another and experienced their total dependence on single enterprises as a dependence on another class represented by the particular fabricant of each enterprise, rather than as a dependence on a particular individual.

Weavers shared their experiences of their relations with fabricants, among themselves, in two ways, one direct and the other indirect. Either they wove for the same fabricant and shared 'directly' among themselves their knowledge of the policies and personnel of the same establishment, or they wove partially or temporarily for different fabricants and shared 'indirectly' their experiences of these latter at a third establishment from which both accepted orders simultaneously. In either case, the weavers typically met in a cage of the fabricant -- the room behind the counter of his store where the weavers waited to receive their orders or to have their completed piece measured, weighed and evaluated for a wage.<sup>124</sup> Weaver-to-weaver encounter of the first ('direct') type -- in the cage of a single fabricant -- characterized most likely the

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<sup>124</sup>For a vivid description of a weaver-fabricant encounter in the cage, see Robert J. Bezucha, "The 'Preindustrial' Worker Movement: The Canuts of Lyon," Modern European Social History, ed. Robert J. Bezucha (Lexington, Massachusetts: D. C. Heath, 1972), pp. 102-103.

experiences of the relatively stable and low-discriminating weavers of medium and small fancy-cloth establishments and of large plain-cloth establishments. The former were not likely to employ masters currently or previously employed by other fabricants as well, and the weavers' awareness of themselves as belonging to a larger collectivity, like their ability to discriminate individual personality from class character in their single fabricant, was therefore presumably weak. More aware of their commonness with weavers outside were the one- or two-loom weavers of the exceptionally large plain-cloth establishments. These at least had contact with weavers occupying three or more looms and working for several fabricants at once. The latter weavers' experience of other fabricants, for whom they wove at the same time, and of weavers of these other establishments, was therefore much broader. Because of the very large absolute size of such a plain-cloth enterprise, moreover, these weavers experienced the mass collectivity of large-scale industrial organization more intensively than the stable fancy-cloth weavers of small establishments. Some 800 workers of the 1600-loom Bellon-Conty plain-cloth establishment, for example, passed through the Bellon cage at 8 rue Griffon about once or twice each week in early 1866, but only about 30 workers of the 60-loom Emery fancy-cloth enterprise passed through his cage at 17, rue Bat d'Argent a few blocks away.<sup>125</sup> Such experience of mass collectivity approximated most nearly the mass character of factory organization of labor without crossing the threshold to physical concentration or internal division of labor which together properly defined the factory system. Such was therefore the first step

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<sup>125</sup>"Soieries (Fabricants et Mds de)," February 15, 1866.

towards an awareness of class-ness on the part of these weavers, in the sense of 'mass,' although their relatively stable employment by a single fabricant obscured the differentiation of their mass from that of the fabricants as a whole.

Weaver-to-weaver encounter of the second ('indirect') type was especially characteristic of the contacts of weavers who changed fabricants frequently. These weavers typically experienced the 'mass' character of their profession by 'comparing notes' with weavers who worked for different fabricants than themselves. Usually these weavers became aware of their common lot by passing from one small fabricant to another, sharing their knowledge and experience with an ever-widening network of colleagues. Unlike the weavers of very large establishments, their experience of the mass character of their class was less intensive in each particular relationship with their fabricants, but their experience of dependence on (and conflict with) a mass of fabricants was greater. Their awareness of their own collective character was therefore refined to an awareness of its 'otherness' in relation to the class of merchant-manufacturers.

The incidence of high discrimination, suggesting strong awareness of the fabricants as a class, and of 'direct' sharing of this class awareness with other weavers, suggesting strong awareness of the weavers' own collective, mass character, among different cloth categories of weavers and weaving establishments, is impossible to determine with any statistical certitude. The tendencies towards such discrimination and sharing described above, for the different categories of weavers -- few-loom and many-loom, plain-weaving and fancy-weaving, stable and unstable -- and for the different categories of putting-out establishments -- large and

small, plain-cloth and fancy-cloth -- are therefore intended to be no more than hypothetical. These tendencies are very reasonable hypotheses, however, and probably give a fairly accurate impression of the different degrees of class awareness among the different categories of the fabrique of Lyons. It would be useful, therefore, to summarize the tendencies in rough tabular form, assigning scores for each 'component' of class awareness discussed above, in order to estimate relative degrees of overall 'class-consciousness' for the several categories of weavers and weaving establishments. Four of the most interesting categories of weavers, distinguished by size of weaving establishment and cloth type, have been selected for the purpose of this summary: weavers of small-scale fancy-cloth establishments, of small-scale plain-cloth establishments, of large-scale fancy-cloth establishments and of large-scale plain-cloth establishments. These did not of course exhaust all possible types of situations -- they ignore, for example, combinations of plain and fancy weaving and also shifts of individual weavers from one category to another -- but they represent the most important groups for purposes of analysis and probably statistically as well.<sup>126</sup>

Levels of potential 'class-consciousness' are valued 0 (low), 1 (high) and 2 (very high). These are computed from values for each of the two major 'components' of master-weavers' class-consciousness mentioned above -- their awareness of fabricants as a class, and their awareness of themselves as a class. Each of these two is assumed to have equal weight in the determination of overall potential class-consciousness. For each component, however, two differently-weighted

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<sup>126</sup>The fancy-cloth category includes regular étouffe-façonnée, shawl, and furniture and church-cloth establishments.

sources of awareness constitute the general awareness (of fabricants as class, or of weavers as class). These are the direct individual experience of the weaver -- presumed more weighty, or significant -- and the indirect shared experience of several weavers -- presumed less weighty, because based on secondary knowledge communicated by another weaver rather than on personal experience. The first source is given a weight of 2, the second a weight of 1. The particular values in each of the four categories of source-based awareness -- 0 (low), 1 (medium) and 2 (high) -- are assigned on the basis of our previous analyses of levels of discrimination and types of weaver-to-weaver encounter in master-fabricant relations. For the question of awareness of fabricants as a class, the level of discrimination 'evaluates' awareness based on the direct personal experience of an individual weaver, and the amount of contact of a weaver with others weaving for different fabricants than himself 'evaluates' awareness based on the indirect shared experience of several weavers. For the question of awareness of the collective character of the weavers by themselves, the size of the enterprise values degrees of direct personal awareness, and the frequency of transfer from one enterprise to another measures the extent of awareness based on sharing experiences with other weavers. These assigned values are of course only impressionistic, but at least they present more clearly some of the relative judgements of tendencies made in our previous analysis. The following table summarizes these results:

Table 2

Evaluation of Potential Class-Consciousness

Category of Weaving Establishment	Awareness of Fabricants as a Class		Awareness of Weavers as a Class (Awareness of Their Collective, Mass Character)		Overall Level of Potential Class-Consciousness
	WEIGHT = 2	WEIGHT = 1	WEIGHT = 2	WEIGHT = 1	
	Based on Direct Individual Experience of Weaver (Level of Discrimination)	Based on Indirect Shared Experience of Several Weavers (Amount of Contact with Weavers with Different Experiences of Fabricants)	Based on Direct Individual Experience of Weaver (Size of Enterprise)	Based on Indirect Shared Experience of Several Weavers (Frequency of transfer from One Enterprise to Another)	Weighted Average of Four Columns
Small-Scale Fancy-Cloth Establishment	0	0	0.5 <sup>2</sup>	0	0.17
Small-Scale Plain-Cloth Establishment	1	2	0	2	1.00
Large-Scale Fancy-Cloth Establishment	1	2	1 <sup>2</sup>	1	1.17
Large-Scale Plain-Cloth Establishment	0.4 <sup>1</sup>	1	2 2	0.4 <sup>3</sup>	1.03
<u>Values</u>					
0	low	small	small	infrequent	low
1	high	medium	medium	frequent	high
2	highest	large	large	very frequent	very high

Notes on Table 2:

<sup>1</sup>Based on the fact that 40% of Bellon weavers were 'independent' with high discrimination, and 60% were 'dependent' with low discrimination. (See Appendix I.)

<sup>2</sup>Based on fact that median size of fancy-loom establishment (37.5 looms) is slightly larger than median size of all fabricants in sample (30 looms) and that large-scale plain-cloth establishment in the sample tended to be larger than large-scale fancy-cloth establishment. (See Table 1.)

<sup>3</sup>Based on fact that only 40% of weavers of Bellon establishment were 'independent.' Presumably their incidence of transfer to another establishment was greater than that of the 60% 'dependent' weavers, because of their awareness of alternatives among fabricants occupying their other looms. (See Appendix I.)

Table 2 demonstrates the tendency of fancy-cloth weaving to generate master-fabricant relations favorable both to the least consciousness of class, in small-scale, very personalized establishments, and to the strongest awareness of class, in relatively large enterprises. The latter generated high class awareness not so much because of an exceptionally high degree of awareness of fabricants' or weavers' 'class-ness,' nor because the sources of such awareness were especially strong; rather the strength of overall class-consciousness of this group derived from a relatively even and average strength of awareness of collective character based both on the personal experience of individual fancy weavers and on the shared experience of several together. Overall class-consciousness was also quite high among all plain-cloth weavers. This was not surprising. If such consciousness of class was indeed a product of modern free-enterprise capitalism, plain-cloth weavers were more subject than most other workers in this luxury craft both to the regime of free competition and to the very large-scale manufacture for a mass market. Apparently this second characteristic of industrialization was slightly more important for generating an awareness of class among plain-cloth weavers, for such weavers in large establishments score slightly higher than their colleagues working for small fabricants. In fact, taking the scores for the two large-scale categories together -- fancy-cloth and plain-cloth establishments -- we might conclude that large scale of manufacture was the single most important determinant of high potential class-consciousness among weavers.

This same conclusion is suggested (though not proven) by the prominent role taken by plain-cloth weavers -- those most likely to work for large establishments -- in the most class-conscious form of

association, among the four discussed in this study -- industrial resistance. This role was clearest in 1869-1870, when the plain-cloth weavers organized the first mass movement of resistance -- that based on their own cloth category<sup>127</sup> -- and then initiated the centralization of the separate movements of their own and most other cloth categories (fancy cloths, shawls, gilets, etc.) into the craft-wide resistance federation, the Société civile de prévoyance et de renseignements des tisseurs de la ville de Lyon.<sup>128</sup> Under the leadership of the plain-cloth weavers, the Société civile extended its financial support and organizational campaign even to the countryside, aiding the rural weavers of Isère in their strike of March-April 1870.<sup>129</sup>

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<sup>127</sup>The furniture-cloth weavers initiated the resistance movement on a small scale in August 1870. Weavers of Levant cloths followed them in September. The small resistance societies which emerged out of the efforts of these weavers to negotiate a tarif with their employers did not engender a mass movement of resistance among the silk weavers of the fabrique as a whole. Only with the organization of plain-cloth resistance societies did the movement assume a truly mass character. This conclusion is based on an analysis of several different sources, the most important of which are the "Chroniques locales" in Le Progrès, October 24 and 30, November 11, 17 and 18, and December 2, 1869; and police reports concerning weavers of ornements de meubles, Levants and unis of August 28 and 30, September 4 and 23, and November 8, 1869, AML, I2 - 47(B).

<sup>128</sup>This conclusion is based on a reconstruction of the sequence of events involving the formation of the Société civile, from police reports concerning meetings of weavers of unis (November 14, 1869) and of confections and armures-robes façonnées (November 28, 1869), AML, I2 - 47(B), and from the "Chroniques locales" of Le Progrès, January 14 and 28, February 4, and March 1, 14 and 20, 1870.

<sup>129</sup>This is, again, a conclusion based on an analysis of several different sources, especially the following: Report of the Special Police Commissioner of the Brotteaux to Prefect of Rhône, March 28, 1870, AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870), No. 156; report of the Chef de commandement de gendarmerie de l'Isère to Prefect of Isère, April 12, 1870, ADI, 166M - 1 - Grèves (1858 à 1877); report by Clatel and Desflache concerning work of commission of fancy-cloth weavers, in Le Progrès, June 26, 1870.

The cooperative movement of the 1860's, dominated by fancy-cloth weavers and concerned largely with problems of special interest to them, was, by contrast, class-conscious only in a diffuse, more ambiguous manner. Though advocating cooperation as a means of making workers "owners of [their own] labor"<sup>130</sup> and preoccupied "with the desire of improving . . . the situation . . . of the entire class to which [they] belong,"<sup>131</sup> cooperative leaders accepted the financial and technical assistance of local bourgeois in organizing their associations. As we saw earlier, the silk weavers in particular accepted capitalists as members of their producers' cooperative to enlarge its financial base. Moreover, some forms of cooperation -- notably consumers' cooperation -- were as much divisive of class solidarity by their attachment to societal autonomy, based on neighborhood rather than class, as concerned with improving the material welfare of the workers belonging to the organization, or residing in the neighborhood served by it.<sup>132</sup> Cooperation demonstrated in fact that other forms of collective solidarity, also

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<sup>130</sup>Monet, "Tissage," in Commission ouvrière, Rapports des délégués lyonnais envoyés à l'Exposition universelle de Londres (Lyon: Commission ouvrière, 1862), p. 154.

<sup>131</sup>Chambre de Commerce de Lyon, Commission des Manufactures, Enquête sur les sociétés coopératives, délibérations, December 7, 1865, AML, I2 - 45, No. 17.

<sup>132</sup>This conclusion is based on an examination of membership lists of consumers' cooperatives in Lyons and on evidence for resistance of the societies to the formation of a federation of consumers' cooperatives. The membership lists are located in the following sources: AML, I2 - 45; ADR, 4M - Police administrative - Associations, coops; ADR, 9U - Sociétés: Constitutions et modifications, dissolutions; and ATCL, Actes des sociétés. Evidence for resistance to the federation includes the following: 'Projet de l'établissement d'un magasin central de commerce,' in Flotard, "Bulletin coopératif," Le Progrès, December 18, 1865 and April 15, 1867.

based on the daily social and economic experience of the weavers, competed with craft and class in fashioning their social identities and in commanding their loyalties in movements of association. As the patterns of consumers' cooperation suggested, one of these was neighborhood.

#### D. The Formation of Neighborhood Solidarity

The most enduring foundation for neighborhood sharing was economic necessity. "The neighbor," wrote Max Weber, "is the typical helper in need, and hence neighborhood is brotherhood, albeit in an unpathetic, primarily economic sense."<sup>133</sup> The master-weaver had one primary need which he rarely could satisfy without the help of other masters in his neighborhood; namely, the need for auxiliary weaving implements. In 1850 the master-weaver Weichmann estimated the value of the "Accessories of a plain-loom shop" at 193 francs, compared to 139 francs for the loom itself and the loom parts. "Yet," noted Weichmann, "we all must depend upon one another for loom tools in order to meet all kinds of changes."<sup>134</sup> Neighboring weavers provided most of these accessories, because this was more convenient than transporting them from the cage where other fellow-weavers, or the fabricant himself, might have provided the extra tools. Neighborhood sharing of this kind probably also included agreements between relatively affluent masters with cannetières (worth 170 francs each<sup>135</sup>) and masters with extra labor or extra time, to

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<sup>133</sup>Max Weber, Economy and Society, ed. Guenther Roth and Claus Wittich (New York: Bedminster Press, 1968), I, 361.

<sup>134</sup>Weichmann, 'Matériel d'un métier d'uni/Accessoires d'un Atelier d'uni,' 'Inventaires de métiers,' "Mémoires recueillis. . .," 2ème Partie, Chapitre 2.

<sup>135</sup>Ibid.

exchange weft preparation (cannetage) by the first for assistance in mounting by the second. Such exchange strengthened casual neighborhood encounters with concrete economic ties, forming networks of communication among weavers who did not necessarily weave for the same fabricant.

Two other sources of neighborhood contact based on occupational need were technical problems encountered in weaving and contacts with auxiliary workers and journeymen passing from one master to another. Technical difficulties frequently forced weavers to seek the aid of more experienced masters in their neighborhoods. 'Shop talk' filled many leisure hours in cafés and squares, among these artisans known for their pride in their craft. Technical problems encountered in a particular shop thus easily became the major topic of conversation among weavers in the neighborhood, who vied with one another to find a solution. Discussions of technique easily passed to discussions of work conditions, particularly of the position of the master-weaver in relation to the fabricant. Such discussions also developed out of concerns among master-weavers about shortages or insubordination of auxiliary workers, journeymen and apprentices. Such were the concerns which motivated the formation of the Society of Mutual Indication in 1827, which soon reorganized into the Society of Mutual Duty, with the purpose of defending the economic interests of the masters against the fabricants.<sup>136</sup> Subordinate workers provided indirect networks of communication among masters besides serving as pretexts for meeting and organization. As these subordinates passed from one shop to another, they transmitted the 'news'

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<sup>136</sup>Fernand Rude, L'insurrection lyonnaise de novembre 1831, pp. 125-34; Jules Favre, De la coalition des chefs d'atelier de Lyon (Lyon, 1833).

of several masters to each one for whom they worked. The content and thoroughness of such reporting varied widely, of course, but the existence of such channels of communication among relatively immobile master-weavers enforced their solidarities of craft, class and neighborhood. Such channels proved extremely effective means of organizing resistance to the violation of the tarif by the fabricants in November 1831, for example.<sup>137</sup>

Besides broadening weavers' sense of the dimensions of their class, neighborhood also occasioned more frequent contacts with workers outside of the silk-weaving profession. The nature and range of these contacts varied with the occupational patterns of particular neighborhood settlements. These were least developed in those sections of the city dominated by concentrations of silk weavers, such as the Croix-Rousse plateau after 1830. In 1866, for example, 75% of the population of the Croix-Rousse engaged in industry (21,159 of 28,412 persons) were silk workers. Most of the remainder provided services to the rest of the population, either food and clothing, or construction and repair of looms and furniture. Most of the commercial population in this section also served the needs of the weavers, as grocers, wine merchants or grain dealers (65% of persons engaged in commerce). Most contacts of weavers outside of their profession were therefore among retail shopkeepers -- grocers, café owners, butchers and bread-bakers -- and independent artisans, like cobblers, tailors and wood-workers. Contacts with non-weaver workers were more frequent and varied, on the other hand, in the more recently settled industrial sections, notably the Brotteaux-Guillotière. In 1866, only

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<sup>137</sup>Rude, ibid., pp. 336-37, 351-52.

11% of the industrial population in this area (6,276 of 55,586 persons) were silk workers. The remainder was divided among other textile trades (8%), food and clothing trades (26%), building (21%), transport and metal trades (15%) and sundry other occupations (19%), including wood-working, ceramics, furniture-making and chemical manufacture (2,436 workers).<sup>138</sup> Weavers in this section of the city thus encountered a much more diversified laboring population in their daily neighborhood contacts, several of whom worked in concentrations of manufacture very different from the semi-artisanal domestic organization most familiar to weavers. Some of these, notably the ceramic and chemical workers and many of the metal-working mechanics, were employed in the few factories set up in this section of the city. Others, like the builders, the largest single occupational group in the area, worked in large teams on common construction sites, where labor was divided by task. The semi-proletarian conditions of these concentrated laborers were shared with the weavers through neighborhood encounter in cafés and grocery stores. Such sharing added a new dimension to the weavers' more limited notions of class founded on their domestic organization -- enhancing that notion from a differentiation of fabricants and weavers within the single trade of silk manufacture to the more general differentiation of employers and workers in industry as a whole.

Bonds of communication and fellow-feeling based on neighborhood contacts either with fellow weavers or with workers in other industries were strengthened by particular neighborhood traditions. These traditions derived from natural geographical frontiers separating one neighborhood

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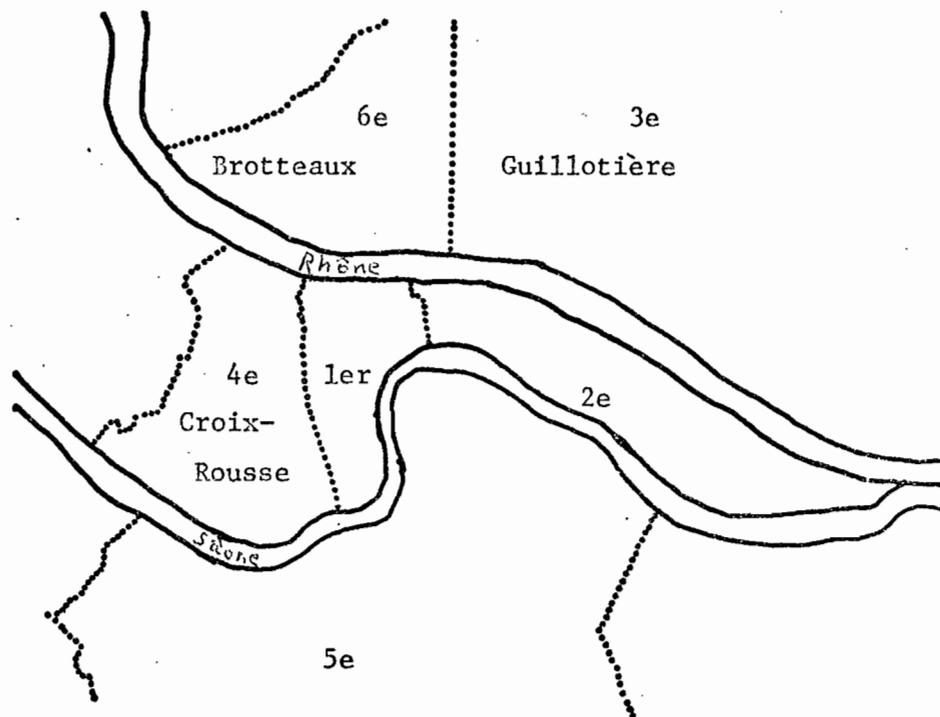
<sup>138</sup> ADR, 5M - 1866: Dénombrement de la population de la ville de Lyon.

from another and from common patterns of settlement and 'home rule' in these naturally delimited areas. Although neighborhood identities based on such factors frequently formed around streets or small quarters, neighborhood perimeters more traditionally differentiated 'sections' of the city coinciding more or less with the limits of the five arrondissements of Lyons in 1866. (See map of Lyons, p. 116.) Geography divided these sections most clearly from one another. The Croix-Rousse (Fourth Arrondissement) was located on a plateau overlooking the central peninsula of Lyons, and the First Arrondissement huddled up against the southern flank of the plateau. This ascending slope of steep streets intersected by stairwells and alleys called traboules, where weavers carried their silk thread and their woven fabrics through the labyrinthine quarters without stepping onto major thoroughfares, led up to the flat summit which supported the old town of the Croix-Rousse. Both the First and Fourth Arrondissements were separated by the two rivers meeting in Lyons, the Rhône and the Saône, from two other major weaving districts -- the Fifth Arrondissement (Old Lyons), situated on the right bank of the Saône, and the Brotteaux-Guillotière (Third Arrondissement), on the left bank of the Rhône.

Different traditions of settlement and local independence strengthened the frontiers between these sections which geography had naturally ordained. Vieux Lyon of the Fifth Arrondissement had been the seat of the royal governor of Lyonnais and the home of the Cathedral of Saint-Jean and the canon of the diocese of Lyons. In the sixteenth century Lyons concentrated in this section the culture and trade for which it was renowned throughout the Mediterranean world, and in the eighteenth century most of the weavers of the Grande Fabrique lived there. The

Map of Lyons

1869



Source: Pierre Leon, Géographie de la fortune et structure sociale à Lyon au XIXe siècle (1815 - 1914) (Lyon: Université Lyon II. Centre d'histoire économique et sociale de la région lyonnaise, 1974), p. 226, Carte No. 3.

slopes of the First Arrondissement and the Croix-Rousse plateau had been settled more recently, after the ecclesiastical and monastic properties which dominated the area had been confiscated during the Great Revolution and sold to laymen. After 1804 silk weavers slowly invaded the slopes with their new Jacquard looms, seeking the larger apartments built especially for their new machines, and the cleaner air, brighter light and more appealing view of the city than their crowded dwellings across the Saône could provide. Migrations continued up the slope and onto the plateau during the next four or five decades, for the same reasons and also to escape heavy municipal taxes on food and drink (the octroi). By 1821 the plateau had enough people to justify its incorporation as a commune, and a royal decree of August 29 of that year duly established the town of the Croix-Rousse. The Brotteaux and Guillotièrè were settled even earlier by scattered workers and bourgeois before the Revolution, and by aristocrats after the Restoration, but only sparsely. Not until the 1840's were these areas populated to any great extent. Devastating floods from overflows of the Rhône made the area quite inhospitable for inhabitants until the government constructed dikes after 1856. When the area finally developed into a town, it grew in the American fashion, with square blocks and one- or two-story houses, rather than as the winding, tortuous streets of the Fifth and First Arrondissements, smothered by eight or twelve-story apartment dwellings. Like the Croix-Rousse, the Brotteaux-Guillotièrè had its own town government before 1851. By an imperial decree of March 24, 1852, however, it was incorporated into the city of Lyons along with the Croix-Rousse.

The weavers' movements of association often built upon these various traditions of neighborhood community, and some tended to re-enforce

neighborhood solidarity. In The Lyon Uprising of 1834, Robert Bezucha demonstrated a relationship between the concentration of weavers in occupationally 'polarized' sections of the city devoted largely to weaving and the emergence of the mutuelliste resistance movement in the late 1820's - early 1830's.<sup>139</sup> The mutuelliste Society of Mutual Duty in fact built its organizational structure on neighborhood cells -- twenty-member ateliers, or lodges, for sharing information concerning trade and technique, for exchanging weaving tools and for collecting and distributing funds for strikes and other purposes.<sup>140</sup> The exchange of weaving tools -- a major purpose of the Society and enjoined upon its members by the statutes<sup>141</sup> -- was, as we saw earlier, one of the concrete economic foundations for neighborhood solidarity in the silk-weaving communities. Neighborhood identity was also preserved and strengthened in several of the small weavers' mutual aid societies and in their educational-recreational-professional clubs. Several sociétés de secours mutuels began as neighborhood organizations, and some restricted membership to weavers residing in certain quarters of the city.<sup>142</sup> Weavers' clubs

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<sup>139</sup>Bezucha, The Lyon Uprising of 1834, pp. 28-31. See also Bezucha, Modern European Social History, pp. 93-123.

<sup>140</sup>Office du Travail, Les associations professionnelles ouvrières, II, 246-51.

<sup>141</sup>Article 2-4 of statutes of Société du Devoir mutuel, ibid., p. 246.

<sup>142</sup>See earliest extant membership lists of individual mutual aid societies in ADR, 5X - 1954 - Sociétés de secours mutuels. The first mutual aid society of the Croix-Rousse, for example, restricted its membership to this district. (See Article 1, Règlement de la société de bienfaisance et secours mutuels de la ville de la Croix-Rousse, 5X - 1954 - Sociétés de secours mutuels, Sociétés diverses (1810 à 1851).

usually formed as neighborhood or district societies, especially in the 1860's, when separate clubs existed for weavers and other workers of the Croix-Rousse, of the Brotteaux and of the Saint-Just quarter of the Fifth Arrondissement.<sup>143</sup>

The most strongly 'neighborhood-conscious' movement of association, however, was the cooperative movement, especially the movement of consumers' cooperation. This was evident even during the Second Republic, when the unity of the working class was frequently emphasized as a major aim of association. The cooperative bread-baking society, the Société des travailleurs unis, organized "to harmonize production and consumption" in general,<sup>144</sup> established its headquarters and baking ovens in the Croix-Rousse, concentrated the largest share of its leaders and members in this quarter (at that time a separate town), and provided a refuge for suspected or actual participants in the insurrection there in 1849.<sup>145</sup> Even more rooted in their respective neighborhoods were the consumers' cooperatives formed under the Second Empire. Members of each cooperative were usually concentrated within a few city blocks,<sup>146</sup> and all of these societies did

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<sup>143</sup> AML, I2 - 45.

<sup>144</sup> Article 5, statutes of Société des travailleurs unis as cited in A. Gilardin, Procureur Général, to M. le Garde des Sceaux, "Rapport sur les associations ayant un caractère politique à Lyon. Vues législatives sur la matière," January 23, 1850, AN, BB18 - 1474(B): Clubs et associations: Cours de Lyon.

<sup>145</sup> Jean Gaumont, Histoire générale de la coopération en France (Paris: Fédération nationale des coopératives de consommation, 1923-1924), I, 390-402; police reports to Special Police Commissioner, September 8 and October 4, 1852, AML, I2 - 45, Nos. 195-196, and undated police report, AML, I2 - 45, No. 198.

<sup>146</sup> This conclusion is based on examination of addresses on extant membership lists of consumers' cooperatives in the 1860's. For sources, see note 132.

most of their grocery business with clients in the same area. The attachment of consumers' cooperatives to their neighborhood autonomy was especially manifest in their resistance to any permanent centralization of their movement.<sup>147</sup>

Besides reflecting different traditions of neighborhood settlement and of exchange based on proximity of residence, these various movements of association also mirrored the differentiation of neighborhoods according to occupation, notably that concerning extent of silk-weaving as compared with other trades. Such occupational division among neighborhoods became especially pronounced under the Second Empire, when urban renewal and industrialization transformed the newer silk-weaving area of the Brotteaux-Guillotière into a section more diversified occupationally than the older silk-weaving sections of the Croix-Rousse, First and Fifth Arrondissements. The division became apparent in differences of social ideology in the cooperative movement, in differences of politicization of social movements and of political preferences in general, and in scope and initiative of organizational activity, between weavers involved in associations in one and in the other sections of the city. In a later chapter I will examine each of these differences in detail.

Amidst this diversity of occupational character between different quarters of the city, one salient attribute emerged common to all, by tradition and association if not by equal statistical importance in each arrondissement. This was the omnipresence of the silk worker as the dominant laboring type. In 1866, more than a third of all persons

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<sup>147</sup>Flotard, "Bulletin coopératif," Le Progrès, December 18, 1865, and April 15, 1867.

depending on industry for their livelihood (34.12%) were employers or workers in the silk industry, or persons dependent on these. Before that date this proportion was even larger.<sup>148</sup> Only the Second Arrondissement had no sizeable population engaged in silk manufacture. As Yves Lequin noted in his recent thesis on the workers' world in the Lyon region, "the canut remains largely the dominant type, the metallurgist, the glass worker, even the mason are marginal elements. . . ."<sup>149</sup> This dominance gave the industrial environment of Lyons a distinctive artisanal flavor:

The image is classically that of a city with a dominant activity and production of consumption goods at its service; it had been certainly little different around 1830-1840, it would hardly be different until the 1880's. The multiplicity of enterprises evokes less the image of a working class than of a small people, where the intermediate levels multiply, where the social ladder enlarges at the lower levels and where the 'social ranks' come together in daily encounter.<sup>150</sup>

Guignot, the scoffing, satirical canut of Laurent Mourguet's classic marionnette theater, remained the image-type of the worker of Lyons throughout the nineteenth century. This image was preserved in the ideology and collective character of various associations involving silk weavers as their most prominent laboring type. All of these identified the aims and activities of the silk weavers' associations as those of the workers' movement of Lyons.

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<sup>148</sup>Bezucha, The Lyon Uprising of 1834, pp. 33-34. According to Bezucha's table of "Working classes of Lyon and its suburbs," the silk workers (40,650 persons) represented 37% of the total working-class population (110,590), that is, slightly more than a third.

<sup>149</sup>Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIX<sup>e</sup> siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), I, 346-47,

<sup>150</sup>Ibid., I, 349-50.

## II. Disorder in the Fabrique

The solidarities of craft, household, class and neighborhood discussed so far all formed part of the 'regime of order' in the social and economic life of the silk weavers of Lyons. Together these solidarities and the economic organization in which they emerged created a structure of social identity among the weavers that persisted amidst the various changes in the economy of their industry and in its social organization. The repeated manifestation of this identity in movements of voluntary association reflected and re-enforced the sense of static perpetuity implied by the notion of a 'regime of order.'

In reality, however, 'disorder' was as much characteristic of the social and economic experiences of the weavers of the fabrique as 'order,' or as the semblance of 'order.' Such 'disorder' was especially the product of economic crises in the industry and emerged most frequently as class conflicts between weavers and merchant-manufacturers. These crises regularly forced weavers and fabricants to confront one another either collectively, or as individuals appealing to collective rights and solidarities. Their conflicts were usually resolved by established institutions -- the Conseil des Prud'hommes (the local industrial court) and the government. In their manner of resolving these conflicts, both institutions confirmed the reality of class in relations between weavers and their employers. Besides strengthening this 'static' class identity, however, the role of the government in this resolution of conflicts engendered another form of collective solidarity, that of the polis -- city or nation. 'Disorder' in the fabrique thus enlarged the structure of social identity among the weavers to include not only their 'static'

experience of order but also their 'dynamic' experience of change and conflict.

A. Crisis and the Conseil des Prud'hommes

Crisis was endemic to the economy of silk weaving. The silk trade depended on the general market for luxury products, on the state of fashion and on the quality and size of the raw silk harvest. Fashion and silk harvests gave the industry a seasonal character. During certain months of the year, particular kinds of silk dresses and suits were in style in aristocratic and bourgeois circles and therefore more highly demanded than in other months. Conversely, on the side of supply, certain periods of the year, immediately after the cocoon harvests, were devoted to raw silk harvests, and the remainder of the year to putting out to weavers according to the orders demanded by the fashion of the day. Demand and supply 'cleared' the market on an order-by-order basis -- since relatively few stocks of fabric were accumulated<sup>151</sup> -- according to the pattern, on the one hand, determined by the subtle interchange between Lyons cloth designers and the seasonal fashions, and according to the size and quality of the raw silk harvest, on the other hand, which established the availability of silk fabrics in general -- their price, in short -- through the cost of the raw material. Such clearing ordinarily stabilized through a recurrent cycle of high and low periods of weaving activity in the industry: January through April and August through November being generally 'high,' and May through July and the month of

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<sup>151</sup> Bowring, Report from Select Committee, pp. 554-55, q. 8918; p. 558, q. 8938.

December being especially 'low.'<sup>152</sup>

Sometimes, however, a 'high' period arrived and activity did not increase. If this continued throughout the season and repeated in the next season, the signs of crisis were clear. Such crises -- or periods of low demand and unemployment -- were the effect of the high income elasticity of demand for the industry's luxury products and the dependence of this demand on competitive foreign markets. As a result, sales were extremely sensitive both to general economic conditions and to natural and political catastrophes, such as epidemics, blundering diplomacy and wars. Crises also resulted from the tendency to expand production during periods of high demand, by attracting new firms into a relatively high profit enterprise when demand was strong. Within a short time, however, a shift of demand to another style of silk cloth, which only the more established houses could satisfy, suddenly left the industry with an oversupply of producers. Such 'crises of overproduction' became even more common as fashion varied more widely over the expanding range of silk products and over that of textiles in general, and as the duration of each prevailing fashion declined. In this situation the market placed a high premium on intensive and rapid production of a style that 'caught on,' in order to capitalize on the demand before tastes changed. When the latter occurred, placing an inordinate technical strain on the resources of the industry to which it could not adapt very quickly,

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<sup>152</sup>Yves Lequin, "Aspects économiques des industries lyonnaises de la soie (1870 à 1900)," (unpublished D.E.S. under the direction of Pierre Leon, Faculté des Lettres et Sciences Humaines, Université de Lyon, April 1958), p. 51, available in collection of mémoires de maîtrise of the Centre d'Histoire économique et sociale de la Région lyonnaise, Université Lyon II, no. 31.

the shock to the silk-weaving economy was as severely depressing as the passing boom had been stimulating. The industry therefore seemed to pulsate between the extremes of its technical and human capacities, from prosperity to distress.<sup>153</sup> The weavers felt this rhythm of activity in their daily lives more acutely than any other group. "[T]hey pass rapidly from the excess of misery to prosperity," wrote Villermé in 1835, "and from the latter to distress; they diminish or increase in number, leave Lyons or flock into it, according to its fortunes or its various vicissitudes."<sup>154</sup>

Cyclical fluctuations increased tensions between fabricants and master-weavers by concentrating the bargaining advantage with one or the other, according to the direction of the cyclical swing, and by reducing the certainty of continued gains for both during periods of favorable demand. This uncertainty encouraged both to maximize short-term gains, often at the expense of the other party, in order to hedge against a future decline in the market. Their conflicting interests on both accounts embroiled fabricants and masters in frequent controversies over the piece-rate, over the terms of their contract (that is, over working conditions), and over mounting of fabrics. As we have already seen, masters had to bear the shift from high to low demand in the form of unused capacity in material (loom and shop, including rents on the latter) and in labor depending on them for subsistence (family, apprentices and dévideuses à gage). Threatened with unemployment, masters were forced to accept a lower piece-rate or other disadvantageous terms

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<sup>153</sup>Reybaud, Etudes . . . Condition des ouvriers en soie, p. 192.

<sup>154</sup>Villermé, Tableau de l'état physique et moral, I, 361.

dictated by the fabricant in order to meet at least some of the costs of underutilized capacity. Fabricants, on the other hand, had to bear the shift from low to high demand in the form of higher piece-rates to attract an adequate supply of labor, depleted by the previous unemployment crisis. Fabricants took advantage of their strength at the downward turn of the cycle to reduce the risk of unprofitable inventory accumulation, and masters took advantage of the upward turn to restore the piece-rate to full employment levels. The demands of each were resisted by the other through various legal and semi-legal ways. Such resistance gave rise either to individual cases of contract-breaking, heard and sometimes adjudicated by the Conseil des Prud'hommes, or to struggles over the tarif -- the uniform structure of piece-rates frequently demanded by the weavers.

Because of the uncertainty of continued demand for a particular fashion, and also because of the competition from other fabricants for a style that 'caught on,' fabricants also had a special concern for speed of production during periods of high demand, to maximize high-profit returns before changes of style or before entry of additional fabricants into the production of this more profitable style. Fabricants were more inclined therefore to require strict adherence to time contracts agreed upon beforehand between themselves and the master, for completion of the fabric, and to insist upon indemnities from the master for delays in weaving. Such indemnities effectively reduced the increases in piece-rate which the weavers could demand by their relative scarcity at the upward turn of the cycle. But the weavers themselves were equally likely to appeal to "the rules . . . according to which the worker would be authorized to keep for a year and a day the piece which was given him

by the fabricant,"<sup>155</sup> in order to preserve the original piece-rate. In 1855, for example, a very favorable year for both plain and fancy cloths, such conflicts over delays in manufacture accounted for a large portion of the cases between masters and fabricants heard before the Conseil des Prud'hommes.<sup>156</sup> Finally, individual fabricants had a special interest in inventing new patterns that succeeded in the market, in order to capture the windfall profits of the initiator. This interest conflicted sharply with that of the weaver to continue weaving the same pattern because of the large costs of mounting, lost time and lost efficiency incurred by changing patterns. As a result, conflicts over such changes and associated costs of mounting were the "source of almost all the quarrels that exist[ed] at Lyons" between masters and merchant-manufacturers in the early 1830's.<sup>157</sup>

Most such conflicts were resolved by "conciliation" or arbitration by the Conseil des Prud'hommes. This industrial court established in 1806 especially for the silk industry of Lyons was in principle an impartial tribunal where decisions were made according to justice and "conscience" rather than according to class interest. Yet the class character of the institution was evident in the provisions in the law of 1806 relating to its constitution. These provisions decreed the election of five merchant-manufacturers and four master-weavers by and among patented fabricants and masters to form the Council.<sup>158</sup> In March

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<sup>155</sup> Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes, année 1855, pp. 7-8.

<sup>156</sup> Ibid.

<sup>157</sup> Bowring, Report from Select Committee, p. 560, q. 8948.

<sup>158</sup> Article 1, Conseil des Prud'hommes, Law of 1806.

1832 the prefect of the Rhône underscored this character of class representation by decreeing the election of nine fabricant prud'hommes and eight master prud'hommes in separate assemblies of the two classes.<sup>159</sup> These prud'hommes had three main functions. These were the resolution of conflicts between fabricants and masters, or between masters and their subordinates, which were brought before the Council; the police of the industry to insure observance of the various rules governing it under the law of 1806 (notably the provision concerning livrets); and guardianship of cloth patterns submitted to the Council for copyright protection. The two prud'hommes on duty resolved most of the individual cases brought before them by conciliation between the two conflicting parties. In the few cases where conciliation did not succeed, or where the matter was too serious to be resolved in this manner, the entire Council heard the affair and decided on the matter by vote of the members. Such votes sometimes offered the occasion for confrontation of the two classes represented by their delegates. In 1853, the police chief of Lyons claimed that in such decisions left only to fabricants and master-weavers of the silk industry, "it is to be feared that in all questions of principles and every time that the interests of fabricants and of master-weavers are opposed, the tribunal would divide into two equal camps. . . ." Only the presence of five prud'hommes from the hat-making industry, claimed the police chief, whose interests were not identified with either side in a conflict among silk producers, prevented

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<sup>159</sup>Gasparin, Préfet du Rhône, Conseil des Prud'hommes de Lyon (affiche), March 31, 1832, AML, F - Prud'hommes - Elections (1806 à 1871), C02-tr32-R2.

the Council from rending itself down the middle on each arbitrated case.<sup>160</sup> His judgement reflected the common view that the Council in fact represented conflicting and juxtaposed class interests, even though its stated ideal was impartial adjudication transcending these narrow interests.

Besides taking sides on certain individual contests, the prud'hommes represented the demands of their respective classes to the government, to the Chamber of Commerce and to the public. The weavers especially used their position on the Council to legitimate such class representation, for they had no other officially-recognized institution of their own to serve such a function, as the fabricants had the Chamber of Commerce. In August 1860, for example, seven recently-elected weaver prud'hommes presented a petition to the Emperor during his visit to Lyons, against several "abuses" in the fabrique for which they sought reform by government action. According to the commission of fabricants and master-weavers appointed by the prefect to consider the petition, the motive of the petition had been an election promise made by these weaver prud'hommes to represent more actively than their predecessors the professional interests of the master-weavers against the fabricants.<sup>161</sup> The weavers clearly regarded the representation of class interests as one of the functions of their prud'hommes, even though the stated aim of the Council was "'the union of the social classes,'"<sup>162</sup>

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<sup>160</sup> Report from Special Police Commissioner to Prefect of Rhône, "Rapport sur la pétition des chefs d'atelier," s.d. (Response to letter from Prefect to Special Commissioner, April 1, 1853), AML, F2 - Fabrique de soies - . . . (1810 à 1874).

<sup>161</sup> Petition of Tray et al., to Emperor, August 1860; Arlès-Dufour et al., "Réponse de la commission," September 18, 1860, ACCL, Soieries Carton 41 - I - Législation - Usages (an 8 à 1836), 13. - Pétition remise à l'Empereur, à son passage à Lyon, par les ouvriers en soie.

<sup>162</sup> Regnaud de Saint-Jean-d'Angely, quoted in Jean Bonnet et al.,

Preoccupation with the Conseil des Prud'hommes in movements of association and the prominent role of weaver prud'hommes in initiating and leading these movements signalled the importance of the Council to the weavers as a forum of class representation. During the mutuelliste period of association in the early 1830's and during the period of revived interest in association after 1840, the reform of the Council was one of the central concerns of the weavers and publicists most sympathetic to collective organization and activity. The Echo de la Fabrique, the "house organ" of the Society of Mutual Duty from 1831 to 1834, and the Echo de la Fabrique de 1841, its successor, followed closely the cases heard by the Prud'hommes, reported the decisions of the Council regularly, and campaigned actively for reforms, such as the right to counsel for weavers appearing before the Prud'hommes and the codification of decisions of the Council into a body of industrial law for the entire fabrique.<sup>163</sup> These and other weavers' publications, and the Society of Mutual Duty itself, became actively involved in elections to the Council, sometimes supporting one or another slate of weavers' candidates. In the early 1830's, prominent mutuelliste leaders served as weaver prud'hommes, including Pierre Charnier, organizer of the first mutuelliste society in 1827, and Falconnet, founder and editor of the Echo de la fabrique.<sup>164</sup> By the 1860's, interest in reforming the

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response of prud'hommes chefs d'ateliers to report of Jules Bonnet, President of the Conseil des Prud'hommes, on métrage question, Le Progrès, April 30, 1866.

<sup>163</sup>Bezucha, The Lyon Uprising of 1834, pp. 61, 69, 98-100, 116-17; Mary Lynn McDougall, "After the Insurrections: the Workers' Movement in Lyon, 1834-1852" (unpublished Ph.D. dissertation, Department of History, Columbia University, 1974), pp. 136-40.

<sup>164</sup>Ibid.

Council had waned, but concern with prud'hommes elections was as strong as ever before and was again closely related to the question of association -- this time of cooperative association. In the general elections to the Council in 1865, for example, the victorious slate of weavers won in part because of their prominent role in the cooperative movement.<sup>165</sup>

Despite this strong concern with the Council in movements of association, weavers often formed their resistance, cooperative and other societies as alternative means of resolving problems which the Council was not empowered, or failed, or even refused to handle adequately. Associations thus often sought to restore 'order' in a crisis-ridden fabrique when the Prud'hommes fell short of achieving this goal. The restoration of order and "reform of abuse" was the primary motive for Charnier's organization of the Society of Mutual Indication in 1827. The "abuses" which preoccupied Charnier and the early mutuellistes included the insubordination of journeymen, the violations of apprenticeship contracts, and grievances with the fabricants concerning the mounting of looms.<sup>166</sup> All of these matters ordinarily fell within the jurisdiction of the Conseil des Prud'hommes. Although the major grievance addressed by the mutuellistes in the 1830's (and also by the societies of resistance of the late Second Empire) -- the inadequacy and instability of piece-rates -- was not, strictly speaking, within the province of the

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<sup>165</sup> Report of Police Commissioner to Prefect of Rhône and to Procureur Impérial concerning elections to Conseil des Prud'hommes of Lyons, December 6 and 10, 1865, AML, F - Prud'hommes - Elections (1806 à 1871).

<sup>166</sup> Rude, L'insurrection lyonnaise de novembre 1831, pp. 124-33,

Prud'hommes, it was not entirely beyond its concerns either, for the Council regularly conciliated individual cases involving wages.

The reduction or elimination of 'disorder' in the fabrique was also the intention of the several master weavers' clubs organized in 1832, 1842-44, 1852 and 1860. All of these provided their masters with a forum for exchange of information concerning available employment for their looms, subordinate workers, and tools and techniques of their trade.<sup>167</sup> Some became concerned with piece-rates as well, and sought to prevent their decline by threats of strike, in the manner of the resistance societies.<sup>168</sup> Concern with 'disorder' of another type occupied the attention of the producers' cooperative association of silk weavers in 1866-1867. This was the disintegration of the urban fabrique caused by the emigration of silk weaving to the countryside. The weavers' association hoped to halt this disintegration by producing silk cloths of finer quality than the cloths made in rural areas and by

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<sup>167</sup> Office du Travail, Les associations professionnelles ouvrières, II, 256-57; letter from Dufour et al. to Mayor of Croix-Rousse, June 1841, letter from Prefect of Rhône to Mayor of Croix-Rousse, February 22, 1842, letter from Minister of Interior to Prefect of Rhône, January 27, 1844, ADR, 4M - Police administrative - Associations, cercles ouvriers gr 13, Cercle des chefs d'atelier de Lyon; letter from Minister of Interior to Minister of Justice, May 17, 1844, AN, BB18 - 1421, No. A8341; letter from Prefect of Rhône to Special Police Commissioner Bergeret, December 3, 1852, report from Special Police Commissioner to Prefect of Rhône, October 2, 1860, and police reports by C.X.Z.D., September 25 and 26, 1860, AML, I2 - 45, Cercle des chefs d'atelier.

<sup>168</sup> Letter from Minister of Interior to Minister of Justice, May 17, 1844, AN, BB18 - 1421, No. A8341; police reports, September 25, 26 and 27, 1860, AML, I2 - 45, Cercle des chefs d'atelier.

competing with the cheaper labor costs of the latter after eliminating "intermediaries."<sup>169</sup> Achievement of this aim, little need it be said, was totally beyond the power of the Prud'hommes.

#### B. The Government and the City: The Solidarity of the Polis

Association to restore order in the silk industry was even more commonly, however, a reaction to the failure of government, local and national, to fulfill this responsibility. For by tradition and by belief -- at least by the popular belief of the silk weavers -- the government was expected to mediate between weavers and merchant-manufacturers, and between both of these and the 'outside' market forces, to alleviate if not to eliminate the 'disorderly' effects of periodic crises on the economy of the city and on the daily lives of the weavers. In this traditional view, the government was supposed to mediate 'impartially,' as arbiter between the two classes. Although its impartiality was not unquestioned, especially after its repression of the insurrections of 1831 and 1834 and after the passage of the law on

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<sup>169</sup> 'Observations générales,' "Situation de l'Industrie au 15 7bre 1866," September 15, 1866, "Rapport à Monsieur Delcourt Commissaire spécial, sur la situation de la fabrique des étoffes de soies au 4e Trimestre Xbre 1866," December 8, 1866, "Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soie," June 8, 1867, "Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique de soieries," December 7, 1869, AML, I2 - 47(B), Nos. 192, 301, 304, 315; Association des Tisseurs de Lyon, Rapport de la Commission nommée par l'assemblée générale du 22 avril 1868, et chargée, par elle, d'étudier la proposition qui lui fut soumise de modifier l'article 47 des statuts sociaux (Lyon: Association typographique lyonnaise, n.d.), AML, Bibliothèque 302.110; Charles Beauvoir, "Des principes généraux des associations et de leur raison d'être en présence de la situation," Le Progrès, August 15, 1864. The interpretation of the weavers' expectations for their association, in particular the way it would halt the disintegration of the fabrique, is my own. This interpretation is based primarily on a reading of the above sources.

associations in March 1834, the weavers continued to seek its intervention and it responded frequently, to resolve conflicts between themselves and the merchant-manufacturers.

The range of issues in which the government intervened in the economy and social relations of silk manufacture was quite large. Two kinds of issues involving 'class conflict' were especially prominent: first, the resolution of particular problems beyond the normal jurisdiction of established institutions, or of problems within their jurisdiction which were too sensitive or too vast for satisfactory resolution by these institutions; and second, the reform of established institutions, or the creation of new grievance channels, to handle recurring conflicts more effectively. The first kind of issue included, for example, the question of measuring silk cloths by the meter or by the aune, and that of waste allowances for thread used in weaving. In the 1860's the weavers called upon the government to resolve both issues by law. Although the prefect refused to force a particular solution in either case, he was instrumental in mediating masters' and fabricants' positions on the measuring issue, represented by their respective delegates on the Conseil des Prud'hommes, which finally resolved the problem.<sup>170</sup>

The main issue for which the government's intervention was sought, however, was the tarif. The weavers demanded a tarif to prevent reductions of their piece-rate during periods of unemployment or under-employment.

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<sup>170</sup>For the respective roles of government and Conseil des Prud'hommes in the resolution of the métrage problem during the 1860's, see the following dossiers in ACCL, Soieries Carton 22 -- II - Mesurage des soieries (an 13 à 1899): 1. Métrage des étoffes de soie - Pétitions des ouvriers de Lyon (1860 à 1862); 2. Métrage des soieries. Pétition des chefs d'atelier et ouvriers tisseurs de la ville de Lyon (1864 à 1866); and 3. Métrage des soieries - Système Bourdelin (1866 à 1870).

Weavers had reason to believe that such regulation of their wage was within the normal authority of the government, for the government had imposed such a tarif by decree in the past. In 1810, for example, the Comte de Bondy, prefect of the Rhône, decreed a "Tarif au minimum" for plain and fancy fabrics woven in Lyons.<sup>171</sup> Such traditions of government intervention on wage settlements were, however, short-lived after 1830, when "laissez-faire" became the accepted dogma (or so the Orleanists said) in matters of industrial relations. In October 1831 the 'traditionalist' prefect Bouvier-Dumolart, under pressure from the master-weavers who helped to 'make' the Revolution of 1830 in Lyons, promulgated a similar tarif drawn up by an ad hoc commission of master-weavers and merchant-manufacturers under his aegis. Several fabricants refused to adhere to the tarif, and when the government refused to enforce it, the workers rebelled and took over city hall. After violently repressing the workers' insurrection, the central government recalled Bouvier-Dumolart to Paris, replaced him with the 'laissez-faire,' 'modernist' prefect Gasparin and revoked the decree instituting the tarif of October 1831 by military order. This reversal of the Revolution of 1830,<sup>172</sup> founded on the freedom of commerce, not only breached the weavers' confidence in the impartiality of the government in industrial disputes but also ended the intervention of the government in establishing piece-rates. Thereafter the weavers turned instead to their own association, the Society

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<sup>171</sup>Le Comte de Bondy, "Tarif additionnel, Au minimum, du Prix de la Façon des Etoffes en soie façonnées," June 28, 1811, AML, F2 - Fabrique de soies - . . . (1810 à 1874).

<sup>172</sup>Robert J. Bezucha, "The Revolution of 1830 and the City of Lyon," 1830 in France, ed. John M. Merriman (New York: New Viewpoints, 1975), pp. 119-38.

of Mutual Duty, to maintain piece-rates by the threat of strike. Industrial resistance -- as the mutuelliste movement was later called -- emerged often during the nineteenth century to preserve wages in a free-enterprise economy, notably in 1869-1870, when it blossomed in a social and ideological environment well-watered by the springs of liberalism, both imperial and republican.

Government efforts to reform institutions in order to handle recurrent conflicts more satisfactorily usually concentrated on the composition and powers of the Conseil des Prud'hommes and on its electoral basis. Oddly enough, the Orleanist regime which first identified itself with freedom of commerce and justified the revocation of the tarif on this ground was more interventionist in reforming the Council than any other preceding or subsequent regime, except the Second Republic. By the decree of October 8, 1830, concerning partial renewal of the Prud'hommes, the prefect established the precedent of final review of the electoral list for the Council by the mayor of Lyons. In the past the Council itself had performed this function of eliminating unqualified electors and adding qualified voters not present on inscription lists.<sup>173</sup> The new decree transferred this power to the mayor, and the prefect even authorized the mayor in private to add electors at his own discretion:

. . . since it might happen that a large number of concerned individuals might neglect to demand their inscription, whence it might result that the nomination of the Prud'hommes be left to too small a number of voters who do not represent the opinion of the mass, it is proper that the administration

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<sup>173</sup> Letter from Mayor of Lyon to Prefect of Rhône, December 15, 1830, AML, F - Prud'hommes - Elections (1806 à 1871).

utilize in this instance, as in many others, a discretionary power. As a result, if you see that the number of persons who registered is too few to regard as morally valid the affairs to which they are assigned, you may complete the lists by adding ex officio, in sufficient number, fabricants, master-weavers and others having the right to vote who are well known to you, as possessing the necessary qualifications.<sup>174</sup>

After the revocation of the tarif in December 1831 and the appointment of Gasparin to the prefecture, the government used reform of the Prud'hommes as a means of conciliating the weavers without reducing the power of the fabricants on this body. On January 15, 1832, a royal edict increased the number of prud'hommes for the fabrique from nine to seventeen members -- nine fabricants and eight masters -- and added to the master-weaver electors by making all masters owning four looms or more eligible to vote for the master-weaver prud'hommes. This raised the total electoral body of masters from about 1,760 patented weavers to about 8,000 weavers with four looms at least.<sup>175</sup> The government also authorized the new Council to post a mercuriale of prevailing piece-rates to guide its decisions in individual wage disputes between masters and merchant-manufacturers, without recognizing these rates as permanent or binding for the fabrique as a whole.<sup>176</sup> Subsequent political regimes also intervened in the affairs of the Prud'hommes, especially by supervising elections to the Council. But except for the Second Republic, none did more to alter its structure than the 'laissez-faire' bourgeois monarchy.

Besides arbitrating or at least mediating conflicts of class within

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<sup>174</sup>Letter from Prefect of Rhône to Mayor of Lyon, December 16, 1830, AML, ibid.

<sup>175</sup>Fernand Rude, L'insurrection lyonnaise de novembre 1831, pp. 623-24.

<sup>176</sup>Ibid., p. 624.

the silk industry, the government regularly served as 'protector' of the weavers when they were most helpless in their economic life; namely, during periods of unemployment. It shared this role with local notables and with local priests, nuns, pastors and rabbis. Economic crisis thus established relationships between weavers and several different groups outside their class and their profession. Although these relationships developed out of the weavers' helplessness, making them dependent on the charity of such persons and groups, they nevertheless provided the source of another form of collective solidarity, that of the city, or urban community, which the weavers experienced as strongly as the solidarities of craft, household, class and neighborhood.

The master-weavers fell into the arms of charity offered by their natural protectors in their city with great reluctance and only after every attempt to keep themselves and their families alive without outside assistance. In order to avoid depending on alms which offended their pride, they pawned linen and clothing, unnecessary household furnishings and finally, in utter destitution, weaving tools and even looms, at the Mont-de-Piété (the public pawning institution), and used the meager sums from these transactions to buy food and fuel for family and apprentices and to pay rent on the shop. Unlike the skilled journeymen from the country, the master-weavers had too much stake in their craft, too strong a belief in the quick return of prosperity and too great an attachment to their neighborhoods, to pack up and leave town. Only after savings and pawned funds were depleted did these masters turn to the Welfare Bureau for assistance, or seek help from the several other public and private charities subscribed by the wealthy of the city.

The citizens of Lyons were in fact well-known for their charities,

especially their private charities. During the crises of unemployment and high food prices from 1853 to 1858, "private charity . . . found a thousand ways" to assuage the suffering of the workers. Besides collecting funds through concerts, balls and voluntary subscriptions, philanthropic individuals and groups organized door-to-door collections of clothing for the destitute.<sup>177</sup> Individuals frequently acted spontaneously to relieve the miseries of the poor without seeking gratitude or recognition. Indigent weavers sometimes found gifts lying at their doorsteps from an anonymous donor who respected the pride of these weavers enough to avoid contacting them personally during the period of their helplessness. Other charitable individuals opened sewing shops for destitute young female silk workers, to occupy and feed them while they were out of work,<sup>178</sup> or set up soup kitchens for hungry unemployed weavers.<sup>179</sup>

The local government and the local Church authorities usually made some attempt to coordinate these various private efforts during extended periods of unemployment. On January 10, 1854, Vaïsse, the prefect of the Rhône, reported to the Minister of the Interior that "a commission composed of notable persons had been formed by my efforts in Lyons, to encourage [and] organize subscriptions in favor of the poor and to bring together on a large scale the contributions of private charity, which, in this city,

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<sup>177</sup> Report from Prefect of Rhône to Minister of Interior, January 18, 1856, AN, Fic III Rhône 5, Comptes-rendus administratifs (An III à 1870).

<sup>178</sup> Reybaud, Etudes . . . Condition des ouvriers en soie, p. 175.

<sup>179</sup> Le Sénateur, Préfet du Rhône, Letter of invitation to form a Charity Commission under the presidency of Monsieur Brolemann, April 17, 1865, AN Fic III Rhône 10, Correspondance et divers (1816 à 1870),

has never been deaf to such appeals."<sup>180</sup> In 1865, on the suggestion of the merchant-manufacturers, Henri Chevreau, his successor, organized a "Commission of Charity" for the same purpose.<sup>181</sup> The Catholic Church had a long tradition of organized charity undertaken both by its several orders of religious, notably the Sisters of Saint Vincent de Paul, and several Church-affiliated 'works' (oeuvres) of laymen and laywomen, such as the Work for the Labor of Mary for Poor Women.<sup>182</sup> During periods of severe unemployment, the cardinal-archbishop of Lyons had additional collections taken in all churches of the city for the destitute silk workers. Cardinal de Bonald ordered such collections in 1857<sup>183</sup> and again in 1865.<sup>184</sup> Catholic clergy, Protestant pastors and Jewish rabbis were actively involved in the distribution of funds for the unemployed. Louis Reybaud claimed that the clergy, having close personal contact with the workers, knew how to overcome their proud resistance to taking 'alms' which they nevertheless needed badly.<sup>185</sup> In 1854, the prefect's "commission of notables" left to "the welfare bureaus and to the curés, pastors and Rabbis" the distribution of the 200,000 francs

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<sup>180</sup> Report from Prefect of Rhône to Minister of Interior, January 10, 1854, AN Fic III Rhône 5.

<sup>181</sup> Le Sénateur, Préfet du Rhône, Letter of invitation, April 17, 1865, AN, Fic III Rhône 10.

<sup>182</sup> Ibid.

<sup>183</sup> Sreten Maritch, Histoire du mouvement social sous le Second Empire à Lyon (Paris: Rousseau, 1930), p. 40.

<sup>184</sup> Le Sénateur, Préfet du Rhône, Letter of invitation, April 17, 1865, AN, Fic III Rhône 10.

<sup>185</sup> Reybaud, Etudes . . . Condition des ouvriers en soie, p. 176.

collected by the commission since the beginning of the year.<sup>186</sup>

Weavers themselves were called upon more and more, however, to participate in the distribution of funds. During the unemployment crisis of 1877, master-weavers performed nearly all the work of distribution and were even represented on the fund-raising committees of the arrondissements.<sup>187</sup> Such participation in the collection and distribution of funds to aid their fellow workers in misery not only re-enforced their sense of urban community with local notables and clergy but also gave that community a positive meaning to the workers. It became a community of self-help in times of crisis and not merely a community of charitable response in which the weavers were exclusively dependent and in need.

Besides centralizing the efforts of voluntary subscriptions, the government also appropriated funds of its own to welfare bureaus and other institutions concerned with the unemployed. Under the Second Empire, the Emperor Napoleon frequently made such appropriations as gestures of his personal concern for the lot of the working-class. In 1865, for example, the Emperor sent 100,000 francs to be distributed among the municipal treasury of Lyons, the Work for the Labor of Mary for Poor Women and the purchase of bread and meat vouchers for the poor.<sup>188</sup> During

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<sup>186</sup> Report from Prefect of Rhône to Minister of Interior, March 10, 1854, AN, Fic III Rhône 5.

<sup>187</sup> Préfecture du Rhône, Ville de Lyon, Crise de l'industrie des soies - Secours aux ouvriers sans travail - Compte-rendu général des opérations faite par la Commission Supérieure et par les Comités, février - septembre 1877 (Lyon, 1877), "Pièce annexe no. 2 - Personnel des comités et des sous-comités de secours," pp. 58-68, ACCL, Soieries Carton 23 - II - Crises de la Fabrique lyonnaise 1877, II - Secours aux ouvriers sans travail - Souscriptions diverses.

<sup>188</sup> Le Sénateur, Préfet du Rhône, Letter of invitation, April 17, 1865, AN, Fic III Rhône 10.

the same year, the mayors of the arrondissements of Lyons distributed funds door-to-door, and the army prepared a "military charity festival" to raise money for the unemployed.<sup>189</sup> The mayor or prefect usually took special measures to reduce food prices for the destitute during periods of crisis. In 1830-1831, for example, the mayor permitted the manufacture of bread of a 'third-rate' quality which was not subject to the official rate (mercuriale) and therefore cheaper.<sup>190</sup> From February to June 1848, the Extraordinary Commission charged with the administration of the department after the February Revolution stamped bread vouchers and distributed these to the unemployed to purchase their bread.<sup>191</sup> During the crises of unemployment and high food prices between 1853 and 1857, the prefect took several special measures to enable weavers and other workers to meet their daily subsistence needs. In addition to distributing vouchers to purchase bread at 40 c. per kilogram, the prefect authorized sales of meat by auction in several sections of the city. This eliminated wholesaling costs -- for wholesalers usually had a monopoly of the urban market -- and thus reduced the purchase price of meat. Even more striking, the prefect "initiated and patronized the organization of an alimentary society, based on that which exists in Grenoble and which renders such great services to the poor of that city." This society prepared "in large quantity" and delivered "to the indigent, healthy and

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<sup>189</sup> Ibid.

<sup>190</sup> A. Kleinclausz, Histoire de Lyon (Lyon: Pierre Masson, 1952), III ("De 1814 à 1940" par F. Dutacq et A. Latreille), 84.

<sup>191</sup> François Dutacq, Histoire politique de Lyon pendant la révolution de 1848 (Paris: Edouard Cornély, 1910), p. 199.

adequate meals at the most modest prices."<sup>192</sup>

Government intervention in the economy during economic crises was not limited to the workers' needs of consumption. The government also tried to provide alternate employment for workers when their normal trades were languishing. Through public works, forced migrations and special government orders for silk fabric, the government literally managed the local economy when the forces of the free market created an excess supply of labor. For the masses of unskilled journeymen, the local authorities had to decide between keeping their excess labor within the city, to insure adequate hands for the fabrique when the crisis passed, and encouraging or forcing their migration to the countryside, to relieve the city of the burden of supporting them and to reduce political tensions fostered by such large bodies of unemployed. The first was usually achieved by employing these unskilled journeymen on public works, such as road digging, river improvement or park construction. The second was accomplished by denying their rights to public welfare because of insufficient time of residence in the city, by enlisting them in the army, or by issuing an order for their departure by a certain date. For the master-weavers and the skilled journeymen, the decision was even more acutely political than economic. These craftsmen could not be removed from the city and therefore had to be supported in some way. The problem was whether to support them by charity alone, by hiring them on public digging projects for which they were utterly indisposed by their sedentary work habits, or by putting out to them government orders for silk fabrics which were both relatively costly and not always necessary.

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<sup>192</sup> Report from Prefect of Rhône to Minister of Interior, November 12, 1854, AN, Fic III Rhône 5.

Only the latter solution satisfied the silk weavers themselves, for it enabled them to continue working with dignity at the trade they knew best.

In 1830 and again in 1837, the mayor of Lyons tried to relieve the labor market of some of its excess 'floating population' by opening charity work-yards to occupy some of this population.<sup>193</sup> In 1830 the prefect also authorized the formation of the mercenary army of the Volunteers of the Rhône for the ostensible purpose of spreading the Revolution of 1830 to nearby Savoy. A more important purpose was the enlistment of unemployed silk weavers, notably Savoyards, in order to send them away from the glutted local labor market. After the insurrection of November 1831 -- in which some of the officers of the Volunteers played a notable role -- the national government took even more drastic measures against these Savoyard "foreigners" to relieve the same market. "By an order of the magistrate," a large number of Savoyards, "both compagnons and chefs d'ateliers," were told to leave the city "so as to reduce the quantity of labor." The "result was, that there was a rise in the price of labour."<sup>194</sup> In 1848, one of the main projects of the Government Commission for the Workers was the organization of national work-yards to occupy the unemployed. Fifteen to thirty yards of five-hundred men each were formed to begin construction on a canal to divert some of the waters of the Rhône into a reservoir in another part of the city.<sup>195</sup> Teams were also formed to work on the new Paris-Lyons railroad line, in the suburb of Vaise, and on a road joining

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<sup>193</sup>Kleinclausz, Histoire de Lyon, III, 84, 132.

<sup>194</sup>Bowring, Report from the Select Committee, p. 555, q. 8922; p. 554, qq. 8914-8915.

<sup>195</sup>Dutacq, Histoire politique de Lyon, p. 207.

the Saint-Clair quarter to the Montée Rey on the Croix-Rousse. Workers received 1.75 francs a day plus bread vouchers for their labor on these projects.<sup>196</sup> The weavers protested against this heavy physical work, which was beyond their strength as well as beneath their dignity, and on April 4, the Provisional Government decided to order 43,000 silk tricolor flags and 130,000 silk sashes for the Republican army, from the fabrique of Lyons. The Government Commission for Workers distributed the orders to all but 377 master-weavers recognized as being "well-off." This government flag order, several have claimed, prevented the June Days from spreading to Lyons, or at least delayed insurrection among the uncommonly turbulent canuts until June 1849.<sup>197</sup>

Public works and government orders for silk cloths were never so grandiose as under the imperial regime of Napoleon III. Vaïsse, prefect of the Rhône, was the Haussman of Lyons. His administration began construction of the central arteries the Rue Impériale (the present-day Rue de la République) and the Rue Impératrice (the present-day Rue du Président Edouard Herriot). Vaïsse also re-enforced the banks of the Rhône and built the famous Parc de la Tête d'Or, still one of the most elegant promenades in France. All of these projects required large teams of unskilled labor. Railroad companies, machinery and locomotive firms also needed pools of heavy labor for laying track, clearing swamps and constructing locomotive and machine shops. Ready and useful work was therefore always available to occupy unskilled journeymen when their trade stagnated. "For some years," wrote Vaïsse to the Minister of the

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<sup>196</sup> Ibid., p. 208.

<sup>197</sup> Ibid., pp. 209-10. Mary Lynn McDougall, "After the Insurrections: the Workers' Movement in Lyons, 1834-1852," pp. 275-88.

Interior on July 20, 1857, "our weavers have developed the habit, during unemployment of [their] trade, to seek work elsewhere, especially in the large work-yards opened by the city and by the railroad companies."<sup>198</sup> In April 1858 he reported that some 5,000 workers had been employed on the city's public works at the Parc de la Tête d'Or, and for a while there were as many as 2,500 working there a day.<sup>199</sup> Even with such a large program of public and private work to occupy the unemployed, the prefect set up additional "charity workshops" during periods of severe crisis in the silk industry. In January 1854, he reported creating such workshops "to give work to all persons who lack employment and who are in need."<sup>200</sup> And in 1865, the municipal council voted funds to support similar shops recently opened for the silk workers unemployed by the 'American' crisis in their industry.<sup>201</sup>

The imperial government went even farther than this in its efforts to help the unoccupied weavers. Often it ordered large amounts of silk fabric to decorate the imperial palace or to meet some more pressing need. These orders were well-timed to the troughs of the several depressions in the industry, and their political effect was not the least matter of interest to the government in making them. In 1856 the Emperor ordered silks valued at 100,000 francs from the fabrique of

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<sup>198</sup> Report from Prefect of Rhône to Minister of Interior, July 20, 1857, AN, Fic III Rhône 5.

<sup>199</sup> Report from Prefect of Rhône to Minister of Interior, April 30, 1858, AN, Fic III Rhône 5.

<sup>200</sup> Report from Prefect of Rhône to Minister of Interior, January 10, 1854, AN, Fic III Rhône 5.

<sup>201</sup> Le Sénateur, Préfet du Rhône, Letter of invitation, April 17, 1865, AN, Fic III Rhône 10.

Lyons, when nearly a third of its looms were inactive. On October 13, Vaïsse reported that the order "produced an excellent effect, both on the merchant-manufacturers and on the workers, and was welcomed with gratitude by all the population, as new testimony of the concern of His Majesty for the interests of the industry of Lyons."<sup>202</sup> Even more dramatic was the order made by the Emperor in 1867 for silk cloths worth 300,000 francs. The order was dramatized by a loan of the same amount to the newly-formed Association of Weavers, a producers' cooperative organized by the master-weavers themselves. The Association also received the order for silk cloths, soon after its approval as a société anonyme by the Council of State, on the personal recommendation of the Emperor.<sup>203</sup> The industry as a whole received an order of 66,200 meters of silk gauze from the army in the same year, even though manufacturers of Paris and Zurich apparently made the same product more cheaply.<sup>204</sup>

Such intervention in the economy of the silk industry during crises of unemployment re-enforced the weavers' sense of 'natural' dependence on the government in their economic life. This sense of dependence encouraged them even more to seek government aid in their conflicts with the merchant-manufacturers. The effectiveness of the government in coordinating fund-raising, in controlling food prices and in relieving

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<sup>202</sup> Report from Prefect of Rhône to Minister of Interior, October 13 1856, AN, Fic III Rhône 5.

<sup>203</sup> Letter from Minister of Interior to Prefect of Rhône, Biarritz, October 17, 1866, AN Fic III Rhône 10, dossier Ouvriers de Lyon.

<sup>204</sup> Letter from Prefect of Rhône to Minister of Interior, March 15, 1867; letter from Minister of War to Minister of Interior, March 25, 1867, AN, Fic III Rhône 10.

unemployment through public works, forced migrations or government cloth orders, during periods of crisis, made its power to intervene in the economy only more apparent. Weavers therefore easily considered it an effective source of assistance against the unjust 'exploitation' of the fabricants, if only it were willing to serve this function. As a result, when the government failed to act in their interests, they often placed their hope in a change of regime, or at least a change of government policy, to secure justice through government action, rather than abandoning all hope of government intervention to defend their position. The ideal of a regulated economy, formed in the image of the pre-revolutionary corporate guild, died hard, in other words, in the hopes and expectations of the silk weavers of Lyons, if only because the actual policies of the government in times of crisis made these dreams plausible.

The presence of the government in their economy thus aroused an interest among the weavers in political affairs, especially when politics influenced the government's social and economic policies. Their social movements of association were, correspondingly, often susceptible to politicization, or at least to favoring particular political programs and currents of opinion, despite the efforts of leaders of associations to keep political concerns out of their movements. The mutuelliste society of the early 1830's at first resisted efforts of local republicans to align the weavers' movement behind the republican political platform.<sup>205</sup> But government interference with elections to the Conseil des Prud'hommes and especially its repression of the weavers' industrial association, along with the republican Society of the Rights of Man, encouraged the

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<sup>205</sup>Bezucha, The Lyon Uprising of 1834, pp. 116, 124.

weavers to join a common struggle with the republicans against the Orleanist authorities. Thus the government effectively politicized what had begun as a purely social movement among the silk weavers.<sup>206</sup> The ideology of association in the 1840's -- notably Icarian communism, appealing especially strongly to the weavers of Lyons<sup>207</sup> -- identified the aims of workers' association with those of social republicanism. In 1848, weavers and other workers sought financial assistance and moral support for their embryonic producers' cooperatives and, in Lyons, looked to the Committee on the Organization of Labor -- called a "little Luxembourg" by the procureur général (referring to the Luxembourg Commission in Paris under Louis Blanc and Albert) -- to organize labor in trade federations.<sup>208</sup> Even after the suppression of workers' political clubs and the abolition of the Luxembourg Commission in 1848, autonomous workers' cooperatives and other associations equated their aims of transforming society with that of consolidating the Republic.<sup>209</sup> In the insurrection of Lyons in 1849, for example, many of the insurgent republicans were active members of cooperative societies.<sup>210</sup>

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<sup>206</sup> Ibid., pp. 96-100, 134-48.

<sup>207</sup> Christopher H. Johnson, Utopian Communism in France: Cabet and the Icarians, 1839-1851 (Ithaca, New York: Cornell University Press, 1974), pp. 117-18, 134-43, 185-90.

<sup>208</sup> A. Gilardin to M. le Garde des Sceaux, "Rapport sur les associations . . .," January 23, 1850, AN BB18 - 1474 (B); Gaumont, Histoire générale de la coopération en France, I, 357-77.

<sup>209</sup> Gaumont, ibid., I, 378, 383-96. The poster announcing the formation of the cooperative Association fraternelle de l'industrie française in September 1848 declared that "bearing a remedy to the suffering of the worker is to contribute to the very desirable union of all classes, to the serious return to order and to the consolidation of our sacred Republic." (Ibid., p. 383, note 17.)

<sup>210</sup> Ibid., pp. 399-403.

Cooperation in the 1860's was ostensibly more detached from politics than its predecessor of the Second Republic. Yet it was promoted largely by liberals, partially as a means of advancing their own political program, and many cooperative leaders in Lyons were also active in local democratic political organization.<sup>211</sup> The resistance movement of the late Second Empire, especially that of the weavers, abstained even more scrupulously from formal political involvement. But the Lyons branch of the International Workingmen's Association, which organized resistance societies in several trades, became an important force in the anti-imperial movement of 1870, joining the Radical democrats after May 1870 to agitate against the regime of Napoleon III.<sup>212</sup> After the fall of Empire in September 1870, the International became a center of anarcho-socialist propaganda and organization.<sup>213</sup> At least one of the silk weavers' clubs, the Club of Cooperative Solidarity, also became strongly political in September 1870, maintaining close ties with radical republicans on the Municipal Council.<sup>214</sup> Thus there was always a latent tendency and often an actual trend in weavers' movements of social association towards politicization, even when these movements originated merely to fulfill a social function abandoned by the government.

Government intervention in the crisis economy had another effect

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<sup>211</sup>Report from Delcourt, Special Police Commissioner, to Prefect of Rhône, concerning the cooperative societies of Lyons, February 1, 1867, AML, I2 - 45, No. 25; Faure, La coopération lyonnaise jugée par l'ex-police impériale (Lyons, 1870), ADR, 10M2 - 1, Associations des tisseurs.

<sup>212</sup>Maurice Moissonnier, La première internationale et la commune à Lyon (Paris: Editions sociales, 1972), pp. 175-206.

<sup>213</sup>Ibid., pp. 214-71.

<sup>214</sup>Ibid., p. 229.

besides arousing the weavers' interest in politics. This effect concerned class solidarity among the weavers themselves. The 'traditional' manner of government intervention effectively distinguished two types of weavers -- the floating unskilled journeymen, on the one hand, for whom the work-yards were set up, and the more settled master-weavers and their skilled assistants, on the other hand, to whom the government orders for silk cloth were put out. Government policy thrust the first into the experience of organized, mass labor of digging and construction teams where all skills were levelled to the common drudgery of heavy physical work, and it kept the second in their household shops at the loom, when it ordered cloth from the industry, or at least in their neighborhoods, when it left them to public and private charity. The different policies towards the two types of weavers confirmed the sense that the weaving neighborhood was really only a community of master-weavers and a few skilled journeymen, for only these were attached to it, in depression as well as prosperity. The unskilled journeymen from the rural hinterlands were only 'foreigners' -- the word is significant in an acutely xenophobic Lyons -- who passed in and out of the city and its quarters with the ebb and flow of demand for their labor. Their 'foreignness' was not so much a matter of their origins, for Yves Lequin has demonstrated the overwhelming rural origins of even the most established master-weavers.<sup>215</sup> Rather it was a matter of transitoriness, of passing from shop to shop, from quarter to quarter, and from town to town, wherever the opportunities of employment and remuneration seemed best.

When the government tried to keep these 'transients' in the city

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<sup>215</sup>Yves Lequin, "Le monde ouvrier de la région lyonnaise," II, 1-120.

during periods of unemployment, through its policy of public works, it made them something more than rootless migrants. It gave them an identity shared with other unemployed workers in the city who were also forced to join the work teams set up by the government. This was the identity of poor hired labor, tradeless but solidaire by the condition of hard work and low pay with the porters, cobblers and builders who also accepted this official benevolence when their own trades were sluggish. J.-P. Donn e discovered that 889 of the 3362 workers employed on the work-yards of Montchat in 1870 whose professions were available, were weavers, and "876 representatives of other artisan crafts: painter-plasterers, carpenters, gilders, bookbinders, etc."<sup>216</sup> These workers of various crafts suddenly found themselves together in the same work experience, which, claimed Donn e, "'re-enforced the idea of a class of 'workers' (terms of the poster) opposed to the rest of the city."<sup>217</sup> In the tense political situation of the time -- immediately after the proclamation of the Commune of Lyons on September 4 -- such teams of workers were especially sensitive to revolutionary appeal for class solidarity:

The receptivity of these uprooted to revolutionary themes and their sensitivity to new policies became strikingly apparent as the days passed: the newspaper vendors who gathered on the very places of work had discovered, soon before the authorities, the potential richness of such a public. [The workers] developed the habit of meeting on the spot and discussing the most diverse questions as well as those which concerned the conduct of the war. Thus, as

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<sup>216</sup> Jean-Pol Donn e, "Une soci t  en crise, La Commune   Lyon" (unpublished D.E.S. under the direction of Pierre Leon, Facult  des Lettres et Science Humaines, Universit  de Lyon, 1966), as cited in Maurice Moissonnier, La premi re internationale, p. 244.

<sup>217</sup> Donn e, ibid., p. 78, as quoted in Moissonnier, ibid., pp. 244-45.

J.-P. Donn  already pointed out: 'This mass represented the hope of the revolutionary element who, by a permanent vigilance, kept alive an atmosphere of protest.'<sup>218</sup>

The same appeal was welcomed in the workers' quarters of the Brotteaux-Guillotiere, including those inhabited largely by silk weavers. Like the weavers on the public works, these weavers were accustomed to encountering workers in other trades and conditions of employment in their neighborhood communities, and thus to experiencing a sense of class that transcended the boundaries of their own craft. This experience, and their residential proximity to factory and public-works employees in proletarian conditions of work, distinguished this sense from that of the sedentary master-weavers and skilled journeymen of the Croix-Rousse, for example. These were more established in their own neighborhoods and more isolated in their artisanal mode of life and work from workers in other trades. Not surprisingly, therefore, the Lyons branch of the International found more responsiveness to its revolutionary ideology, stressing inter-professional class solidarity, and more support for its abortive anarchist coup on September 28, 1870, among the unsettled silk workers and among the weavers and workers of the Brotteaux-Guillotiere than among the settled master and journey artisans of the Croix-Rousse. The latter -- the masters at least -- became, in fact, enemies of the International and saved the Radical republican municipal government from the September 28 uprising.<sup>219</sup> These weavers -- cooperators, trade unionists and club activists like nearly all others in the city -- had become politicized like the rest by the events of the late Second Empire

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<sup>218</sup> Moissonnier, *ibid.*, p. 245.

<sup>219</sup> *Ibid.*, pp. 240-41, 243-46, 264.

and early Third Republic, but their politics veered in a different direction than the politics of weavers in other sections of the city. They, unlike many of the latter, did not expect the government to revolutionize society, even though they continued to regard as normal some government intervention in their industrial and social affairs. In this respect their notion of the role of government in their economy and in their city -- their conception of the solidarity of the polis, in short -- differed from the ideas of these other weavers. This difference was explained, at least in part, by a different experience of other solidarities -- of neighborhood, class and craft -- in their daily economic and social lives.

Craft, household, class, neighborhood and polis thus formed the networks of sharing and the units of collective solidarity which gave the silk weavers of Lyons a particular social identity in their daily lives. This identity referred at once to skills required and status enjoyed in a single trade -- and in several different specialties of cloth production and technique within that trade -- and to certain regular relationships with subordinate workers and with other master-weavers in similar positions of independence or dependence, and of individualized or collective encounter, with the merchant-manufacturers. This social identity presumed certain traditions and experiences of residential community -- of geography, of patterns of settlement and of occupational diversity -- and it manifested certain expectations of intervention by the authorities of government in the economy and society of silk weaving.

The silk weavers experienced the sharing and solidarity that produced such social identity in an 'order' of the fabrique that made

their actual social position essentially ambiguous. Internally -- within their household economy -- the master-weavers, at least, were independent employers, supervisors and fathers of families. Externally -- in their contact with the fabricants -- they were contractors at best, mere laborers at worst, working for a piece-rate and subject to varying degrees of indebtedness, dependence and exploitation. The institutions designed to minimize the 'disorder' of the fabrique -- the Conseil des Prud'hommes and the government -- mediated this ambiguity, by providing the weavers moral support and sometimes material assistance to maintain a semblance of autonomy before the fabricants. But these institutions did not eliminate the "double character" of the weaver's position, as their failure or refusal to resolve certain major grievances of the silk artisans frequently made evident.

Such failure or refusal encouraged the weavers to take matters into their own hands by forming various kinds of voluntary associations with social and economic concerns as their primary impulse. The ideological values, the programs of action, and the scope and forms of these associations appealed to one or several of the solidarities of craft, household, class, neighborhood and polis that fashioned the social identity of weavers. These attributes appealed to the same solidarities, as the weavers experienced them both 'internally,' in the domestic economies of their households, and 'externally,' in their industrial relations with the fabricants. Weavers discovered in the mutual aid, cooperative, educational-recreational-professional and resistance societies the revival of craft quality and artisan status, the reassertion of class solidarity and the economic strength of their own class, the advancement of neighborhood community, and the economic or political

salvation of city and nation. They also discovered in these associations homage to work in the family, an instrument for controlling subordinate labor, and a promise of autonomy from the arbitrary decision of the merchant-manufacturers.

In some cases, the appeal to several solidarities was consistent and mutually re-enforcing, such as the appeal of mutuellisme in the 1830's to craft, class and neighborhood among silk weavers residing in sections of the city devoted exclusively to their trade and including only master and journey weavers. In other cases, the appeal was contradictory and divisive against one or another solidarity, such as the appeal of consumers' cooperation in the 1860's to neighborhood autonomy against class solidarity when weavers were dispersed throughout different quarters of the city. In any case, movements of association 'caught on,' became meaningful to the social experience of the weavers only when they appealed to these solidarities, whether consistently or divisively. Without such an appeal, the movements risked stagnation, having lost touch with the concrete reality of the weavers' world.

## CHAPTER II

### The Changing Economy of Silk Manufacture

The social and economic world of the silk weavers was shaped by the economy of the silk industry of Lyons. That economy was subject to constant change throughout the nineteenth century, especially after 1850, when that change became 'structural' -- fundamental and permanent. Harbingers of that change appeared much earlier, however, under the specter of foreign competition. In 1829, for example, the fabricants of Lyons noted with alarm that the number of looms occupied by the Swiss merchants of Zürich and by the German merchants of Elberfeld had increased by 3,000 since 1815 and that Faverges (Savoy) had steadily increased its shipments of silk fabric to New York since 1826. The number of looms occupied by the fabricants of Lyons meanwhile declined from 26,000 to 15,000 since 1824.<sup>1</sup>

Their fears were unnecessarily exaggerated, and their statistics not really convincing, for French silk exports to the United States also increased between 1828 and 1830.<sup>2</sup> But the specter of foreign competition, to which the Lyons manufacturers attributed the recent decline of demand, remained to haunt them. The only solid defense against such competition, so they believed, was their superior production of the étoffe façonnée:

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<sup>1</sup>Guérin-Philippon, et al., Mémoire présenté à Son Excellence le Ministre du Commerce et des Manufactures par les Fabricans d'étoffes de soie de la ville de Lyon (Lyon: Gabriel Rossary, 1829), p. 3. (BMTL, C. 1557)

<sup>2</sup>Ministère des travaux publics, de l'agriculture et du commerce, Statistique de la France. Commerce extérieur (Paris: Imprimerie royale, 1838), pp. 476-79.

The fancy fabrics of Lyons keep their superiority over those of all foreign manufactures. The fertile imagination of our fabricants produce them constantly under a thousand new aspects, the foreign competitor cannot copy them either rapidly or perfectly enough, to make their products match their models.<sup>3</sup>

In 1860 the fabrique of Lyons entered a long industrial crisis that shattered the myth of the invincible façonné. Foreign manufacturers did not usurp the place of Lyons in the production of this elegant cloth. But the textile markets of the world, so it seemed, conspired during that decade to eradicate the fancy cloth from the range of wanted goods. By quick assassination rather than by slow attrition, these markets cruelly stripped the fabrique of Lyons of its long claim to monopoly of luxury textile production, based on the protection afforded by its superior aesthetic genius. Lyons now had to struggle on the turf of the étoffes unies, where competition had become strong over the past half-century. On this turf economies of cost were much stronger weapons than artful design.

## 1. The Development of the Market: Change in the Structure of Demand

### A. The Quality of Demand: Novelty, Cheapness and Fashion

Plain silks had always constituted the largest part of the output of the fabrique of Lyons, in aggregate value and quantity terms, and had occupied the largest numbers of workers and looms. Between 1815 and 1860, the proportion of plain silks in all exports of pure silk fabrics (in kilograms) was never less than 60% and less than 70% only in 1820 and

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<sup>3</sup>Guérin-Philippon, et al., Mémoire présenté à Son Excellence, p. 2, note 1.

from 1841 through 1847.<sup>4</sup> The unis constituted the staple of the industry and registered the major crises and the sudden spurts of demand for silk fabrics by its own export cycles. Before 1848, however, little growth of production in the industry resulted from an expansion of plain silk manufacture. (Table 2)

Table 2

Annual Exports of Silk Cloth from France,  
Yearly Average (1815-1847)

<u>Period</u>	<u>Average Annual Exports</u> (100,000 kg)				<u>Percentage Change from</u> <u>Preceding Five-Year Period</u>			
	<u>All Silks</u>	<u>Plains</u>	<u>Fancies</u>	<u>Other</u>	<u>All Silks</u>	<u>Plains</u>	<u>Fancies</u>	<u>Other</u>
1815-19	8.55	6.37	.98	1.20				
1820-24	7.12	4.44	1.13	1.54	-16.7	-30.3	15.3	28.3
1825-29	7.07	4.04	1.41	1.62	- .7	- 9.0	24.8	5.3
1830-34	7.86	4.75	1.44	1.68	11.2	17.6	2.1	3.7
1835-39	8.42	4.70	1.67	2.05	7.1	- 1.1	16.0	22.0
1840-44	9.67	4.55	2.53	2.59	14.8	- 3.2	51.5	26.3
1845-47	10.29	4.80	2.78	2.71	6.4	5.5	9.9	4.6
Average Annual Rate of Change, 1815-19 to 1845-47					3.7	- 3.4	19.9	15.0

Sources: Ministère des travaux publics, de l'agriculture et du commerce, Statistique de la France. Commerce extérieur (Paris, 1838), Commerce spécial.  
Administration des douanes, Tableau décennal du commerce de la France, 2e Partie: 1837 à 1846, Commerce spécial.

The average annual rate of change of plain silk exports between each five-yearly period from 1815 to 1847 (three-yearly period from 1845 to

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<sup>4</sup>These percentages are calculated from export data available in the following volumes for each period indicated:

1815-1836: Ministère des travaux publics, Statistique de la France. Commerce extérieur, Tableaux 193-196.

1837-1876: Administration des douanes, Tableau décennal du commerce de la France (Paris: Imprimerie nationale), 2e Partie, for the years: 1837 à 1846, 1847 à 1856, 1857 à 1866, 1867 à 1876.

1847) was -3.4%, compared to 19.9% for fancy silks and 15.0% for other categories of silk cloths. Not only was this rate small, so that the impact of plain-silk demand on total demand for silk cloths was rather weak, but such change as did occur in exports of plain silks retarded rather than stimulated the growth of total demand. The small growth of overall exports of silk cloth resulted rather from the larger sales increases of fancies and other silk fabrics.

Before 1848 the international silk market still preferred the quality product for which Lyons was renowned. Immediately after the fall of Napoleon, the fabricants of Lyons found their lighter plain cloths competing with import-substitution industries in the internal markets of Britain and Switzerland. Both British and Swiss manufacturers were able to sell their cloths more cheaply than the manufacturers of Lyons, but only because their products were of much inferior quality. The British mixed cotton with silk threads, or used less fine Asiatic silks in their fabrics. The Swiss used unskilled mountain labor to weave light taffetas of the simplest sort. To fight this competition, the fabricants of Lyons invented new designs and types of cloth. In 1818, they put out the Chinese crape (crêpe de Chine), in 1826 the Indian shawl (châle indien) and the fancy tulle (tulle façonné).<sup>5</sup> Such efforts to expand the range of fabric quality assured for Lyons the market for elegant cloths, even though some of its inferior specialties were threatened by foreign competition.

The Jacquard loom was especially important in maintaining and

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<sup>5</sup> Joseph Jouanny, Le tissage de la soie dans le Bas-Dauphiné (Grenoble: Allier Père et Fils, 1931), p. 32.

expanding the market for these quality cloths. It permitted a much wider range of variety and complexity of pattern design in fancy cloths. This was at least as important a contribution to the industry as the savings in mounting and weaving labor permitted by the loom. Along with the artistic skills of the designers, the high-grade raw silk of the Cevennes region of southern France, the dyeing techniques and chemically-favorable waters of the Rhône used in silk dyes and, to some extent, the skills of the weavers -- none of which, unlike the loom itself, was easily transferable to other countries -- the Jacquard loom gave Lyons a competitive advantage in supplying the market for novelty fashion which the loom had an important role in creating. Such advantage was reflected in the output of new patterns by the Lyons designers. Before 1817, the Conseil des Prud'hommes did not receive more than twenty patterns each year.<sup>6</sup> Between 1824 and 1829, however, it registered at least three hundred patterns annually.<sup>7</sup>

The aristocratic revival of the Bourbon Restoration favored these elegant fashions offered by the fabrique of Lyons, especially under the court of Charles X. La Mode, the legitimist journal of fashion, noted in its reports of January-March 1830 the "'dresses of white crape uni of the diplomatic circle, and the luxury of flower decorations and the salmon dresses with Turkish and Chinese designs of rich women'" in the royalist Court.<sup>8</sup> Aristocratic tastes favored not only luxury but also variety of

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<sup>6</sup>E. Pariset, Histoire de la fabrique lyonnaise (Lyon: A. Rey, 1901), p. 302.

<sup>7</sup>Ibid.

<sup>8</sup>La Mode, January-March 1830, as quoted in Henriette Vanier, La mode et ses métiers: frivolités et luttes des classes, 1830-1870 (Paris: Armand Colin, 1960), p. 24.

style, fashioned according to circumstance and social position.

"Style must vary inevitably according to age and position, and be mended according to fortunes, according to quarters of the city, according to habits, according to face and figure, according to circumstances and even to the events of life," wrote Madame de Girardin (Vicomtesse de Launay) in 1839.<sup>9</sup> Such tastes insured not only a sizable domestic market for the fancies and more elegant plain silks of the fabrique but also a foreign demand influenced by the consumption patterns of Paris. "Maurice Beauvais, Beaudran, Lucy Hocquet, Simon dictate fashion in Paris, in France, even abroad, for their reputation makes not only England, but Russia, and the overseas nations, vassals of their taste."<sup>10</sup>

The Orleanist regime of Louis Philippe was not so lavish and favored a more modest style of dress in court and parliament. "The new royal family distinguishes itself by an external simplicity which surpasses by far that of the least ceremonial of foreign courts."<sup>11</sup> "The duc d'Orleans wants to receive only in breeches and silk stockings," complained la Mode in 1838.<sup>12</sup> After the July Revolution of 1830, deputies were allowed to attend Court in a simple black dress coat. A proposition to the Chamber in 1838 to adopt a more dignified embroidered coat as official dress for the parliamentarians, favored privately by Lamartine

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<sup>9</sup> Madame de Girardin (Vicomte de Launay), "Lettres parisiennes," La Presse, April 27, 1839, as quoted in Vanier, ibid., p. 26.

<sup>10</sup> Le Follet, May 24, 1835, as quoted in Vanier, ibid., p. 24.

<sup>11</sup> La Mode, 1831, as quoted in Vanier, ibid., p. 93.

<sup>12</sup> La Mode, 8e livraison, 1838, as quoted in Vanier, ibid.

among others, quickly failed on the floor of the Chamber. "I speak in favor of the simple black frock," declared Thiers. "I find that the dress worn by everyone each day is that which suits us best."<sup>13</sup> This official simplicity did not minimize luxury in all the salons of Paris, for a "marvel of the Chaussée-d'Antin" would have been well-received in the bankers' circle in 1839, in a dress with "six, seven or eight flounces."<sup>14</sup> But simplicity at Court stabilized somewhat the domestic demand for luxury silks in which Lyons' superiority was strongest. A few even blamed the Court for the stagnation of the luxury clothing trades in the early July Monarchy.

Today, all branches of the industry (especially those connected with dress) are paralyzed by the suppression of Court uniforms. . . . Silk fabrics are wasted and sold at ridiculous prices . . . it is absolutely necessary that the Court adopt dress styles which . . . offer an outlet for fine merchandise.<sup>15</sup>

Although Parisian designers continued to set the tone for European fashion, French cloth and clothing manufacturers depended more strongly on foreign markets to increase sales of their more elegant products. Export data summarized in Table 2 clearly indicate an expansion of sales of silk fabrics abroad, especially fancy silks, after 1830. The Germans, Americans and British were the major buyers, consuming more than half of the total exports of silk fabrics every year from 1821 to 1836. Table 3 suggests in fact an increasing concentration of total exports of silks among these three countries after 1830, as well as a

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<sup>13</sup> Le Constitutionnel, January 30, 1838, as quoted in Vanier, *ibid.*, p. 96.

<sup>14</sup> Madame de Girardin, "Lettres parisiennes," La Presse, April 27, 1839.

<sup>15</sup> Journal des Tailleurs, July 1, 1832, as quoted in Vanier, *ibid.*, pp. 92-93.

general shift towards more exclusive dependence on the two Atlantic markets, Great Britain and the United States.

Table 3

Proportion of Exports of French Silk Cloth  
to Great Britain, Germany and the United States  
Yearly Average (1821-30 and 1831-36)

<u>Period</u>	<u>Proportion of Total Silk Exports (%) Destined for</u>			
	<u>Britain and Ireland</u>	<u>Germany</u>	<u>USA</u>	<u>Total</u>
1821-30	8.6	22.0	34.8	58.5
1831-36	11.9	11.4	41.2	64.5
	<u>Proportion of Plain Silks (%) Destined for</u>			
	<u>Britain and Ireland</u>	<u>Germany</u>	<u>USA</u>	<u>Total</u>
1821-30	12.0	15.9	24.9	52.8
1831-36	17.4	7.2	41.1	65.8
	<u>Proportion of Fancy Silks (%) Destined for</u>			
	<u>Britain and Ireland</u>	<u>Germany</u>	<u>USA</u>	<u>Total</u>
1821-30	2.6	30.9	31.3	64.7
1831-36	2.8	26.1	41.1	69.9

Source: Ministère des travaux publics, de l'agriculture et du commerce, Statistique de la France. Commerce extérieur (Paris, 1838), pp. 476-479.

The concentration of exports was strongest on the market of the United States, which alone imported more than 40% (average) of French silks sold abroad from 1831 to 1836. This concentration was equally strong for both plain silks and fancy silks. To the extent that this pattern continued after 1836,<sup>16</sup> the growth of markets for fancy cloths, which governed the expansion of overall exports of silk cloths before 1848,

<sup>16</sup>The data needed to determine this is unfortunately inaccessible to me at the present time.

depended primarily on American demand.

The year 1848 was a turning point in the world of French silk manufacture as well as in French political life. Cloth production fell in most branches of the industry during 1848 itself but increased thereafter for the next quarter century to its highest levels. The return of luxury fashion in the Imperial Court of the Second Empire, along with rising incomes in France and abroad, stimulated unprecedented demand for silk fabrics in Paris and in other fashion centers of Europe and overseas. The marriage of Napoleon and Eugénie in January 1853 set the tone for the style of Court dress upon which the former Spanish princess, now the Empress of France, lavished her careful and constant attention. The fabrique of Lyon made "thirty-nine magnificent dresses" for the occasion. The City of Lyons and the Chamber of Commerce offered these to the Empress, upon whom they made a strong impression.<sup>17</sup> On February 3, the Court decreed that "'no one will be received at Court without a uniform, official dress or dress clothes.'"<sup>18</sup> This order alone increased the domestic demand for silk fabrics and carried foreign demand in trail. The increase in the latter, however, was notable not only by its degree but also by its quality. Unlike that of the July Monarchy, led mainly by the demand for fancy silks, the expansion of the Second Empire followed increased sales of plain silks above all. Table 4 and Graph 2 demonstrate this most clearly.

The shift of demand from fancy silks to plain silks was largely the result of changes in Parisian fashion for women's dresses. Dresses

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<sup>17</sup> Vanier, La mode et ses métiers, p. 163.

<sup>18</sup> Ibid., p. 160.

Table 4

Average Annual Exports of Silk Cloth from France (1848-49 to 1875-78)

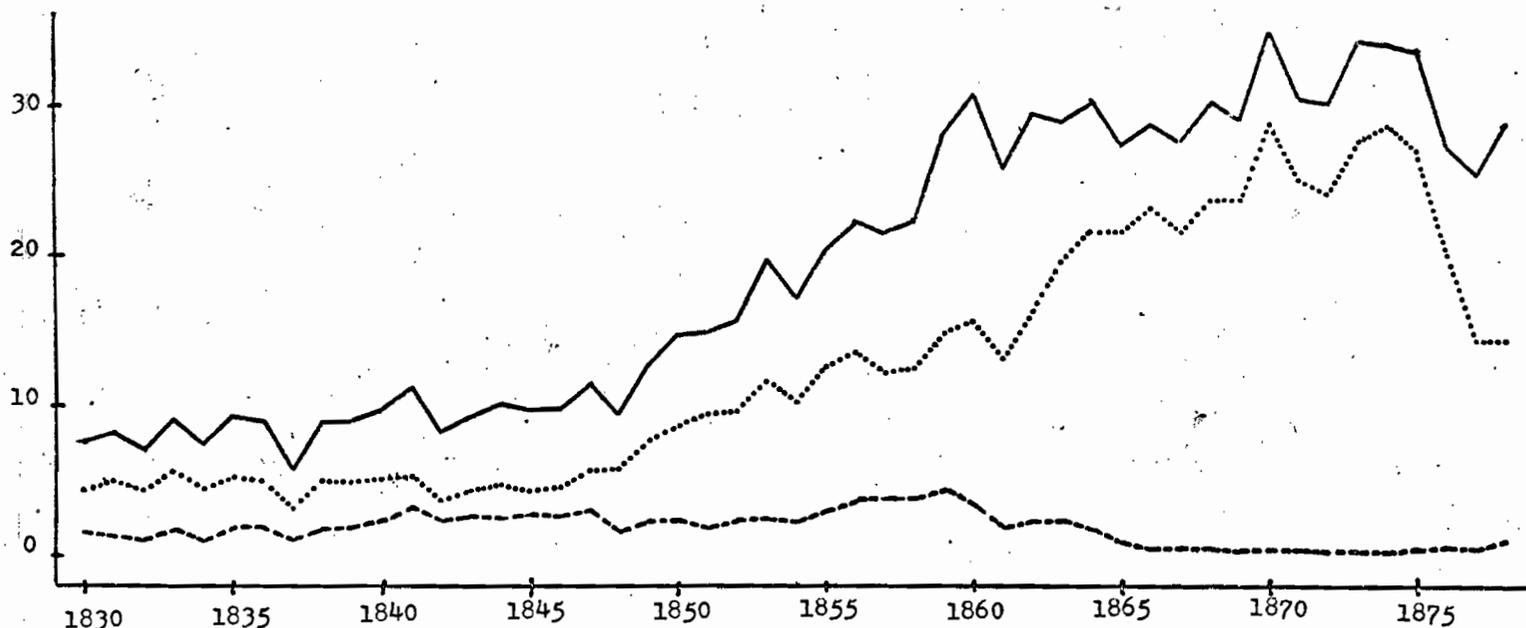
<u>Period</u>	<u>Average Annual Exports</u> <u>(100,000 kg)</u>				<u>Percentage Change</u> <u>from Preceding Period</u>			
	<u>Total</u>	<u>Plains</u>	<u>Fancies</u>	<u>Others</u>	<u>Total</u>	<u>Plains</u>	<u>Fancies</u>	<u>Others</u>
1848-49	11.01	6.76	1.79	2.45				
1850-54	16.43	9.99	2.23	4.20	49.2	47.8	24.6	71.4
1855-59	22.93	13.16	3.70	6.07	39.6	31.7	65.9	44.5
1860-64	29.07	17.30	2.33	9.43	26.8	31.5	-37.0	55.3
1865-69	28.71	22.88	.53	5.30	- 1.2	32.2	-77.2	-43.8
1870-74	32.88	26.95	.17	5.75	14.5	17.8	-67.9	8.5
1875-78	28.89	19.09	.51	9.28	-12.1	-29.2	200.0	61.4
Avg 1815-19 to 1845-47	8.43	4.81	1.71	1.91	3.7	- 3.4	19.9	15.0
Avg 1848-49 to 1855-59	16.79	9.97	2.57	4.24	31.9	40.1	18.3	35.4
Avg 1860-64 to 1875-78	29.89	21.55	.88	7.44	13.4	27.2	-60.7	6.7

Sources: Administration des douanes, Tableau décennal du commerce de la France, 2e Partie:  
1847 à 1856, 1857 à 1866, 1867 à 1876, 1877 à 1886.

Graph 2

Exports of Silk Cloths from  
France, Special Commerce  
(1830 - 1878)

100,000 kg.



— Etoffes de Soie (All Silk Cloths)  
..... Etoffes Unies (Plain Silks)  
----- Etoffes Façonnées (Fancy Silks)

Sources: 1830-1836: Ministère des Travaux publics, Statistique de la France. Commerce extérieur, Tableaux 193-196.  
1837-1878: Administration des douanes, Tableau décennal du Commerce de la France (Paris: Imprimerie Nationale), 2e Partie, for the years: 1837 à 1846, 1847 à 1856, 1857 à 1866, 1867 à 1876, 1877 à 1886.

became larger or otherwise used more material than in the past. This was initially the effect of the vogue of the crinoline style which prevailed in the early 1850's. Adopted as the favorite dress of the Empress Eugénie, the crinoline enlarged the external surface of the dress traditionally reserved for the silk cloth, either by a rigid underskirt of crin and wool, invented in 1848, or by semi-spherical metal "cages" over which the silk was laid as the outer dress. These wide dresses made ample use of folds of the outer material besides increasing the amount of fabric. The folds broke up the traditional flower design of the dress, and the increased material needed for the crinoline favored the cheaper luxury cloth. Both considerations made plain silks preferred over fancy silks in the confection of the dress.

The British-born dress designer Gaston Worth reacted against the uniformity of the crinoline style by stressing "the confection of a dress model for each client and for each fabric. . ." <sup>19</sup> He inaugurated a new era in fashion by adding form, produced by the dressmaker's cut and fold, to decoration of design brocaded into the fabric. Since cuts and folds varied at much less cost than brocaded designs, Worth was able to introduce a whole range of "'new models, better suited than the eternal shawl, to different circumstances of daily life.'" <sup>20</sup> His variations favored a new form of dress manufacture in Paris -- confection, or making dresses ahead of order. Worth's styles increased the range of goods offered by the maison de nouveautés confectionnées of Paris, such as the maison Gagelin,

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<sup>19</sup> Michel Laferrère, Lyon: ville industrielle (Paris: Presses Universitaires de France, 1960), p. 153.

<sup>20</sup> Gaston Worth, La couture et la confection des vêtements de femme (Paris: Chaix, 1895), p. 20, as quoted in Laferrère, ibid., p. 126, note 108.

for which he worked from 1846 to 1858. The style also became popular with the wealthy and the noble, especially the Princess de Metternich and the Empress Eugénie, who changed her attire not only for the occasion -- as for her excursion to the Sea of Ice in 1860 -- but also for the seasons of fashion. Variation of style accelerated, in short, more than ever before, prompted by less costly changes in form, with no respect for brocaded design. Under the 'dictatorship' of Worth, Parisian dress-makers usurped the lead from the fabric designers of Lyons in determining the fashion of the day. They alone could produce the enormous variety of style demanded by prevailing tastes. Since the plain silks gave the dressmakers more freedom to execute their models than the brocaded fancy fabrics, Worth's attack on crinoline did little to restore the demand for fancies. Rather it did much to de-throne these in the world of Paris fashion, to the advantage of the étoffes unies,

Worth cultivated an exclusive clientele, for his products were snobbishly expensive. But the success of his styles represented a more general transformation of tastes. This was the passion for novelty based on appearance, irrespective of the quality and durability of the material. As early as 1845, Alphonse Karr complained in Le Voleur of the substitution of "appearance" for reality in the choice of products:

. . . the likeness de-thrones quietly the things it tries to imitate. . . .

Dresses which look elegant are sold very cheaply , , , at the same price one could offer better fabrics which are less shiny, but they would not be bought,<sup>21</sup>

According to the fashion journals of the late 1860's, one should

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<sup>21</sup>Alphonse Karr, Le Voleur, February 5, 1845, as quoted in Vanier, La mode et ses métiers, p. 31.

prefer the present vogue of the dress combination to the value of the fabric of which it is composed. One should never forget, in fact, that it is more elegant to wear a dress tailored according to the [prevailing] fashion, made with cheap cloth, than a very expensive dress, of an old form that is out-of-date.<sup>22</sup>

The new retail stores of Paris, such as the Louvre and the Bon-Marché, and the confection clothing shops catered to this passion for novelty with their long sales counters and flashy displays of an ever-changing range of products. In the clothing trades they were called maisons de nouveautés to emphasize their appeal to new tastes. Disdainful of the quality of material and even of the skill of craftsmanship, such products could be manufactured with inferior materials and therefore sold at bargain prices. Hence novelty became associated with cheapness, and even the wealthy were lured by the association into 'consumerism' to satiate their lust for variety. The maison Paris advertized such benefits to its rich clientele in the fashion journal Le Follet, in 1868, by means of a telling anecdote:

'[A stingy husband gave his wife, for his New Years' gift, a bank draft for 600 francs to buy an evening gown. Returning home from a trip, he notices], all over the furniture, a display of 8 or 10 evening dresses of all sorts.

. . . Mme de K. gives him the bill for her collection of dresses. Total: 650 francs, at the maison Paris. . . .M. Paris is the godsend of women who are at once both thrifty and elegant.'<sup>23</sup>

The sacrifice of quality in the name of novelty and cheapness, even in these markets for luxury products, harmed the traditional specialties of

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<sup>22</sup>La Mode Illustrée, Paris, 1869, p. 54, as quoted in Laferrère, Lyon: ville industrielle, p. 127, note 111.

<sup>23</sup>Le Follet, February 22, 1868, as quoted in Vanier, La mode et ses métiers, p. 210.

the fabrique of Lyons most of all, in particular its fancy silks.

Fortunately for the fancies, not all the luxury markets of the world obeyed the Parisian directives in fashion. While Paris neglected the fancy cloths in favor of the plains, the American market continued to consume the elegant étoffe façonnée and even increased its purchases of this fabric. In 1859, for example, fancy silk exports from France reached their highest level of the century -- 432,000 kg, valued at 66,000,000 francs.<sup>24</sup> The United States alone imported more than half of this amount -- 35,000 francs, or 53%.<sup>25</sup> The fabrique of Lyons thus depended on a single national market for the prosperity of its most cherished product. Such dependence made Lyons' fancy trade especially vulnerable to the economic conditions of that market. In 1860 these conditions changed radically as a result of the outbreak of the American Civil War. To the fabricants and weavers of Lyons, the shots fired on Fort Sumter resounded as the curse of fate taking vengeance on their specialty for its splendid performance of the previous year. The 'unnatural' economic crisis triggered by the War hurt the fabrique of Lyons more than any other European manufacture except the Continental cotton industry. Not only did the Northern blockade of the Confederate South remove a major share of the luxury-goods market from foreign suppliers, but in order to raise revenue, first for the war effort, then for Reconstruction, the Union government levied a 30% duty in April 1861 and a 60% ad valorem tariff in 1864. Exports of silks to the United States from France plummeted

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<sup>24</sup>Administration des douanes, Tableau décennal du commerce de la France, 1857 à 1866, 2e Partie, Commerce spécial.

<sup>25</sup>Laferrère, Lyon: ville industrielle, p. 127, note 109.

from 104,000,000 francs in 1860 to 25,000,000 francs in 1861 and averaged only 6.7% of total exports per year from 1861 to 1865, as compared with 25.1% for 1859-60.<sup>26</sup> Exports of fancy silks fell most severely, from 35,000,000 francs in 1859 to 4,000,000 francs in 1861 and to less than 1,000,000 francs in 1865.<sup>27</sup> Although the American demand for fancy cloths slowly revived over the next decade, it never again reached its pre-war levels. Even in its period of weakness, however, the American market remained the single most important consumer of the fancy silks of Lyons, so strongly had Lyons come to depend upon it. As a result, the 'assassination' of fancies on this market practically destroyed the entire specialty of étoffes façonnées in Lyons for nearly two decades after 1860. Graph 2 demonstrates this quite clearly. No wonder some local "experts" in Lyons, observing the state of the fancy-cloth manufacture in March 1867, said "that the fabrique Lyonnaise is lost."<sup>28</sup>

Meanwhile foreign demand for plain silks soared to unprecedented levels. Between 1860 and 1874, the annual average exports per each five-year period increased steadily above all previous five-year averages. The average rate of change for plain silks between each five-year period was 27.2%, higher than the rate of change of total exports (13.4%). (Table 4) The largest share of the increase, in the 1860's at least, came from the British market, which consumed French plain silks more

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<sup>26</sup>Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1865, 1866, 1867, 1868, p. 24. (BCCL).

<sup>27</sup>E. Pariset, Histoire de la fabrique lyonnaise, p. 377, as cited in Laferrère, Lyon: ville industrielle, p. 127, note 110.

<sup>28</sup>"Rapport à M. Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies: 1er Trimestre 1867," March 9, 1867, AML, I2-47 (B): Corporations: ouvriers en soie (1819 à 1870).

than ever before. Between 1861 and 1870, nearly half of the exports of French plains (47.7%) were shipped to Britain. (Table 5, below)

Table 5

Proportions of Exports of French Plain Silks  
to Four Major Importers, (%), (1849-50 to 1871-73)

<u>Period</u>	<u>Britain</u>	<u>Germany</u>	<u>USA</u>	<u>Total of These</u>	<u>Switzerland</u>
1849-50	24.1	7.1	33.3	64.6	
1851-60	34.3	6.0	23.8	64.1	1.2*
1861-70	47.7	8.1	9.8	65.6	10.4
1871-73	31.1	1.6	22.9	55.6	24.5

Sources: Compte rendu des travaux de la Chambre de Commerce de Lyon, années 1865, 1866, 1867, 1868, p. 24. Compte-rendu des travaux . . . , année 1873, pp. 33-35.

\* 1855-60

The sudden growth of the British market for French silks had two sources. First, fashions exchanged rapidly across the Channel, so that styles originating in Paris or London quickly became the mode in the other. Such exchange was favored by the Universal Expositions held alternately in the two capitals in 1851, 1855, 1862 and 1867. Since Parisian fashion stimulated a growing market for plain silks under the Second Empire, the British preference for this specialty simply mirrored prevailing tastes in France.

The second reason for increased British demand was free -- more precisely, freer -- trade, from which the French silk industry reaped the greater advantage. The Cobden-Chevalier Treaty of 1860 lowered tariffs on several goods exchanged between the two countries. Among these were woven silk products. The fabricants of Lyons had been among the relatively few French industrialists who favored the treaty -- who pressed for it with great enthusiasm, in fact. For all their declared fears of

'foreign competition' -- the specter raised most frequently to diffuse the protests of workers against low piece-rates -- the silk manufacturers of Lyons correctly perceived their economic interests well-served by the liberal program of Michel Chevalier. Britain's domestic industry of 150,000 looms in 1860 (10,000 of which were machine-driven)<sup>29</sup> produced cheaper products than Lyons, but these were low-grade for the most part. Most of the cheapest silks woven by machine were mixed fabrics of cotton and silk. These were generally unsuited for the crinoline or for the luxury clothing fashioned by Worth. The threads used for the better English fabrics were made from low-grade raw silk imported from Asia. Although fashion was shunning brocades, tastes for silks remained luxury-directed and required a minimum cloth quality which the French were still more accomplished in providing. The prosperous middle-classes of Victorian England were probably even more squeamish on this matter than in the past, imitating as they did more often after 1850 the rich pretensions of the Parisian bourgeoisie. As long as French prices were not very different from those of their English competitors, French silks were generally preferred by luxury buyers over the English product. Lower tariffs brought the prices of the two national silks within closer range on the British market. As a result, English demand for the products of Lyons grew and compensated the fabrique as a whole for the loss of the American demand for fancy cloths. As the fancy-silk exports to the United States fell by 34.1 million francs from 1859 to 1865-69 (-97.4%), exports of plain silks to Britain more than doubled by 78.3 million

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<sup>29</sup> Leon Permezel, L'industrie lyonnaise de la soie: son état actuel, son avenir (Lyon: Alf. Louis Perrin, 1883), pp. 23-24.

francs (111.7%).<sup>30</sup> The domestic industry of Britain meanwhile declined during the same period from 150,000 looms in 1860 to 65,000 looms in 1872.<sup>31</sup>

Thus, in summary, the demand for silk cloths shifted from one of 'elite' luxury, which favored quality and durability of the fabric, to one of 'mass' novelty, which accepted fabrics of inferior quality for a reduction in their price. This shift of demand was largely the result of changes in taste and in dress design, manifesting changes in material values among the traditional consumers of silk fabrics -- the aristocracy and upper bourgeoisie -- but deriving partly, also, from the entry of new classes of consumers, with different life styles and consumption preferences, into the retail markets for silk products. The shift was reflected in rising sales of étoffes unies relative to sales of étoffes façonnées on the major European fashion markets. Two 'institutional' factors -- as economists would describe them -- accentuated this trend in favor of the unis. These were the outbreak of the American Civil War in 1860 and the signing of the Cobden-Chevalier low-tariff treaty between Great Britain and France in that same year. The first factor eliminated suddenly the largest foreign market for façonnés, and the second factor replaced this loss with the opening of another, expanding foreign market, making it the largest, but for sales of plain silks instead of fancies. Thus a combination of conjunctures -- changes in taste, associated with a general social and cultural transformation of Western

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<sup>30</sup>Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1865, 1866, 1867, 1868, p. 24; Compte-rendu des travaux . . . , année 1873, pp. 33-35.

<sup>31</sup>Permezel, L'industrie lyonnaise de la soie, pp. 23-24.

Europe -- and events -- the American War and the low-tariff treaty -- 'conspired' to transform the qualitative structure of demand for silk cloths.<sup>32</sup> Most of this change was concentrated in the period of the Second Empire.

B. The Rise of Competition: Substitute Products and Foreign Industry

Besides its qualitative structure, the quantitative structure of demand for silk fabrics changed as well. The latter changed both 'vertically,' as the competitive distance between pure silks and other, qualitatively 'inferior' textiles narrowed, and 'horizontally,' as competition between the products of the fabrique of Lyons and the products of foreign silk industries intensified. Increasing 'vertical' competition between pure silk fabrics and other textiles, especially mixed cloths and woolens, followed the rapprochement of the 'high-luxury' markets for the former with the 'low-luxury' markets for the latter, as prices tended to guide consumers' preferences as strongly in the first market as in the second. The same reasons for which fashion favored plain silks over fancy silks -- the need for increased material for each dress, the desired freedom of cut and fold on the part of the tailor, and the lust for novelty and variety even at the expense of quality and durability -- made these other textile fabrics more competitive substitutes for pure silk fabrics. In the language of economics, the cross price elasticities of demand between pure silks and these other textiles increased, and competition on the basis of price now determined the

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<sup>32</sup>For definitions of 'conjuncture' and 'event' as used here, see Fernand Braudel, "Histoire et Sciences sociales: la Longue durée," Annales: Economies, Sociétés, Civilisations, 13 (Octobre-Décembre, 1958), 727-31.

strength of demand for each, whereas quality considerations had isolated the two markets in the past. Mixed cloths, composed of silk and other textile threads (usually wool or cotton), competed with pure silks woven with silk threads alone. Woolen fabrics competed, moreover, with silk cloths in general, both pure and mixed.

The competition of mixed silks and woolen fabrics did not emerge noticeably in the export statistics until after 1874. Silk continued to reign supreme in luxury markets throughout the Second Empire. But unlike the past, when such supremacy was presumed by the relative isolation of pure silk markets from the markets of other textiles, the markets of the Second Empire forced silk to prevail over the other textiles by struggle and conquest. This became especially evident in 1860-64, when the loss of the American market temporarily weakened much of the silk trade. Both mixed silks and woolens exports reached exceptionally high levels during that period. The former averaged 20% of the annual value of pure silk exports from 1860 to 1864, attaining 30% in 1861. The latter averaged 67% of annual exports in the same period, reaching a peak of 87% in 1864. Even more revealing, annual average exports of brocaded woolen shawls (châles façonnés) increased by 5.3 million francs between 1859-60 and 1865-69 (41.7%), while exports of brocaded silk cloths fell drastically during the same period by 49.8 million francs (-86.2%). Mixed cloths and woolens were lying in wait, so it seemed, to invade the markets of silk in the moments of her weakness. By 1875 woolens emerged victorious, exceeding total exports of silk goods.<sup>33</sup> Luxury fashion made silk the

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<sup>33</sup> Administration des douanes, Tableau décennal du commerce de la France, 1857 à 1866, 2e Partie, Commerce spécial; Tableau décennal, 1867 à 1876, 2e Partie, Commerce special,

'vassal' of wool, using the latter for the body of the dress and silks for mere ornament.<sup>34</sup>

Besides the increasing 'vertical' competition of other textiles, the fabrique of Lyons had to face the 'horizontal' competition of silk industries abroad as well. Except for a few specialties, such competition on markets of third countries remained negligible until the 1880's. The growth of foreign industries often limited, however, the further penetration of the silk products of Lyon on their home markets, sometimes with the aid of tariff barriers. Internal competition was strongest in Germany and in Switzerland. Although annual average exports of plain silks to Germany and Switzerland increased by 35.9 million francs between 1850-59 and 1860-69, this represented less than half the increase of 77 million francs to Great Britain alone during the same period.<sup>35</sup> Most of the increase to the two eastern countries went to Switzerland (23.3 million francs). A large share of this was re-exported to South Germany and Central Europe, notably Austria-Hungary, so that the actual Swiss consumption was much less than the total export figure suggests. German consumption of plain silks represented a mere 9% annual average of total plain-silk exports from France between 1860 and 1869. This was little more than its 5.7% annual average share for 1850 to 1859, despite the expansion of the German market in 1866, by the annexation of Schleswig-Holstein, and in 1867, by the consolidation of the North German Confederation. In relation to the size of the markets supplied by

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<sup>34</sup>A. Beauquis, Histoire économique de la soie (Grenoble: Grands Etablissements de l'Imprimerie générale, 1910), p. 217.

<sup>35</sup>Compte-rendu des travaux de la Chambre de Commerce, années 1865 . . . , 1868, p. 24; Compte-rendu des travaux . . . , année 1873, pp. 33-35.

exports to Switzerland and Germany, these were relatively small for a period of growing demand for plain silk cloths.

The relatively slow growth of demand for French plain silks by these eastern countries was the result of rapidly developing home industries in these areas. The Prussian silk industries of Crefeld, Elberfeld and Wuppertal, and the Swiss industry of Zürich, had become formidable competitors of the silk industry of Lyons by the time of the Second Empire, at least within their own national frontiers. Between 1850 and 1873, Prussian productive capacity doubled from 34,000 looms to 68,000 looms. The number of Swiss looms weaving silk fabrics increased to 27,000 by 1872, including 3,500 mechanical looms.<sup>36</sup> The industries of the two countries together represented nearly 80% of the productive capacity of Lyons in the same year (120,000 looms, including 5,000 power looms).<sup>37</sup> Both produced cloths of inferior quality -- mixed cloths or the simplest plain silks -- but made these with great care and ingenuity, and at a very low cost. The Germans produced cheap velvets of coarse silk called schappe woven with cotton weft, both plain and fancy styles. By using this cheaper material and by producing in stock, they were able to weave fancy velvets at a cost not much higher than plain velvets, whereas the difference in cost, and therefore price, between the plain and fancy styles remained very high in Lyons.<sup>38</sup> The Swiss wove various plain and fancy mixed silks in addition to plain pure silks of the very simple sort,

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<sup>36</sup>Permezel, L'industrie lyonnaise de la soie, p. 13.

<sup>37</sup>Henri Silbermann, Die Seide: Ihre Geschichte, Gewinnung und Verarbeitung (Dresden: Gerhard Kühtmann, 1897), Erster Band, p. 115.

<sup>38</sup>Permezel, L'industrie lyonnaise de la soie, pp. 15-17; Beauquis, Histoire économique de la soie, p. 266.

such as faille, its specialty in 1871.<sup>39</sup>

Wage rates in these countries were no higher than in Lyons, and in Switzerland they were often much lower. Economies of specialization on a smaller range of goods for which demand was relatively stable reduced other costs of production below their equivalents in Lyons. As a result, the German and Swiss manufactures, unlike the British, competed effectively with the fabrique of Lyons in their home markets and even outsold the fabrique on some international markets by 1880, including those of Paris for some specialities. From 1864 at least, German exports of silk fabrics exceeded total imports of silks from abroad by more than 100%.<sup>40</sup> More than half of these imports were pure silks for which German industry was relatively undeveloped, rather than mixed silks which it produced both more cheaply and with better quality than Lyons. These mixed cloths had a more certain future than the pure silks of Lyons, both technologically, because of their amenability to power weaving, and in terms of demand, as luxury fashion became ever less sensitive to the purity of the cloth fiber and more sensitive to its price. In 1883 the merchant-manufacturer of Lyons, Leon Permezel, was forced to recognize "this brutal fact" of German competition:

While our total production declines, along with our exports, our German competitors see both [of theirs] grow; hence they grasped more quickly than us the desires of consumption and, also more promptly, they equipped themselves more rapidly to satisfy these desires.<sup>41</sup>

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<sup>39</sup>Permezel, ibid., p. 28.

<sup>40</sup>Silbermann, Die Seide, Erster Band, p. 125.

<sup>41</sup>Permezel, L'industrie lyonnaise de la soie, pp. 41-42.

The success of the Germans, as compared with the stagnation of the Lyonnais, indicated the special strength of the two forms of competition -- the 'vertical' competition of substitutes for the traditional specialties of Lyons and the 'horizontal' competition of foreign silk industries -- when built upon their mutuality, or symbiosis. This mutuality, consisting of the manufacture of such substitutes by the foreign industries most able to produce them, probably made competition more acute than it would have been, had the two forms attacked the fabrique of Lyons separately, from entirely distinct sources.

## II. The Pressure on Costs: The Pébrine Crisis of Silkworm Production

During the same period when the structure of demand for silks changed most deeply and most permanently -- the period of the Second Empire -- the fabrique of Lyons confronted uncertain and rising costs of its raw material. These costs made more difficult than in the past the low-cost production of silk cloths, and thus the sale of these cloths at the lower prices required by the product market. The combined effect of these two pressures, one from the supplies needed for production of silk cloths, the other from the demands of consumption, threatened even more intensely the traditional business expectations and modes of manufacture of the producers of silks.

The pressure on costs came from a natural disaster -- the pébrine silkworm disease. Beginning around 1845, this hereditary disease attacked the French herd of Bombyx mori silkworms. The yellow cocoons spun by these worms provided the fibers giving silk cloth its special luster and tenacity. The thread made from these fibers was a necessary raw material for the high-quality pure silk fabrics of Lyons. The Bombyx mori was

raised in the Cevennes region of southern France and in northern Italy, notably Piedmont. By 1855, the pébrine disease had destroyed the Cevennes race of Bombyx mori. At first the silk merchants of Lyons imported Italian and Spanish cocoons, but these too were destroyed by 1865. As the epidemic spread throughout the Mediterranean, the silk merchants were forced to seek new sources of raw fiber. They turned to Asia, especially to Japan and China, to fill the deficit in the European crop. The merchants imported silkworm eggs from Japan to replace the Cevennes race, while Pasteur sought a cure for the disease. In 1866, the French harvested 16,436,000 kilograms of Japanese green and white cocoons. In 1865, they harvested only 4,000,000 kilograms of Italian cocoons by comparison.<sup>42</sup> About 58% of the eggs hatched annually between 1872 and 1874 were Japanese, while only 32% were laid in France.<sup>43</sup>

French merchants also imported increasing quantities of Asiatic grèges -- unworked (non-thrown) silk thread. At first they were forced to buy most of their grèges from London, which had nearly monopolized the Asiatic silk trade since the early nineteenth-century. "From 1850 to 1870 the London Docks accumulated enormous stocks of Asiatic silks (especially Chinese silks) while the warehouses of Lyons remained empty."<sup>44</sup> With the power of its merchant fleet, the British profited most from the commercial treaty of Peiping in 1860 to strengthen the position of London

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<sup>42</sup>Pariset, Histoire de la fabrique lyonnaise, pp. 339-40.

<sup>43</sup>M. Natalis Rondot, Les soies (Paris: Imprimerie Nationale, 1885), I, 94.

<sup>44</sup>Louis Gueneau, Lyon et le Commerce de la Soie (Lyon: L. Bascou, 1923), p. 66; Tcheng Tse-Sio, Les Relations de Lyon avec la Chine (Paris: L. Rodstein, 1937), p. 70.

as the world capital of silk commerce.<sup>45</sup> Fortunately for Lyons, however, a few of her far-sighted merchants began to make direct contacts with silk growers in Asia. In some cases the Chamber of Commerce of Lyons encouraged these efforts and provided some assistance, but most contacts were established by enterprising individuals. Ulysse Pila, for example, began work in an importing house on the Croix-Rousse. From 1864 to 1866 he served as inspector of silks in Shanghai, and from 1866 to 1870 he made three major trips to the Far East as the head of a commercial establishment of Marseilles. When he finally settled as a silk merchant in Lyons in 1873, he had regular and direct commercial ties with Asian silk growers based on contacts made during his previous visits. Sigismond Lilienthal furnished arms to the new Mikado army after the Japanese revolution of 1868 in return for raw silk. In 1877 he was elected president of the Union of Silk Merchants of Lyons.<sup>46</sup>

The creation of regular navigation service between China and France by the Messageries Maritimes in 1862 and the piercing of the Isthmus of Suez by the de Lesseps Company in 1869 gave these and other enterprising Lyonnais a decisive advantage over their British competitors. Direct trade in silks flourished between France and the Far East as a consequence. After 1870, Lyons gradually weakened the London monopoly on the Asiatic silk trade and assumed leadership of world trade in raw silks. It held this position until 1880. The home industry of Lyons became the largest single consumer of these raw silks imported by its local merchants, as Asiatic grèges and ouvrées steadily supplanted French and Italian silks

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<sup>45</sup>Tcheng Tse-Sio, ibid.

<sup>46</sup>Gueneau, Lyon et le Commerce de la Soie, pp. 94-95.

in the fabrique. (Graph 3) By 1874, China was the largest single source of thread passing through the Condition des Soies of Lyons,<sup>47</sup> and by 1877, China and Japan both sent more silk to Lyons than the Southern Europeans,<sup>48</sup>

The transformation of raw silk sources created great uncertainty concerning the availability of silk thread. Sudden shortages due to poor cocoon harvests in the Mediterranean crop caused prices of silk fiber to rise to unprecedented levels in some years between 1853 and 1876. Prices of silks suitable for the finer cloth specialties of Lyons remained generally high until the French silk commerce adjusted to the new condition of world supply. At first, imports of Asiatic eggs, cocoons and grèges were rather costly, because of the underdeveloped state of commercial ties between France and the Far East before 1870. French silk merchants depended on London importers for their early supplies and therefore had to pay discounting fees and costs for transport across the Channel. Cocoon prices in the 1850's and 1860's reflected both the extra charges for these imports, in their general rise from 1854, and the sudden shortages of raw silk from disease-weakened harvests, in the occasional price spurts of 1857, 1859 and 1865. (Table 6)

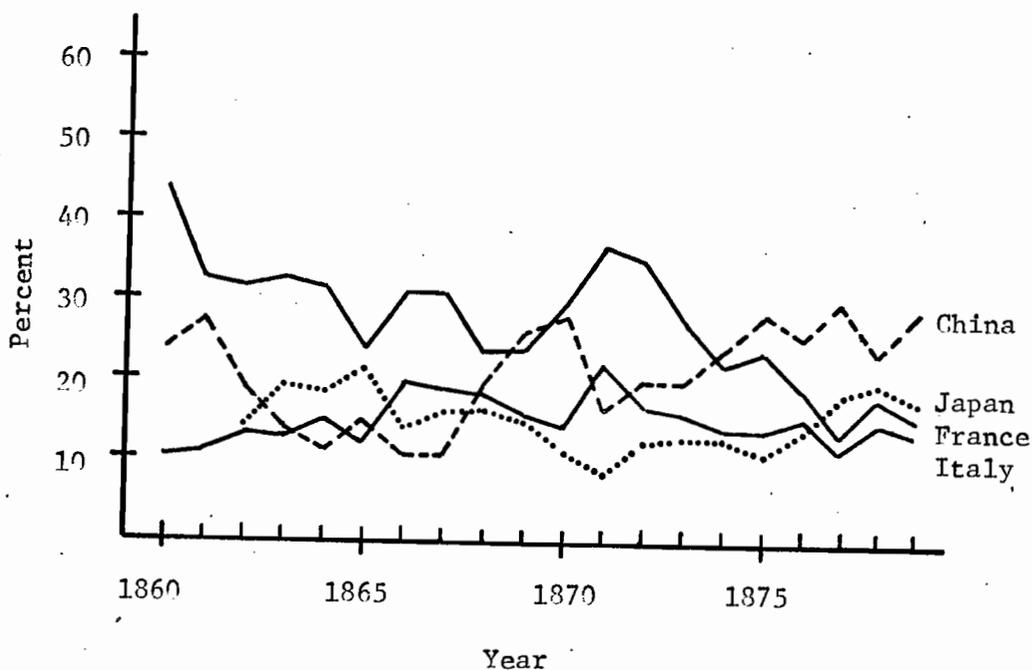
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<sup>47</sup>The Condition des Soies was the local weighing and drying station through which passed nearly all raw silk and silk thread (or representative samples of these) transacted in silk commerce in Lyons. The Condition determined the true weight of the grège and thread after subtracting the weight of moisture accumulated in storage or transit. It therefore minimized frauds in such transactions of this costly raw material.

<sup>48</sup>Société d'agriculture, histoire naturelle et arts utiles de Lyon, Compte-rendu des opérations de la Condition des soies de Lyon, Lyon, 1889, p. 15.

Graph 3

Distribution of Silk Thread  
 Passing Through the Condition des Soies of Lyons,  
 According to Country of Origin, for Four Major Countries,  
 (1860-1879) <sup>49</sup>



Source: Société d'Agriculture, histoire naturelle et arts utiles de Lyon, Compte-rendu des opérations de la Condition des Soies de Lyon, Lyon, 1889, p. 15.

<sup>49</sup> Percentages on the graph represent only shipments from France, Italy, Japan and China -- the major sources of raw silk and silk thread passing through the Condition during this period. Since additional silk was shipped each year to Lyons from several other countries and regions besides (such as Spain, Greece, Syria and Bengal), these percentages do not total 100%.

Table 6

Average Prices of Silk-Worm Cocoons,  
Per Kilogram (1854-1865)

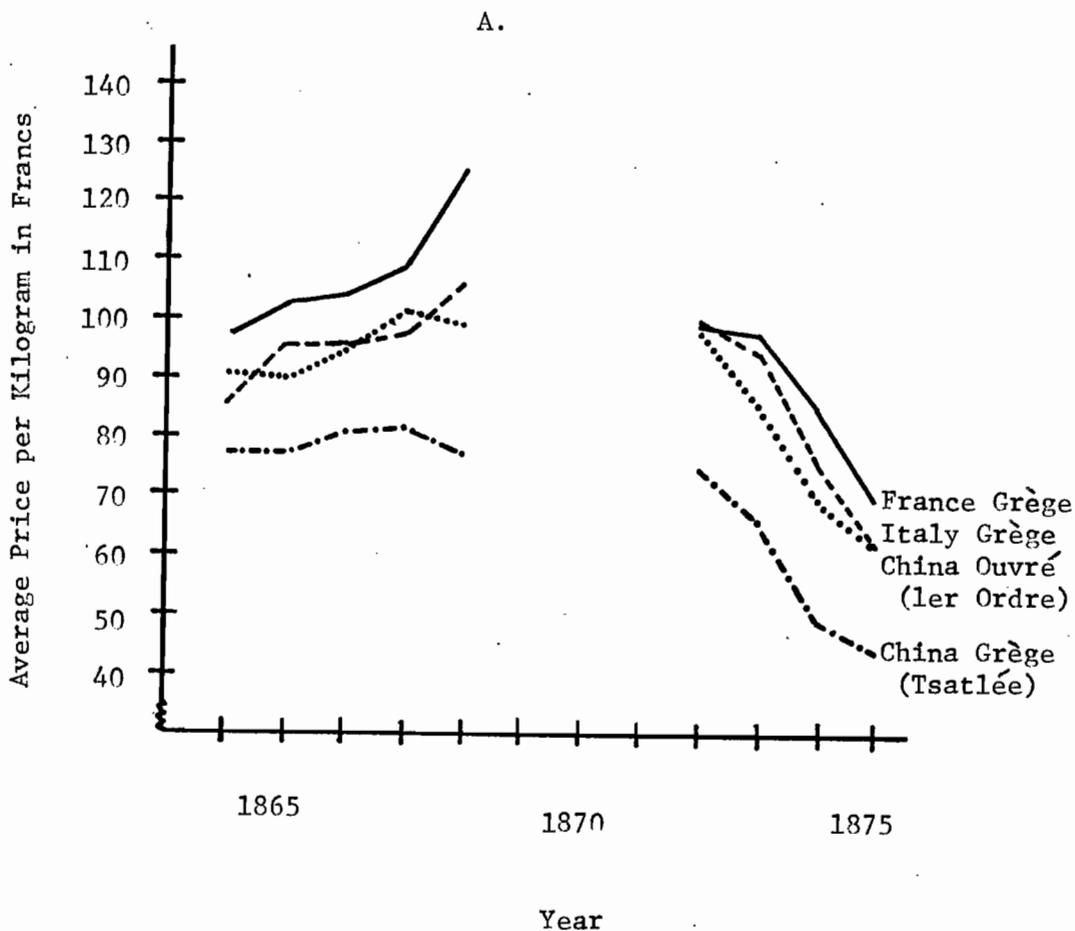
1854	4.55 francs	1860	7.25 francs
1855	4.80	1861	6.25
1856	6.75	1862	5.55
1857	8.00	1863	5.85
1858	5.30	1864	5.90
1859	7.14	1865	8.00

Source: E. Pariset, Histoire de la fabrique lyonnaise (Lyon, 1901), p. 346.

The new grades of raw silk also altered the quality of silk fabrics produced by the fabrique of Lyons. The oak-feeding silkworm species Antherea, which provided much of the new silk supplies, produced a fiber generally inferior to that of the Bombyx mori raised in France and Italy. This fiber was more tenacious but less elastic than that of the French-Italian mulberry worm. As a result, the grège was more susceptible to breakage from stretching. The Asiatic fiber was also more rounded, heavier and less brilliant than the European. Since the fabrique of Lyons required high-grade thread for its quality fabric, it had to correct for the low-grade Asiatic fiber by more careful spinning of the cocoon and by more intensive throwing of the grège. Until spinning and throwing capacity and technique adjusted to the new demand for worked thread, prices for the better-grade 'worked' threads made from Asian grège remained high, despite the lower cost of the latter as compared to the French and Italian silks. Graph 4-A demonstrates the effect of throwing Asian grèges on the price of silk thread before 1870, when throwing had not yet adjusted to the new demand, and after 1870, when it had adapted. In the first period, throwing raised the price of the inferior Asiatic thread to the level of high-grade Italian grèges and

Graph 4

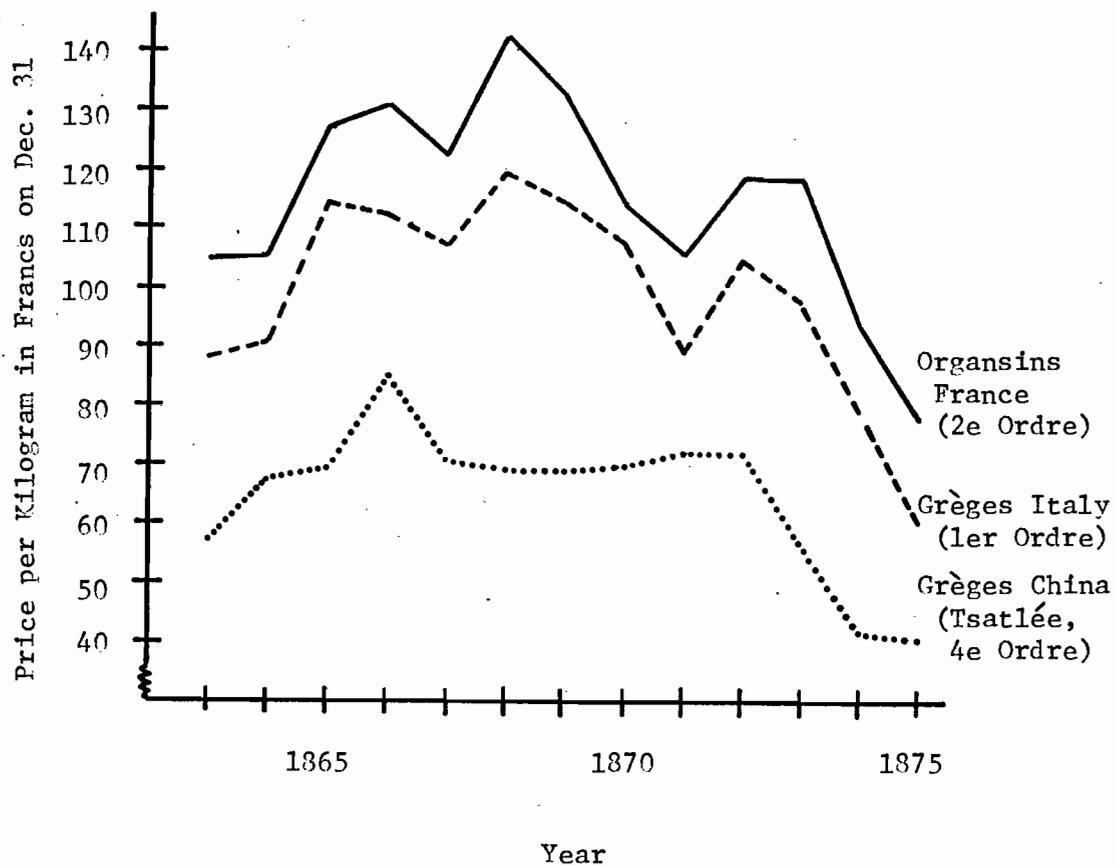
Prices of Silk Thread on  
the Market of Lyons  
(1863-1875)



- Sources: 1864: Compte-rendu des travaux de la Chambre de Commerce de Lyon, année 1864, p. 31.
- 1865-1868: Compte-rendu des travaux . . . , années 1865, . . . 1868, p. 61.
- 1872-1875: Compte-rendu des travaux . . . , année 1872, p. 45; Compte-rendu . . . , année 1873, p. 28; Compte-rendu . . . , année 1874, p. 46; Compte-rendu . . . , année 1875, p. 83.

Graph 4 (cont.)

B.



Source: Compte-rendu des travaux de la Chambre de Commerce de Lyon, année 1875, p. 95.

also imparted to the Asiatic thread a greater variation in price than the Asiatic grège. In the second period, the price of top-grade Chinese ouvré (thrown silk) was both generally lower than the Mediterranean grèges and about equally variable as the Tsatlée (Chinese grège). The best quality silk fabrics, such as the étoffes façonnées, meanwhile continued to rely on the remainder of the Mediterranean harvest of Bombyx mori, paying unusually high and varying prices for these. Graph 4-B shows these higher prices and greater year-to-year variations in the prices of the high-grade Italian raw silks and French 'worked' silks, as compared with the low-grade Asiatic grège (Chinese Tsatlée). Prices fell significantly only after 1870, when the Mediterranean crop was at least partially restored (due to the discoveries of Pasteur) and when direct commercial ties with the Far East were established.

### III. The Responses of the Fabricants to Changes in the Market

The uncertainty and rise of the cost of raw material combined with a product market more sensitive to price than in the past forced the fabricants of Lyons to seek new ways of reducing their production costs without alienating fashion. They used two methods to achieve this. They cut labor costs, through the formation of a dual labor market, and they substituted dyeing properties and color combinations for brocaded design in the creation of nouveautés of silk cloth. They reduced labor costs on the cheaper (lower-grade) plain cloths and plain velvets by putting these out in the countryside, where labor was offered at a lower piece-rate than in the city. They reserved the higher-grade unis and the fancy silks for the urban weavers, in order to keep closer watch on these quality fabrics during weaving. By means of new dyeing techniques and

and color combinations, the fabricants reserved to themselves a certain independence of the Parisian designers in setting fashion on the plain silks, without interfering with the dress patterns of cut and fold imposed by the tailors of the capital. Dyeing also enabled the fabricants of Lyons to vary styles on these cloths more rapidly and more cheaply than brocades. As a result, the fabricants maintained the appeal to the luxury tastes which their designers were most accomplished in cultivating and satisfied at the same time the new demand for novelty, at low cost and minimum risk.

A. The Development of Rural Manufactures

Two sets of factors encouraged the fabricants of Lyons to put out to the countryside silk thread for weaving. One of these, the pressure of costs and changes in product markets, affected the demand for weaving labor. Rising costs of silk thread and the rising price elasticity of demand for silk fabrics, favoring sales of cheaper fabrics, forced the fabricants to cut production costs on inputs other than raw materials. Diligence in making these necessary cuts earned its reward in the form of opportunities for sales expansion, since the markets for the cheaper étoffes unies were growing, and reductions in fabric prices made possible by lower costs of production accelerated this growth. Labor costs were the most likely candidate for such cuts, because of the relatively large percentage of total costs, after silk thread, represented by labor,<sup>50</sup> and employment of rural labor was the easiest way, both technically and socially, to reduce these labor costs. Because of lower living expenses and less need for money income -- due to lower or non-existent household

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<sup>50</sup>See Chapter I, p. 81.

rents, lower taxes and the availability of local or home-grown sources of food and supplies -- and because of less power or less desire to force wage increases -- due to the dispersion of rural households throughout the countryside -- rural weavers could be paid a lower piece-rate than weavers in the city, for the same opportunity costs of weaving silk fabrics and for the same work-leisure preferences in city and country. Thus employment of rural labor could save the fabricant expenses of cloth production up to the point that extra costs of distributing the silk cloth to rural areas (costs of transportation, hiring sub-contractors, etc.) outweighed the reduction in labor expenditures. The net savings after subtraction of these distribution costs enabled fabricants to compensate somewhat for the rise in raw silk prices and to sell their fabrics at sufficiently low prices to retain some of their old silk markets and to capture new ones besides. Moreover, the kind of silk cloths for which such price considerations were most important and for which demand was increasing -- the étoffes unies -- were also the kind for which relatively unskilled, unsupervised household weavers in the countryside were at least as competent as the more practiced, more closely watched weavers of the city of Lyons. Thus, in sum, the pebrine disease of the silkworms and the quality, growth and high price elasticity of demand for silk fabrics after 1850 together favored a rising demand for rural labor by the fabricants of Lyons.

The second set of factors favoring putting-out in the countryside concerned the supply of rural labor. Rising supplies of labor for silk weaving followed the diminishing opportunities for weaving other textile fabrics, especially linens and cottons, with the same assurance of continued employment as the weaving of silk cloths provided. Silk weaving

provided a source of employment and income when the local linen-weaving and cotton-weaving trades languished. The parcelling of farm lands into smaller plots probably released additional supplies of labor for household weaving as well, both in areas traditionally occupied by linen and cotton weaving and in areas of no recent experience with rural industry. In order to supplement the dwindling incomes or product of their smaller, less efficient plots of land, peasant farmers and their families wove silk cloths in their homes, especially during periods of slack demand for their services on their own lands or on farms nearby where they worked seasonally as hired hands. The availability of employment in the rural silk industry favored, in turn, the maintenance of a high birth-rate among the households changing from weaving linens or cottons to weaving silks, and the elevation of the birth-rate in the increasingly marginal farming households, forced by parcelling or other causes to supplement their agricultural incomes with earnings from rural industry. The relatively high birth-rate in both cases usually exceeded the death-rate in the same areas and thus maintained or initiated a high rate of natural increase in the population. Since much of this increased population, of both sexes, could be occupied at a relatively young age on weaving the inferior silk cloths put out to the countryside, this population growth increased even more the supply of rural labor for the manufacture of these cloths.

1. Putting-out to Rural Households

Putting-out in the countryside commenced on a significant scale in the 1820's. Fear of foreign competition in plain-cloth markets abroad and the weavers' insurrections of 1831 and 1834 accelerated this early migration of the fabrique. By 1840, more than half of its looms were

located in rural areas. During the 1840's the pace of emigration rapidly diminished as the number of urban and suburban looms increased to satisfy the demand for fancy fabrics. After 1848, however, the steady and rapid growth of plain-cloth demand again stimulated weaving in the countryside. By 1872, three-fourths of the looms of the fabrique of Lyons were situated outside the city limits, in the villages of the Rhône and the surrounding departments. During the same period, the number of looms within Lyons stagnated or declined. The growth of plain-cloth production during this period was therefore the work of the rural weavers. Table 7 summarizes these various developments.

The emigration of the fabrique was initially strongest towards the towns and mountain regions of the Lyonnais plateau, west-southwest of the city of Lyons. The first silk looms in the countryside were set up in the canton of L'Arbresle in 1818, about fifteen kilometers from Lyons. After 1830, rural weaving spread farther west, through the towns of Tarare and Amplepuis to Roanne, in the department of the Loire, through the northwest region along the Azergues river and southwards into the Monts Lyonnais and the Rhône valley, reaching as far as Montbrison and Bourg-Argenthal in the Loire. By 1850 nearly the entire department of the Rhône south of the Azergues river, as well as much of the department of the Loire east of the Loire river and north of St.-Etienne was within the orbit of the fabrique of Lyons. This penetration of the countryside by silk weaving was especially noteworthy because of the prevalence of commercialized domestic cotton and ribbon weaving, and linen weaving to a lesser degree, in the same area. Although household linen manufacture was declining rapidly by 1850, ribbon and cotton production were flourishing sectors of these rural economies by 1850 and remained

Table 7

Growth of Silk Weaving in the Countryside (1810-1877)

Year	Number of Looms				Percentage Change from Previous Year		
	Lyons- Suburbs	Rural Areas	Total	% Rural	Lyons- Suburbs	Rural Areas	Total
1810	17,520	696	18,216	3.8			
1820	22,700	2,568	25,268	10.2	29.6	269.0	38.7
1830	29,278	8,265	37,543	22.0	29.0	221.8	48.6
1840	27,450	30,050	57,500	52.3	- 6.2	263.6	53.2
1848	33,500 <sup>51</sup>	30,000	63,500	47.2	22.0	- .2	10.4
1861-65	35,215	80,000	115,215	69.4	5.1	166.7	81.4
1872	30,000	90,000	120,000	75.0	-14.8	12.5	4.1
1877	28,000	73,000	101,000	72.3	- 6.7	- 18.9	-15.8

Note: The later figures for rural areas progressively understate the relative share of production in these areas. An increasing number of rural looms were power-driven, so that the output per loom was much higher than for the hand looms of the city and suburbs.

Sources: 1810, 1820, 1830, 1840, 1872: Maurice Lévy-Leboyer, Les banques européennes et l'industrialisation internationale dans la première moitié du XIXe siècle (Paris, 1974), p. 143.  
 1848 (Urban): AML. Recensement: Lyon, 1846; Recensement: Croix-Rousse, 1844-45; Arlès-Dufour, Un mot sur les fabriques étrangères de soieries, 1834, pp. 106ff, 129ff, as cited in "Recensement des métiers à différentes époques (1600 à 1844)," ACCL. Carton 21; Joseph Arminjon, La population du département du Rhône (Lyon, 1940), p. 35.  
 1848 (Rural): Joseph Jouanny, Le tissage de la soie dans le Bas-Dauphiné (Grenoble, 1931), p. 43.  
 1861-65: Bureau de la statistique générale, Statistique de la France (Deuxième série: Tome XIX): Industrie. Résultats généraux de l'enquête effectuée dans les années 1861-1865 (Nancy, 1873), p. xxj.  
 1877: Compte rendu des travaux de la Chambre de Commerce de Lyon, année 1877, p. 32, as cited in Yves Lequin, Le monde ouvrier de la région lyonnaise, tome I, p. 142.

<sup>51</sup>This represents a minimum value estimated in the following way:

The number of looms in the six cantons of Lyons in 1846 (arrondissements 1, 2, 5 according to 1852 urban districts) and in the Croix-Rousse in 1844-45 (arrondissement 4 in 1852) was 27,205, according to AML, Recensement; Lyon, 1846 and Recensement: Croix-Rousse, 1844-45. To these looms must be added

those in the suburbs of the Guillotière and Vaise. According to the census of looms by the Prefect Gasparin in 1833 (see "Recensement des métiers à différentes époques (1600 à 1844)," ACCL, Carton 21), these two suburbs had 2,704 looms. Since both were growing areas but not exceptionally strong weaving districts before 1850, an estimate of 3,000 looms, as the minimum number by 1848, is reasonable. This brings the total for Lyons and suburbs to 30,205.

Joseph Arminjon, La population du département du Rhône, p. 35, gives a total of 40,000 looms for Lyons and suburbs in 1847. Whether or not this is an overestimate is difficult to determine, but it is reasonable as a maximum value. Arminjon's estimate for looms in the Croix-Rousse in 1847 (13,000) is probably accurate, since the city did take a census of looms in that year, the results of which were probably accessible to Arminjon or (more likely) his source. I added, therefore, the difference between Arminjon's figure and that of the 1844-45 census of the Croix-Rousse, to the total looms of Lyons and suburbs calculated above (i.e. 30,205). The result is 33,491, which I estimated at 33,500 looms.

important local industries throughout the Second Empire, despite the depressions of 1857 and 1867 and the 'cotton famine' of 1860-65.<sup>52</sup> Between 1830 and 1851, silk-weaving migrated into the muslin region of Tarare, where it employed most of the active male population, into the coarse-cotton (vichys) region of Roanne, Amplepuis and Thizy to the west and into the ribbon-weaving area of Pelussin and Bourg-Argenthal to the south. By 1866, Tarare, Amplepuis, Pontcharra, Valsonne and Turdine, all within the "cotton zone," were major silk-weaving areas with several thousand looms.<sup>53</sup>

It is difficult to determine whether silk-weaving replaced muslin, cotton and ribbon weaving in these areas during periods of crisis or slack demand but such was not improbable. According to Gilbert Garrier, silk weavers in Lyonnais and Beaujolais were apparently faring better than cotton weavers in 1848, a year of economic crisis for most French industry. In July 1848, local authorities of Saint-Jean-la-Bussière in the canton of Thizy complained of "'an almost general stoppage of cotton looms and in increasing misery of the population,'"<sup>54</sup> But respondents to the Enquiry of 1848 on the Conditions of Agriculture and Industry, from the wine-growing region of Villefranche, judged it "desirable 'to import work on silk to improve the condition of the poor in the villages,'"<sup>55</sup>

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<sup>52</sup> Gilbert Garrier, Paysans du Beaujolais et du Lyonnais 1800-1870 (Grenoble: Presses universitaires de Grenoble, 1973), I, 455-57; II, Carte 20; Claude Fohlen, L'industrie textile au temps du Second Empire (Paris: Plon, 1956), pp. 185-96.

<sup>53</sup> Garrier, ibid., II, Carte 32.

<sup>54</sup> Saint-Jean-la-Bussière, Archives communales: Délibérations du Conseil Municipal, registre no. 3, 26 Juillet 1848, as quoted in Garrier, ibid., I, 212.

<sup>55</sup> Enquête sur le Travail Agricole et Industriel (1848), Question 5, as cited in Garrier, ibid.

Respondants from L'Arbresle, moreover, claimed that the lot of the silk weavers was "'envied by the day-labouring cultivators and by many small property owners.'"<sup>56</sup> "Thus," concluded Garrier, "even in times of crisis and generalized poverty, the [silk] looms continued to operate, even at a slower pace; this was especially true for silk looms with orders more spread out in time and taking longer to weave."<sup>57</sup> Silk manufacture thus provided more regular work for rural weavers than cotton production and therefore was more likely to be a preferred employment during periods of severe cotton depression, of which there were many during the Second Empire.

Although the advantages of silk weaving probably convinced some specialized cotton weavers to occupy their looms with silk cloths during crisis periods, the largest number of rural silk weavers in the Rhône and Loire departments were 'proto-industrial' peasant farmers who wove silks during off-seasons of agriculture to supplement the income derived from their farms. Many of these worked small parcels of land which they owned and which therefore provided some of their food throughout the year. Few were likely to have had former experience weaving textiles, except for some linen weaving early in the century. Silk weaving enabled many of these peasants to remain on their very small, dispersed and unfertile parcels of land, and to maintain a high rate of natural population increase, by providing enough additional income to insure subsistence and sometimes even a little comfort besides. Silk weaving probably also

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<sup>56</sup> Enquête sur le Travail (1848), Réponse L'Arbresle, as cited in Garrier, *ibid.*

<sup>57</sup> Garrier, *ibid.*

prevented the exodus of many of these peasants into the growing industrial towns of the region, such as Tarare and Roanne, where they would have swelled the cotton-weaving labor force, as well as the 'army' of beggars and misérables during periods of cotton crisis.

Although silk markets, catering to luxury tastes, generally were more susceptible to general economic conditions than cotton markets, "the crises of the Lyons silk industry had a weaker impact on the [rural looms] than on the urban looms."<sup>58</sup> Most of the rural looms in this area wove the most inferior plain silks, especially plain velvets. Demand for these cloths was growing rapidly and regularly, especially during the Second Empire, and crises in this specialty were therefore relatively infrequent. The fabricants of Lyons, moreover, preferred rural labor over urban labor for the execution of these fabrics, because of the lower wage accepted by peasant weavers and the simplicity of weaving inferior plain silks, requiring little skill and surveillance. During the few periods of slack demand for plain cloths, the fabricants laid off their urban workers first, cushioning the effects of the crisis on the rural sector. Silk weaving thus provided not only increased opportunities for employment in the rural areas but also more regular work than in the city of Lyons, making the industry more competitive with cotton weaving on the labor market.

Silk weaving did not expand indefinitely to the west of Lyons, however. After 1850, the fabricants began to put out silk cloths more intensively to the east. The migration to the east was not entirely new. In the 1820's a few fabricants of Lyons set up small silk-weaving

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<sup>58</sup>Garrier, ibid., pp. 544-56.

factories in the department of Isère. They also put out orders to several households along the route from Lyons to Grenoble traced by the Bourbe and Agny rivers. By 1830 seven establishments with 400 looms plus 300 household looms were weaving silk cloths in Isère.<sup>59</sup> In 1848-50, some 3,600 looms were working for the fabrique of Lyons in the same department.<sup>60</sup> This represented only 12% of the 30,000 looms in the countryside working for Lyons at this time and compared modestly with the 6,120 looms in the countryside of the arrondissement of Lyons (outside of the city) in 1850.<sup>61</sup> After 1850, however, the fabricants focused most of their attention on the east, so that by 1877 the largest share of rural weaving of silks occurred in Bugey and Dauphiné to the east of Lyons and the river Rhône rather than in Lyonnais, Beaujolais and Stephanois to the west. Table 8 traces this shift in the geography of countryside weaving. Since the number of looms for the department of the Rhône in 1848 includes only those in the arrondissement of Lyons, the size of the shift was in fact greater than the table suggests.

Putting out to the east of Lyons was favored by many of the same factors as putting out to the west. Among these were high population density, subsistence farming on low-yield lands, and division of ownership and exploitation of land in the areas where weaving tended to concentrate. In 1846, the density of rural population in the Bas-Dauphiné

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<sup>59</sup>Jouanny, Le tissage de la soie dans le Bas-Dauphiné, pp. 36-37, as cited in Pierre Léon, La naissance de la grande industrie en Dauphiné (Paris: Presses universitaires de France, 1954), II, 598.

<sup>60</sup>Jouanny, ibid., p. 43.

<sup>61</sup>Garrier, Paysans du Beaujolais, II, 91 (Tableau X). To these must be added the looms in the arrondissement of Villefranche (Rhône) and in the department of the Loire, for the total number of looms in the west.

Table 8

Geographical Distribution of Countryside Weaving of Silk Cloths (1848, 1877)

<u>Region</u>	<u>Department</u>	<u>1848</u>		<u>1877</u> <sup>63</sup>	
		<u>Number of Persons</u>	<u>% of Total</u>	<u>Number of Looms</u>	<u>% of Total</u>
West	Rhône	6,889 <sup>62</sup>		25,000	
	Loire	4,665		8,000	
	Ardèche			1,000	
Total West		11,554	70.0	34,000	46.6
East	Isère	3,894		20,000	
	Ain	513		12,000	
	Drôme	538		7,000	
	Savoie				
	Hte-Savoie				
Total East		4,945	30.0	39,000	53.4
Total Countryside		16,499		73,000	

Source: Yves Lequin, Le monde ouvrier de la région lyonnaise, tome I, pp. 59, 142.

<sup>62</sup>This includes the arrondissement of Lyon only.

<sup>63</sup>According to Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), I, 142, these are estimates upon which one cannot rely for the absolute values. The relative values are probably accurate, however. The minimum value is used for the estimated range of each department. For example, the range given by Lequin for Isère is 20,000-25,000 looms. The value used here is 20,000 looms.

was higher "for the threshold of Rives, the Terres basses and the Terres froides orientales" -- the region in which silk weaving concentrated most heavily -- than in any other part of the province.<sup>64</sup> A relatively high rate of natural increase -- favored by abundant rural industry, by heavy seasonal demands for harvest labor in the valleys, and by a low death rate -- explained part of this high population density. The birth rate in the Terres Froides was 22 to 26 per thousand inhabitants from 1853 to 1862 and the death rate only 19 per thousand in the same period. Migration from the rural villages of nearby regions with exceptionally high rates of natural increase accounted for the rest.<sup>65</sup> These same areas with large population densities also had the smallest average size of landholdings in 1835 and 1869, in a relatively small landholding region as compared to the rest of France. They also had a small to medium share of large holdings in relation to the total surface area of private holdings.<sup>66</sup> Very small owners, in short, owned and farmed most of the land in the developing silk-weaving areas. These owners derived no more than food for their households from these plots, and often not enough for these, since the area was hilly and even mountainous in parts, therefore unlikely to yield adequate harvests year after year. Between 1840 and 1890, the number of such small-holding peasants apparently increased relatively more than the increase of owned

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<sup>64</sup>H. Blet, "Densité de la population par commune en 1847," La Révolution de 1848 dans le département de l'Isère, 1949, pp. xxix-xxxii, as cited in Pierre Barral, Le département de l'Isère sous la Troisième République, 1870-1940 (Paris: Armand Colin, 1962), p. 40.

<sup>65</sup>Barral, ibid., pp. 42-43, 48.

<sup>66</sup>Ibid., pp. 90, 92.

land, so that the size of the average plot became even smaller during this period.<sup>67</sup> Some of the support for this large, impoverished rural population came from the seasonal demand for harvest labor in the more fertile wheat-growing plains of Biève-Vallois, Gresivaudin and the plains of Lyons, to which the boquaux of the Terres Froides migrated during part of the summer.<sup>68</sup> But a more important source of employment was the textile industry -- first, linen-weaving, cotton-weaving and flax-spinning, all of which flourished in the eighteenth century, and later silk weaving, spinning and throwing.

The linen industry, which had traditionally provided this necessary complement, began to decline rapidly after 1840. Unwilling to concentrate and mechanize, this predominantly household craft could not compete with the new power-driven factories of the north, especially as the development of transportation between the two regions closed the geographical gap between the two markets of north and south. "In 1850, the Municipal Council of La-Tour-du-Pin wrote: 'the linen industry is lost in this region, and this deprives wives and daughters of earning their living,'"<sup>69</sup> The weaving of cotton fabrics -- indiennes and cotton linens -- had provided another flourishing and expanding source of support for small peasants, but it too declined for other reasons. Among these were the falling demand for indiennes and especially the shift of raw cotton sources from the Middle East to the Americas, favoring the industries

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<sup>67</sup>Ibid., p. 89.

<sup>68</sup>Ibid., p. 113.

<sup>69</sup>ADI, 162 M/1 no. 2 and 138M/4, as quoted in Leon, La naissance de la grande industrie, II, 580.

of the north supplied through Le Havre on the Channel. The concentration of manufacture in the north gave these industries a competitive advantage through the effect of scale economies and enabled the firms of Alsace and the Nord to weather the severe cotton famine of the 1860's, following the outbreak of the American Civil War, more effectively than the manufacture of Dauphiné.<sup>70</sup> The demand for agricultural labor was low in 1848, moreover, because of the bad harvests that year. Surplus labor with experience in commercialized industry was thus relatively abundant in Isère on the eve of the Second Republic, when the demand for plain silk cloths suddenly leaped upward. The fabricants of Lyons gladly occupied this labor offered at relatively low cost, which had, moreover, the necessary skills to execute the plain silks.

Around 1850, therefore, two sets of trends -- one in the industry-centered economy of silk weaving, the other in the region-centered economy of the région lyonnaise -- converged to accelerate a large-scale 'migration' of the fabrique to households in the countryside. The trends in the silk-weaving economy -- the rise in the cost of raw silk and the shift and growth in demand for étoffes unies and other simpler silks -- transformed the demand of the fabricants for weaving labor, from one for trained, concentrated, surveyed urban labor, to a demand for unskilled, dispersed, anonymous rural labor. The advantage of employing the latter over employing the former consisted primarily of the savings in labor expenses from the lower piece-rate for which rural labor was willing to weave the simpler cloths of the fabrique. The trends in the regional economy -- the decline or increasing uncertainty of employment in the

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<sup>70</sup> Léon, ibid., II, 582-86.

linen and cotton industries, the continued or accelerated growth of rural population and the parcelling of lands in the densely-populated areas -- favored a rapid rise in the supply of household labor for silk weaving in the country towns, villages and farm areas, especially to the east of Lyons. This growing supply of labor not only kept to the low, near-subsistence or even under-subsistence level, the piece-rates at which this labor could be employed, but also provided a growing mass of labor by which output of plain silk fabrics could be increased quickly. Thus these regional trends affecting the supply of labor enabled the fabricants of Lyons both to cut costs of production and to increase the volume of production of the étoffes unies, at just about the same time that one set of industrial trends -- the crisis in raw-silk sources, the change in consumers' tastes and rising foreign and substitute-product competition -- made the first imperative, and another set of industrial trends -- the vogue of Parisian fashion and its emulation in London -- made the second profitable.

## 2. The Emergence of Rural Factories

The success of putting-out to the countryside in achieving these two aims -- reducing production costs and increasing output of silk fabrics -- became evident in the increasing long-term, fixed investments by fabricants in the same rural areas, especially investments in silk-weaving factories. As early as 1824, fabricants began to set up factories in various parts of Isère, to the east of Lyons. These concentrated 20 to 800 looms each, most of which were still operated by hand. In 1850, 1,621 of the 3,600 silk looms in the Bas-Dauphiné (about 45%) operated in factories of 30 to 200 looms in thirteen towns of the department of Isère. Nearly all of these (82%) were hand looms. Only two factories,

both in the town of Voiron, had all mechanical looms.<sup>71</sup> The only comparable example of factory weaving in the west at this time was the peluche-weaving establishment of J.-B. Martin of Tarare. In 1857, this factory had 400 'apprentices.'<sup>72</sup>

The first factories in Isère were set up in medium-sized towns along rivers, such as Rives, Renages, Bourgoin-Jallieu and especially Voiron. As silk weaving penetrated more deeply into the hills and mountain villages after 1850, factories followed the lead of household weaving, slowly concentrating an increasing proportion of hand looms within their walls. By 1862, the number of hand looms in factories (6,948) exceeded the number of household looms (about 3,500).<sup>73</sup> Communes with silk factories numbered 46 in this year and included such small villages as Corbelin (3 factories), Dolomieu (3 factories) and Faverges (4 factories), all in the densely-populated region of the Terres Froides.<sup>74</sup> Between 1850 and 1862, the average factory size diminished slightly, from 90 to 84 looms, but a few factories, such as that of Renage, had as many as 800 looms.<sup>75</sup>

In several of the factory villages, factory and domestic industry developed together. In the late 1850's, for example, the village of Colombe had 135 "dispersed looms" in individual peasant households weaving

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<sup>71</sup>Jouanny, Le tissage de la soie, p. 41.

<sup>72</sup>Louis Reybaud, Etudes sur le régime des manufactures. Condition des ouvriers en soie (Paris, 1859), pp. 204-208.

<sup>73</sup>Jouanny, Le tissage de la soie, pp. 46, 50.

<sup>74</sup>Ibid., pp. 49-50

<sup>75</sup>Ibid., pp. 41, 50.

silk, in "normal" times, along with 300 looms concentrated in four factories in the same village.<sup>76</sup> The two forms of industry usually did not compete with one another before the mechanization of weaving. The factories merely kept the wages of adjacent household weavers down to their initial levels determined by the opportunity cost of weaving in off-seasons of agricultural demand; Often the two forms of industry complemented one another. Factories concentrated the purveying of silk thread and the preparation of the thread with dévidage and cannetage. They distributed this thread to households in the region to weave on their looms. In la Murette of the canton of Rives, for example, the Bellon factory hired young females for dévidage and cannetage and then put out the prepared thread to tisseuses "disseminated in the village, each having a loom at home,"<sup>77</sup> Fabricants putting out in the area also may have determined some specialization of cloth production between factory and household, according to the skills and surveillance required for executing the fabric. Usually the skills of household weavers were superior to those of factory weavers -- who were young females from the mountains for the most part -- but work requiring close surveillance was best undertaken in the factory.

Among the motives for concentrating hand looms under one roof were the minimization of costs of transporting the household industry to the most distant, less populated regions; the training and surveillance of

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<sup>76</sup>Département de l'Isère, Arrondissement de la-Tour-du-Pin, "Situation industrielle au 31 Décembre 1857," ADI, 136M-17; Statistiques diverses relatives aux Centres industriels du département de l'Isère,, 1855-58.

<sup>77</sup>Report of Justice of Peace of Canton of Rives to Prefect of Isère, June 18, 1870, ADI, 166M-1.

a relatively unskilled labor force in the execution of unis which were not of the coarsest sort; and the wage economies of exploiting directly a labor force of the most docile kind -- child, female and in most cases entirely unfamiliar with commercialized industry. The fact that such enterprises developed in close proximity to household weaving without offering the latter serious competition for several decades simply reflected the intensity of demand for rural weaving labor on the part of the silk manufacturers of Lyons. Such also indicated the regularity of weaving orders anticipated by these manufacturers for cloth specialties within the technical competence of these rural workers. By concentrating cheap factory labor from more distant and scattered areas in the localities with relatively high population density, the fabricants reaped the economies of locational differentiation of the labor force of the larger region, 'marked' by the respective geographical origins of factory vs. household labor. The fabricants also gained certain economies of concentrating raw materials and tools and economies of specialization of certain auxiliary functions. Such rationalization of the organization of rural weaving demonstrated the greater seriousness and intensity of putting out to the east of Lyons as compared with putting out to the west.

Silk factories were, in short, a sign of the increasing personal involvement of the fabricants of Lyons in the weaving sectors outside Lyons. Unlike putting out to households, they could not suspend production in an 'irresponsible' manner (as the urban weavers saw the matter) in order to hedge against losses in times of economic crisis. The costs of such 'irresponsible' suspension included unused capacity in looms and plant and sometimes also the resistance and hostility of the local population, including local authorities, for sudden lay-offs of large numbers of

workers. The investment in factories was therefore a long-term commitment to the productive economy of the region. Another sign of the growing commitment of the fabricants to rural weaving was the substitution of the "counter" for the contremaître in the organization of putting out to rural households. Both in Isère and in the department of the Rhône, fabricants initially put out silk orders to peasant households through the agency of a contremaître rather than directly. The contremaître was usually a resident of the village or nearby town in the region to which the fabricant put out cloth orders. The fabricant consigned silk thread to him, along with the orders, and received the woven fabrics from him, in return for the piece-rate. The contremaître distributed the thread, weaving tools and orders among the households in his region and paid the peasant weavers directly out of the piece-rate given him by the fabricant. He was responsible to the fabricant for the quality of the work. The contremaître left a bond with the fabricant to guarantee his 'fidelity' but was an independent operator and could work for several fabricants at once. This sub-contracting arrangement freed the fabricant from the cost and aggravation of communicating with unfamiliar and less accessible rural regions, and of dealing with odd peasant habits as well. But it also gave him less control of the quality of manufacture and was therefore less suitable for the execution of the better plain cloths.<sup>78</sup>

After 1850, the fabricants could not depend on the sub-contracting method as they put out some of the better unis specialties to the east.<sup>79</sup>

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<sup>78</sup>"Enquête Parlementaire sur les Conditions du Travail en France," 1872. Réponses de la Chambre Syndicale des Soieries de Lyon (Rhône), Premier Questionnaire A, Observations, AN C3021.

<sup>79</sup>The evidence for this 'higher-quality' putting-out in the east is indirect but nonetheless convincing. In March 1870 the silk weavers of

As a result, they began to set up 'counters' in the rural villages. Unlike the contremaîtres, these were agencies dependent entirely the fabricant's establishment in Lyons, staffed by an employee of the latter. These counters received silk thread from Lyons and distributed the thread along with orders, tools and even looms to household weavers

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Lyons organized a society of resistance to maintain piece-rates recently negotiated with the merchant-manufacturers, called the Société Civile de Prévoyance et de Renseignements pour le Travail des Tisseurs de la ville de Lyon (SCPR). During the organizational meeting, a delegate of the séries of La-Tour-du-Pin, in the heart of the Terres Froides of Isère, informed the weavers of Lyons of a pending strike against the fabricants by the weavers in this region. [Report of Police Commissioner of Brotteaux to Prefect of Rhône, March 28, 1870, AML, I2-45: Sociétés coopératives de production et de consommation (1849 à 1870), No. 156.] The members of the SCPR voted funds to support the strike and sent a delegation of eighteen urban weavers, called the "committee of Lyons," to organize support for the strike in the rural villages of the Terres Froides. [Ibid.; Report of Police Commissioner of Canton of Morestel to Under-Prefect of La-Tour-du-Pin, April 2, 1870, ADI, 166M-1: Grèves (1858-1877).] A certain "Biralloud" headed the delegation -- most likely Brialou, a representative of the category of taffetas (plain) cloth to the central commission of the SCPR. [Report of Police Commissioner of Canton of Morestel to Under-Prefect of La-Tour-du-Pin, April 9, 1870, ADI, 166M-1.] Several rural weavers coordinated their activities with the urban plain-cloth masters working for the fabricants Giraud and de Boisseu-Cochaud, who were among the most important merchants putting out silk cloths in Isère. [Report on Meeting of Master-Weavers of Houses Giraud and de Boissieu-Cochaud (Taffetas Unis), April 18, 1870, AML, I2-47 (B).] The striking weavers of the Terres Froides seemed, in short, to be weavers of étoffes unies rather than plain velvet weavers. In fact, the SCPR apparently did not become involved in rural labor conflicts anywhere but in Isère, except for sending 100 francs to L'Arbresle (Rhône) to support the strike of the two-piece velvet weavers there. [République Française, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. Office du Travail, Les associations professionnelles ouvrières (Paris: Imprimerie nationale, 1901), II, 278.] Since the SCPR did not include the plain velvet category within its ranks, it seems evident that the east concentrated relatively more than the west the manufacture of the better étoffes unies. The west remained largely a producer of plain velvets and other coarse plain silks.

in the region.<sup>80</sup> The fabricants thus controlled rural production directly and, through the commis at the 'counter,' surveyed the execution of the orders first-hand. After 1850, there "were about ten fabricants of Lyons who divided the region of household weaving" in Isère among themselves by setting up such counters.<sup>81</sup> The new mode of putting out was not confined to the east. To the west, "the fabricants replaced the contremaîtres with counters (Amplepuis, Tarare, Chamelet, L'Arbresle, Soucieu) then opened the first factories in L'Arbresle, Tarare and Amplepuis." The shift from counter to factory apparently developed along with the "generalization of mechanical looms" in these regions after 1875.<sup>82</sup>

### 3. The Mechanization of Rural Weaving

Mechanization of weaving was in fact the next logical step to concentration of production in factories throughout the countryside. Mechanization reduced even more the unit labor costs of producing the étoffes unies, and it increased further the speed of responding to rising demand for silk cloths. In the department of the Rhône especially, mechanization was the major motive for setting up silk-weaving factories. Before 1870, however, power-weaving of silk fabrics, like factory weaving generally, was practically unknown in the west. The factories which initiated trials in mechanical weaving were instead those first established

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<sup>80</sup>"Enquête Parlementaire sur les Conditions du Travail en France," 1872. Réponses de la Chambre Syndicale des Soieries de Lyon (Rhône), Premier Questionnaire A, Observations, AN C3021.

<sup>81</sup>Jouanny, Le tissage de la soie, p. 45.

<sup>82</sup>Garrier, Paysans du Beaujolais, II, 456.

in the east. These experimented with mechanization at a very early date. In 1826, the thirty-loom factory recently set up at Rives had eight looms operated by power from the waters of the Fure River. Two years later, the Montessuy family of Lyons set up 45 mechanical looms, driven by water-power, along with 155 hand looms in their new silk factory in Renage, a short distance down the same river.<sup>83</sup> By 1831, on the eve of the silk-weavers' insurrection in Lyons, at least 48 of more than 400 factory looms in the department of Isère wove silk cloths mechanically.<sup>84</sup> The existence of these power looms gave concrete content to the weavers' fears of the machine at this time.<sup>85</sup> Their insurrection, so it seemed, brought reality closer to their fears. In 1833 the weaving house of demoiselle Flandrin, in association with a Sieur Guinet, inventor of the "so-called rotation" loom operated by water power, set up an all-mechanical silk weaving enterprise of 100 looms in an old paper factory of the town of Voiron, on the River Morge, not far from the River Fure which it joined south of Renage. Guinet himself set up another 100-loom mechanical factory in the same town shortly thereafter.<sup>86</sup> A few other fabricants followed the lead of these pioneers of factory weaving in Isère. By 1850 at least six establishments in the Bas-Dauphiné had a

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<sup>83</sup>Jouanny, Le tissage de la soie, pp. 36-38,

<sup>84</sup>Ibid., p. 38.

<sup>85</sup>In the fall of 1832, Anselme Petetin, editor of the pro-republican Précurseur, debated Bouvery, master-weaver of silks, prud'homme and one of the founders of the Society of Mutual Duty, on the merit of machines in industry. Bouvery expressed the weavers' traditional, strong opposition to the use of machines. See Robert Bezucha, The Lyon Uprising of 1834 (Cambridge, Mass.: Harvard University Press, 1974), pp. 82-83,

<sup>86</sup>Jouanny, Le tissage de la soie, pp. 39-40,

total of 295 power looms.<sup>87</sup> These were still few compared to the 1,326 hand looms in factories and the 2,000 household looms. But after 1850 weaving by machine became more common. In 1860, for example, 1,500 silk looms in the Bas-Dauphiné region were driven by power. These represented about 14% of all looms in the region and about 22% of all factory looms in the department of Isère.<sup>88</sup> By 1879, the 4,667 power looms in the region represented 28% of all looms and 41% of all factory looms.<sup>89</sup> Between 1850 and 1880, therefore, the number of power looms in the Bas-Dauphiné increased by a factor of almost fifteen, at an average rate of more than 300% per decade,

The coincidence of accelerated mechanization and accelerated putting-out to the countryside in general after 1850 suggests that the same or related causes were involved in both trends. These causes -- the necessity of low-cost production and the opportunity of rising world demand for plain silks, which the mechanical loom was technologically able to manufacture -- intensified the search for means of reducing labor expenses and of increasing rapidly the output of the étoffes unies. This intensification encouraged the adoption of the power loom by fabricants already putting out in the countryside, to accelerate even more the reduction of labor costs and the expansion of output initiated by putting out to households and by establishing handloom factories. This

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<sup>87</sup> Ibid., p. 41.

<sup>88</sup> Ibid., pp. 46, 50; p. 140 (graph). Calculations are based on figures for total number of looms in the Bas-Dauphiné and total factory looms in 1862.

<sup>89</sup> Ibid., p. 140 (graph); "Statistiques des métiers mécaniques de la fabrique Lyonnaise en 1881; Renseignements fournis par les Directeurs des Contributions Directes," ACCL, Carton 21: Tissage de Soieries (Statistiques). Calculations for percentages of total looms are based on figures for handlooms in 1880 added to mechanical looms in 1879.

combination of economic necessity and economic opportunity explained the demand for mechanization. The willingness of the fabricants to risk long-term investment in power looms -- affecting what we might call the 'supply' of risk capital for mechanization -- resulted from the expectations of continued increase in the demand for étoffes unies. Such expectations were strengthened by the observable secular increase in that demand from year to year after 1848, despite occasional 'crises.'<sup>90</sup> (Graph 2).

The department of Isère was especially favored for the development of power weaving and therefore concentrated more mechanical looms than any other department by 1880. Water power was initially easier to adapt to the weaving of silk fabrics than steam power, and Isère was abundantly supplied with relatively cheap sources of flowing water. The river Morge, where the demoiselle Flandrin and the Sieur Guinet had set up their power-driven factories in the 1830's, had an average gradient of 2,5%, yielding a five-meter fall along 200 meters of river length, 700 liter-seconds of delivery and 35 horsepower of force. This sufficed to drive a water wheel activating 100 looms. The Fure River, which powered the silk factories of Renage and Rives, achieved deliveries ranging from 700 to 1400 liter-seconds, and the Bourbre, along which many additional weaving factories concentrated, achieved 400 to 3315 liter-seconds. The falls of the Morge and the Fure were well supplied with water during the months of heaviest rainfall, especially October to January.<sup>91</sup> Since agriculture

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<sup>90</sup>The severe unemployment crisis of 1877 apparently did not halt the mechanization of silk weaving very much, as Table 9 suggests.

<sup>91</sup>Jouanny, ibid., pp. 12-13.

required little labor during much of this period, labor for industry was abundant. This season was also one of the most active for silk weaving, following the summer harvest and spinning of the cocoon. The factories along these rivers were therefore well equipped with a cheap source of motive power for the seasons of strongest manufacturing activity. Many of the early hand-loom factories had set up along such rivers and were thus well situated to mechanize production when economic conditions favored this transition. Also favoring the adoption of the mechanical loom in Isère were the availability of cheap female and child labor in growing industrial towns like Voiron, Rives and Renage, from migrations of peasants and workers attracted by the growing paper, metal and machine industries in these towns. The same industrialization, finally, provided a technical infrastructure of loom manufacture and repair skills which facilitated the integration of the power loom in the local economic environment. For all these reasons, power weaving, like factory weaving of silk cloths, developed more extensively in Isère than in any other department.

But the mechanical loom was not absent from other areas, east and west of Lyons, especially after 1870. The following table, tracing the geographical extension of power weaving of silks in 1871-73 and 1879, makes this very clear. Although power weaving remained more heavily concentrated in the east in 1879, the spread of the mechanical method was most striking in the west during the decade 1870-1879. In the department of the Rhône, as noted before, factory and power weaving were set up together. According to Gilbert Carrier, the adoption of the two after 1875 effectively destroyed the household weaving of silks in much of the department. In the towns of L'Arbresle, Tarare and Amplepuis former

Table 9

The Geographical Distribution of the Power Weaving of Silk Cloths  
in the Lyons Region, (1871-73, 1879)

<u>Region</u>	<u>Department</u>	<u>1871-73</u>		<u>1879</u>	
		<u>Number of Factories</u>	<u>Number of Power Looms</u>	<u>Number of Factories</u>	<u>Number of Power Looms</u>
West	Rhône	?	720 <sup>*</sup>	23	1,690
	Loire	?	?	27	2,185
	Hte-Loire	4	170	4	175
	Ardèche	<u>3</u>	<u>313</u>	<u>5</u>	<u>338</u>
Total West	7 <sup>+</sup>	483 <sup>+</sup>	59	4,388	
East	Isère	?	2,213 <sup>*</sup>	?	4,400
	Ain	6	220	6	411
	Savoie	5	345 <sup>**</sup>	11	764
	Hte-Savoie	<u>2</u>	<u>194</u>	<u>3</u>	<u>448</u>
Total East	<u>13</u> <sup>+</sup>	<u>2,972</u>	<u>20</u> <sup>+</sup>	<u>6,023</u>	
Total Countryside	20 <sup>+</sup>	3,455 <sup>+</sup>	79 <sup>+</sup>	10,411	

Source: "Statistique des métiers mécaniques de la fabrique lyonnaise en 1881: Renseignements fournis par les Directeurs des Contributions Directes," ACCL, Carton 21, Tissage de Soieries (Statistiques).

\* 1873

\*\* 1875. At least one of these factories (maison Gord, Faverges) had been established in 1869-70.

household weavers became part of the new factory proletariat of the silk industry. "The children of velvet-weavers henceforth went to live in these small centers, breaking for good their ties with the land."<sup>92</sup> Power looms in these areas wove mostly the lighter silk cloths, such as scarfs, velvets, plush and crape. Scarfs alone accounted for 59% of the mechanical looms in the department of the Rhône in 1880, and scarfs, velvets and plush together accounted for 80% of the looms in the department. Crapes occupied 70% of the power looms in the Loire in 1879.<sup>93</sup> In the east, mechanical weaving of the finer plain cloths, such as satins, was not uncommon. The fabricant Pochoy of Voiron, for example, manufactured satins with his power looms in the early 1870's, until a turn in fashion forced him to change his looms in favor of an inferior silk cloth.<sup>94</sup>

The substitution of Asiatic grèges for European silks and the increasing demand for mixed cloths after 1875 also favored the adoption of the power loom. Asian silk fiber tended to have a greater tenacity and, for some silkworm races, greater elasticity than the fiber spun from European cocoons -- at least after the restoration of the European crop in the 1870's.<sup>95</sup> The former was therefore more resistant to the shaking and comb friction of the power loom. Cotton and woolen fibers in mixed cloths also resisted thread tension better than pure silk fibers. As a result, such cloths were most frequently woven in power-driven factories.

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<sup>92</sup>Garrier, Paysans du Beaujolais, II, 456.

<sup>93</sup>"Statistiques des métiers mécaniques en 1881," ACCL, Carton 21.

<sup>94</sup>Letter of Mayor of Voiron to Prefect of Isère, January 30, 1876, ADI, 166M-1.

<sup>95</sup>Rondot, Les soies, II, 389-93.

A few fabricants exploited simultaneously the increasing demand for Asiatic silks and the advantages of using these silks for power weaving by setting up spinning and throwing operations to prepare the Asian thread along with their power-driven factories. The Asian grège, as noted earlier, required more careful unwinding of the cocoon and especially more intensive throwing to produce finer counts of thread with sufficient luster. Some of the early silk-weaving factories quickly specialized in the spinning and throwing of Asian grèges to supply their looms with thread of the proper quality. C. J. Bonnet in Jujurieux (Ain), J. B. Martin in Tarare (Rhône), and Montessuy-Chomer in Renage (Isère) all had throwing operations in their factories as early as 1835. After 1860, they "took the initiative in the treatment of Asiatic silks in their individual throwing operations."<sup>96</sup> The silk cloths woven by these fabricants -- satins and failles, velvets and plush, and crape respectively -- were all especially suited to the use of the Asiatic fiber and therefore easily produced by mechanical means.<sup>97</sup> Hence these fabricants were among the pioneers of power weaving of silks, as well as pioneers in the preparation of Asian thread. These and other fabricants set up additional spinning and throwing factories elsewhere in Lyonnais, Vivarais and Dauphiné to prepare Asiatic weft and warp for the manufactures of the region.<sup>98</sup> The industrialization of the Lyons region by the silk industry was thus a rather complex process involving putting-out to households, mechanized weaving in factories, and the expansion of spinning and throwing.

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<sup>96</sup> Laferrère, Lyon: ville industrielle, pp. 140-41, 143.

<sup>97</sup> Ibid.

<sup>98</sup> Ibid., pp. 139-44.

The work force created by this process was, for the most part, rural in origin and habits.

B. The Development of New Dyes and Dyeing Techniques

The transition of raw material sources from Asian to European silks, causing uncertainty and high prices for silk thread, provoked another change in thread preparation of a different sort, namely, dyeing technique. The two most important changes were the substitution of "softening" (assouplissage) for "cooking" grèges during dyeing and the "loading" (charge) of silk thread with foreign materials. Before the pébrine disaster, dyers allowed most of the silk threads which they colored to "cook" in the dyeing basins. "Cooking" removed part of the outer skin of the thread and gave it a special luster. The technique of assouplissage applied the vegetable coloring matter and the mordant to the fiber without removing the outer grès of the thread, therefore leaving it all of its natural weight and volume. The dyer Pons of Saint-Chamond developed the technique in 1820,<sup>99</sup> "Loading" silks by repeated bathing in metallic salts and astringents, such as alum or tannin, added further weight and volume by incorporating cheap foreign material into the silk fiber along with the coloring dye. Loading had served traditionally "to ease the work or to cheat on the weight and width" of the thread by less scrupulous dyers. After 1850, however, the fabricants deliberately encouraged the "loading" of silks to add weight and volume to an ever more costly raw material.<sup>100</sup>

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<sup>99</sup> Ibid., pp. 147-48.

<sup>100</sup> Ibid., pp. 148-49.

The dyer François Gillet first developed the processes of "softening" and "loading" for black dyes. Claude-Joseph Bonnet, the celebrated fabricant of Lyons, encouraged and supported Gillet in this direction to prepare thread spun and twisted by his factory in Jujurieux and thence woven into fine black taffetas and failles in the same establishment. By 1865 Gillet had perfected the souple fin for non-loaded blacks. These rivaled the "cooked" silks in brilliance and luster for the finer light black fabrics. In 1868 he achieved the "maximum of beauty" for "the maximum of load" on heavy black fabrics destined for mass consumption. In both cases trends in fashion in the 1860's favored the efforts of Gillet and Bonnet. Fashion welcomed the failles, for which the souple fin technique produced the finest dyed threads at a much lower cost than the "cooked" black taffetas (noirs légers). Fashion also welcomed the "bluish-tinted" cloth, strongest in heavily loaded noirs lourds, and preferred over the red-tinted noirs légers.<sup>101</sup> Undoubtedly, the new dyeing technique weakened the thread both physically and aesthetically, according to the standards of the past. But these same techniques strengthened the economy of thread use for the new demands of the silk market after 1860, which was less squeamish about durability and luster than about shade and price. The fabricants were all the more inclined to encourage these methods, moreover, because of the savings they permitted in the use of expensive raw material.

As "softening" and "loading" techniques were developed for black dyes, new chemical bases were discovered for color dyes. These proved more suitable than the natural vegetable coloring for varying styles

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<sup>101</sup>Ibid., pp. 147-52.

on plain silks during the Second Empire. The picric-acid yellow of N. Ph. Guinon, the French purple of Etienne Marnas, and the aniline violet (mauvéine) of W. H. Perkin all appeared within ten years after 1846. French purple was a favorite of the Empress Eugénie, and the mauvéine preferred by Queen Victoria quickly became fashionable in England.<sup>102</sup> The most remarkable discovery, however, was the fuchsine of Emmanuel Verguin in 1859. This reddish dye proved to be the base of several new derivative colors, such as the violets of Paris and Hofmann. It had both "shine and solidity," making it especially appropriate for high-fashion cloths.<sup>103</sup> Despite the exclusive monopoly of fuchsine held by the Renard brothers of Lyons from 1859 to 1869, restricting the diffusion of the dye, the new colors and color derivatives enabled fabricants to vary the styles of their luxury plain cloths more than ever before. As the domestic demand for étoffes façonnées declined with the triumph of the Parisian dress makers over the Lyonnais fabric designers, the fabricants replaced brocades of the fancy cloths with colored dyes on the plain cloths in composing high-fashion nouveautés. In this way they regained some of the initiative in designing the fabric. This new, color-based mode of fabric design also permitted a more rapid variation of styles than on the fancy cloths. Thus fabricants were able to capture the short-lived profits of an ever more variable market of fashion with less risk of losing orders because of delays in mounting and weaving.

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<sup>102</sup>Ibid., pp. 154-55.

<sup>103</sup>Ibid., p. 157.

### The Destiny of the Trade

Between 1815 and 1880 the silk industry of Lyons thus emerged from a luxury craft industry to an industry of mass consumption. In 1815 the industry was insulated from the markets of other textiles by the exclusiveness of the tastes to which silks catered, and from the competition of foreign industries by the proximity of the best raw silks, by the aesthetic talent of the Lyons fabric designers and by the long tradition of weaving skills of her master-weavers, practiced over many generations. By 1880, the material foundations of this insularity were shattered. Lyons still had the best fabric designers and the most highly-skilled weavers in the world. But consumers of luxury cloths wanted a different product than in the past. They wanted cheap and scintillating fabrics, a new style every season. They wanted long and wide dresses in shiny tints of red, violet, or soft black, cut and folded in every possible way. Silks tried to meet the new demands by turning out more plain cloths, by discovering new dyes and by combining colors in different ways. But the battle was all uphill. First the pébrine disease ruined the best sources of raw silk and caused prices of thread to soar. Then the American Civil War suddenly eliminated the most important foreign market. Meanwhile the silk industries of Germany and Switzerland grew stronger, and woolens and mixed cloths crept surreptitiously into luxury fashion, threatening the almost exclusive lead of silks on luxury fabric markets. From one crisis to another, attacked on all fronts, the industry fought to defend the throne of silk, 'queen of the textiles,' from the invasion of other fibers and to keep Lyons as her favorite, despite the growing clamor of other national industries for her special attention. The fight was brilliant and succeeded for more than two decades, By 1880, however,

the fate of the industry of Lyons could be discerned. Silks no longer claimed a monopoly of luxury textile markets, and several foreign industries, notably that of Germany, had become formidable competitors in some important cloth specialities. The battle, from then on, was one of sheer survival.

In retrospect, the ability of the industry of Lyons to maintain its strong growth and pre-eminence until 1880 at least, despite the odds against which it had to contend, was a remarkable feat. But it achieved this at a great cost, in terms of its own tradition. The product which it manufactured was no longer one of which it could really be proud. Less durable, 'loaded' with foreign matter, less brilliantly designed and executed, it represented the sacrifice of quality to quantity, of value to price. Even more serious, however, was the social cost of the transformation. In order to triumph in a competitive, mass market, the industry abandoned its urban craft tradition which valued skill and attention and substituted a rural, proto-industrial or factory system which favored speed and low cost of production. The shift from luxury to mass manufacture meant in effect the dismantling of the urban industry and its assimilation to the predominant rural industry. The industrialization of the Lyons region by the migration of silk weaving to the countryside obscured the decline of the traditional urban sector. The city became the entrepôt of rural manufacture, exporting silk thread and fabric orders to the rural areas and importing woven fabric in return. The profits from the sale of this fabric accrued largely to the account of the city, and so it prospered by integrating the countryside into its commercial and industrial orbit. But this prospering city consisted largely of the silk merchants and the merchant-manufacturers, who owned

the raw silk and who had the necessary contact with buyers. For the master-weavers of silk cloths, the ruralization of their industry and the demise of quality manufacture signaled the end of a golden era in their trade. The traditional world of their work soon became a world in deep crisis.

## CHAPTER III

### A Taste of Change in the Weavers' World, 1850-1860

"Men whose memories go back to the first years of this century, speak of a certain golden age of the urban fabrique," observed Louis Reybaud in 1857.<sup>1</sup> The weaver of that period "was a peaceful, thrifty, honest man, content with little, not getting involved in political matters and submissive to all regimes. . . . It was not that he had no sense of his own dignity, only he understood it in a different way from the present generation."<sup>2</sup> In 1857, however, weavers were 'agitated,' "if not in their actions, then in their hearts." Journeymen were insubordinate towards their masters, and masters were hostile to merchants. "Thus it is that the fabrique no longer offers anything but a confused hierarchy, where rights are misunderstood and roles inverted, and where there no longer exists any bond but one, a very fragile bond, that which necessity imposes."<sup>3</sup>

These changes in social relations and social attitudes were some of the consequences of the changing economy of silk manufacture after 1850. During the decade following that year, the master-weavers of Lyons experienced these consequences most strongly in two dimensions of their world of work: in their households, affecting their relations with

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<sup>1</sup>Louis Reybaud, Etudes sur le régime des manufactures. Condition des ouvriers en soie (Paris, 1859), p. 21.

<sup>2</sup>Ibid., pp. 129-30.

<sup>3</sup>Ibid., p. 138.

subordinate workers, and in their class, affecting their relations with other master-weavers and especially with the merchant-manufacturers. The disorder of their households seemed especially new to them, deriving from some of the more recent changes in the economy of silk weaving, such as the increased demand for inferior-quality cloths and the accelerated putting-out of silk cloths to the countryside. The disorder of class relations was more familiar. Such disorder appeared to be an intensification of traditional competition among masters for subordinate labor, during periods of labor shortage, and of traditional conflict between masters and merchant-manufacturers over the level of the piece-rate, during periods of high employment. The novelty of the latter was not its manifestation in class conflict but rather its source -- the high (negative) price elasticity of demand for silk cloths, favoring cheapness over quality, at a time of rising costs of manufacture, due to the shortage of raw silk from the pébrine disease.

Such disorder of household and class relations reflected a more general uncertainty among the weavers of Lyons during the 1850's. They experienced this uncertainty most acutely as frequent unemployment, aggravated in some years by rising prices of food and other necessities. According to some observers, this unemployment was more frequent than in the past. Yet it was not as chronic (long-term) and as deep (affecting as many looms) as that of fancy-cloth weavers in the 1860's, it did not cause a secular decline in piece-rates as in the following decade, and its relative incidence on weavers of plain silks as compared with weavers of fancy silks did not differ very much from 'traditional' patterns as it did after 1860. At most, then, the disorder represented by frequent unemployment was, like the disorder of class conflict, merely an intensification

of that experienced before, in periodic 'crises' of the fabrique. It was not a radically different, 'structural' change that was both fundamental and permanent.

In particular, unemployment did not yet threaten the traditional solidarity of the weaving craft, based on the concentration of silk-weaving -- or rather, on that of its fancy-cloth sector -- in the city of Lyons, on the one hand, and on the hierarchy of cloth specialties, weaving skills and corresponding piece-rates, within the urban craft, on the other. Nor did it threaten the traditional solidarity of the polis, based on the continuing economic importance of silk-weaving to the urban economy of Lyons and on the continuing social significance of the silk weavers among the workers in the city. As a result, part of the response of the weavers, their employers and the government to this disorder assumed a traditional, or 'structural' form, affirming the solidarity of the polis above all others. A new kind of response, however, also emerged during the 1850's. It included the revival of an old form of weavers' voluntary association, the mutual aid society, under a new form of government surveillance and local philanthropy. Like the traditional response to 'disorder,' this revival of mutual aid affirmed the solidarity of the polis and was concerned more with the effects of disorder than with its causes. Its ideology also appealed to the weavers' concerns for the disintegrating solidarity of their households, sought to mitigate class conflict, and to reduce the anxiety produced by economic uncertainty besides.

## I. Disorder in the Fabrique

### A. The Old Form of Crisis Intensified: General Economic Uncertainty

During the 1850's the economic situation of the weavers of Lyons was

generally unstable. This instability affected both their earnings and their expenses. The instability of earnings derived primarily from the frequency of unemployment, following sudden shortages in the harvest of raw silk cocoons, rumors of war in Europe, and financial panics in the markets of major foreign consumers of silk fabrics, such as the United States. All of these factors persuaded fabricants to suspend further production until raw silk prices fell, until war clouds passed, or until confidence returned to financial markets. By the end of the decade, at least one observer claimed to have witnessed a greater frequency of unemployment than ever before. In 1860, Pierre Dronier, a journeyman weaver, probably of fancy silks, complained that:

Before this period . . . a worker always found employment in the category of work familiar to him; then, once the loom had been mounted, he worked for a year, for eighteen months, without interruption. Now periods of unemployment have become very frequent; one hardly finds work for half the year. Cloths no longer have their season of manufacture which, in the past, was almost invariable.<sup>4</sup>

In some years, such as 1853-1854 and 1857-1858, unemployment was not only frequent but severe, affecting most of the looms of the urban fabrique, and, for some weavers at least, lasting months without interruption.<sup>5</sup> Sometimes also, as in 1856-1857, a decline in piece-rates, following a fall in output, and a lag in their recovery, following a revival of

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<sup>4</sup>Pierre Dronier, Essai sur la décadence actuelle de la fabrique lyonnaise (Lyon: Nigon, 1860), p. 5. (BMTL, C. 1559)

<sup>5</sup>Such are the conclusions based on general descriptions in reports from Prefect of Rhône to Minister of Interior, September 8, November 9, 1853; January 10, March 10, April 9, July 9, 1854; April 30, 1858, AN, Fic III Rhône 5, Comptes-rendus administratifs (An III à 1870). Unfortunately, these reports do not provide sufficient and regular quantitative data concerning unemployment to specify the meaning of "severity" more precisely.

production, reduced earnings even further,<sup>6</sup>

The instability of expenses resulted from sudden increases in the prices of food and other necessities, especially during the years 1853-1856. (See Graph 5.) Exceptionally poor grain harvests and a potato blight during these years created shortages of bread flour and livestock feed, causing prices of bread, meat and potatoes -- all staples of the silk weavers' diets<sup>7</sup> -- to rise. Coal prices were high as well, raising the cost of heating the homes of the weavers during the winter months -- for which many observers blamed the monopolistic pricing by the Loire coal mines.<sup>8</sup> The consequent rise in living costs worsened the economic situation of the weavers who were unemployed in some or all of the months of the inflationary years.

Economic uncertainty derived not only from severity of unemployment or food-price inflation, but also from the fact that neither unemployment nor inflation was permanent. There was no certitude, in short, that economic conditions would remain unfavorable. For the opposite trends -- the recovery of production and employment in the fabrique, the rise of piece-rates, and the fall in costs of living -- followed these unfavorable conditions usually within a few months or one year. After a pessimistic report on the economy in July 1857 announcing the rising unemployment leading into the 'crisis' of 1857-1858, the prefect of the

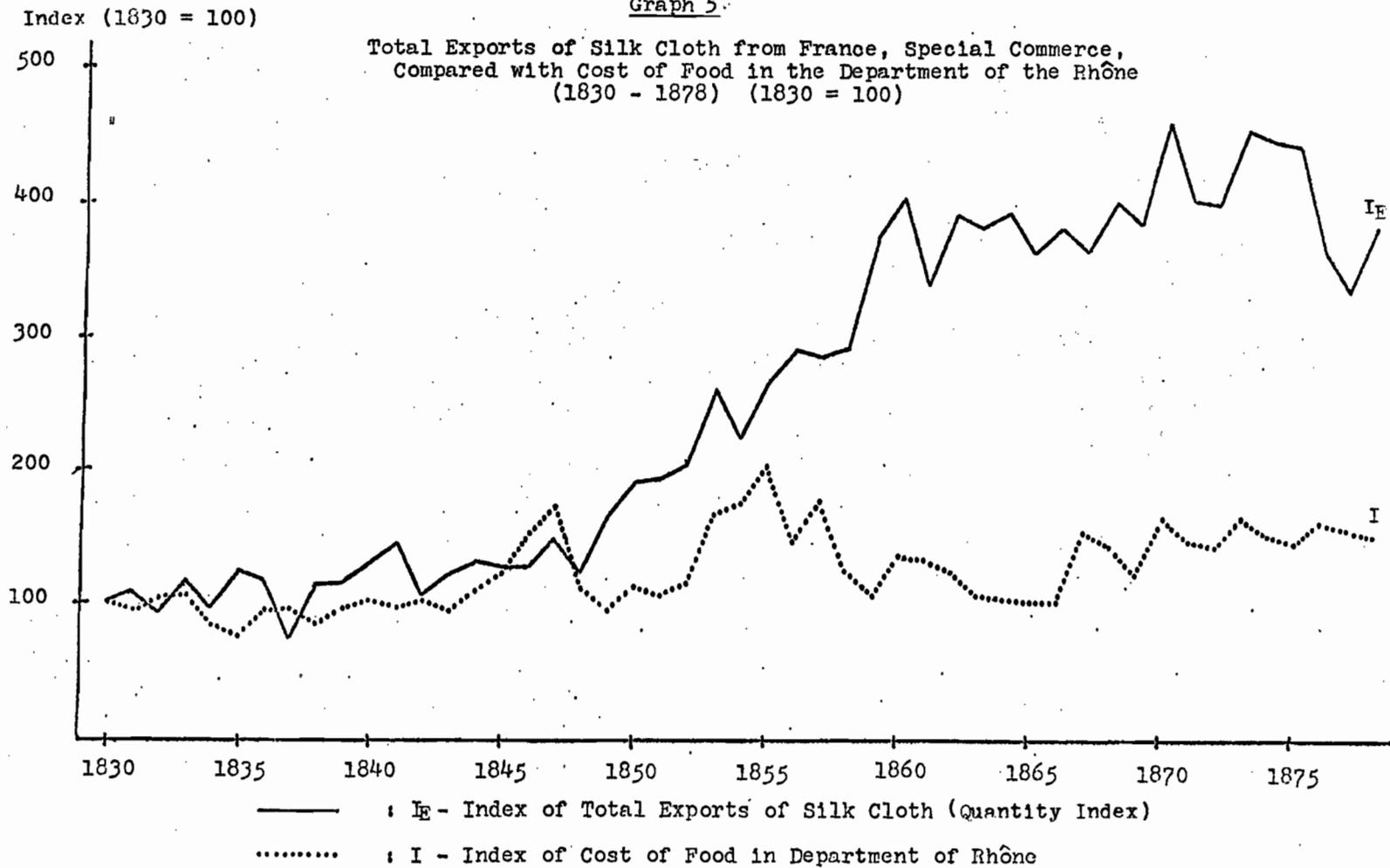
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<sup>6</sup>Report from Prefect of Rhône to Minister of Interior, January 15, 1857, AN, Fic III Rhône 5.

<sup>7</sup>Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIX<sup>ème</sup> siècle, 1848 à 1914 " (Unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), II, 168. See Appendix II.

<sup>8</sup>Report from Prefect of Rhône to Minister of Interior, September 8, 1853, AN, Fic III Rhône 5.

Graph 5.



Sources: See Appendix II

Rhône reported a mild recovery in December 1857 and in January and April 1858.<sup>9</sup> By June 1858 work was so abundant that hands were lacking to occupy additional looms,<sup>10</sup> and by September of that year, the prefect declared that "[t]he workers have never earned better wages and their situation has rarely been so good."<sup>11</sup> Optimistic reports of falling food prices followed news of inflation with somewhat more delay after the exceptionally severe cost-of-living hike of 1853-1856. Not until July 1856 did the prefect announce the first significant decline in bread prices since the start of inflation two years before.<sup>12</sup> But thereafter, rises in living costs did not endure long before they returned to more tolerable levels.

What worsened the economic conditions of the silk weavers, in comparison with the past, was therefore the more numerous oscillations of levels of employment in silk weaving, rather than their amplitude, and the occasional aggravation of more frequent unemployment by simultaneous, sometimes very steep rises in the cost of living. The economic uncertainty caused by such movements was best described by the periodic (usually bimonthly) reports from the Prefect of the Rhône to the Minister of the Interior on the industrial situation in Lyons. The following extracts from these reports for the years 1853-1857 illustrate

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<sup>9</sup>Reports from Prefect of Rhône to Minister of Interior, July 20, December, 1857; January 19, April 30, 1858, AN, Fic III Rhône 5.

<sup>10</sup>Report from Prefect of Rhône to Minister of Interior, June, 1858, AN, Fic III Rhône 5.

<sup>11</sup>Report from Prefect of Rhône to Minister of Interior, September, 1858, AN, Fic III Rhône 5.

<sup>12</sup>Report from Prefect of Rhône to Minister of Interior, July 14, 1856, AN, Fic III Rhône 5.

the interweaving of various trends of this period, making the economic situation of the weavers very unstable:<sup>13</sup>

1853: August - The economic situation is good, especially in comparison with the last five years. The silk industry has "reached such heights of prosperity, unknown until now," that there has sometimes been a shortage of workers.

September - The rapid progress in the silk industry will soon stop. Cocoon harvests are bad and raw silk prices are rising. In face of these rising prices, "many establishments have refused large orders. Looms are becoming inactive."

The greatest concern, however, is the poor grain harvests. Bread prices have risen to 43 centimes per kilogram -- the highest price yet since the grave shortage of 1847. Prices of wine, meat and coal have risen as well.

November - The silk industry is slowing down even more. About one-fourth of the plain-cloth looms have stopped working. The seasonal unemployment, normal for this time of the year, has been aggravated by the high prices of raw silk and by rumors of war,

Poor harvests for potatoes, rye, wheat and grapes have forced up the prices of all major food items.

1854: January - The usual end-of-the-year orders for silk fabrics were delayed or postponed by rumors of war, by the high cost of raw silk or by large inventories remaining from last year.

Bread prices rose as high as 48 centimes per kilogram.

March - Employment in the silk industry continued to fall in January and February. A census of looms at the beginning of February indicated that one-fourth of all looms were unoccupied. This high unemployment, "the exceptional severity of the winter," "the high prices of food and fuel" all created "greater suffering among the workers than they are accustomed [to endure],"

May - Silk production declined even more during the last two months. From the end of February to the end of April, the proportion of looms unoccupied rose from one-fourth to more than three-fourths.

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<sup>13</sup> Extracts are paraphrased, except where marks are used to indicate exact quotation.

Bread prices remain at 43 centimes per kilogram.

July - The silk industry has recovered somewhat. Orders for silk fabrics are coming from several sources, the most important ones being expected from the United States. The number of active looms has therefore increased.

Bread prices, however, are now at 46 centimes, and there is fear of another poor grain harvest.

September - The advent of the Universal Exposition has given a bit more work to our silk industry and some employment to our weavers.

November - The silk industry has returned to stagnation, and unemployment among the weavers continues. The recovery noted in the last two reports was due mainly to a change in season, since the orders for the Paris Exposition had only a minor effect. Orders from the United States, "which are the main support for our industry," are no longer expected. The silk weavers spent all their savings last winter, they used up all their credit "and now find themselves at the end of their resources."

Their situation is worsened by the high cost of all food items.

1855: January - Although orders from America are lacking, the silk industry received a small boost from seasonal orders and from orders for the Exposition in Paris.

. . . . .

July - Activity and employment in the silk industry have increased remarkably. All silk weavers are working.

October - The activity in the silk industry continues. Despite the high cost of food, there is enough work in silk-weaving and in other industries to keep up the level of employment.

1856: January - The silk industry of Lyons received several distinctions at the Universal Exposition, and orders for its fabrics are rising. Activity in the industry probably will continue for several months. The situation is therefore encouraging, despite the high cost of food.

April - Activity in the silk industry continues. The silk weavers do not lack work.

July - Production of silk cloths is beginning to decline, because of the high price of raw silk. The bad harvest of cocoons will force up this price even more, and orders for silk cloth are becoming rare. There is great fear of further decline in the industry and of a hard winter ahead,

Bread prices finally, fell, then rose again. There is hope that they will fall again soon.

October - The most serious fact is the decline in employment in the silk industry. At least a third of the looms in Lyons and its suburbs have stopped.

1857: January - There has been a mild recovery in the silk industry, following the arrival of raw silk from China. "Today, almost all the good workers are employed and . . . they earn enough to provide for their basic needs."

Bread prices continue to fall.<sup>14</sup>

The economic uncertainty created by such changing conditions of employment and food-price inflation was not entirely new to the master-weavers of Lyons. In the 1820's and early 1830's, for example, they experienced similar fluctuations in the conditions of their industry.<sup>15</sup> In the 1830's and especially in the 1840's, the prices of their food also fluctuated as often as in the 1850's and rose almost as steeply in 1847 as in 1855. (See Graph 5.) At most, the unemployment "crises" of the 1850's were more frequent and, in 1854-1855, apparently coincided more

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<sup>14</sup> Reports from Prefect of Rhône to Minister of Interior, August 12, September 8, November 9, 1853; January 10, March 10, May 9, July 9, September 9, November 12, 1854; January 17, July 15, August 18, 1855; January 18, April 11, July 14, October 13, 1856; January 15, 1857, AN, Fic III Rhône 5.

<sup>15</sup> Fernand Rude, L'insurrection lyonnaise de novembre 1831; le mouvement ouvrier à Lyon de 1827-1832 (Paris: Editions Anthropos, 1969), pp. 110-20, 156-60, 188-90, 297-301.

closely with the inflation of food prices than at any time in the recent past.<sup>16</sup> They were, in short, intensifications of an old form of cyclical crises, rather than radically new phenomena.

B. The New Sources of Crisis: Reflections of a Changing Economic Environment

What was new about the fluctuations of employment, at least, were the sources of unemployment and the reactions of weavers on the labor market to changes in employment levels. Two new sources of unemployment were the pébrine silkworm disease and the putting-out of silk cloths to the countryside. The first created sudden, acute shortages in the harvest of raw-silk cocoons. These differed from the occasional failures of cocoon harvests in the past produced by changes in the weather. When climatic changes created a shortage in one year, the harvest of the next year, or the year following that, was usually sufficiently abundant to compensate for this temporary reduction in the raw-silk supplies, and prices of raw-silk fell accordingly, or at

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<sup>16</sup>These are my own impressions based largely on a reading of the reports of the Prefect of the Rhône to the Minister of the Interior, AN, Fic III Rhône 5, during the 1850's. Unfortunately, the statistical data concerning unemployment necessary to verify such impressions are not available, to my knowledge. The impressions concerning the crisis of 1854-1855 seem probable enough, given the steep decline in exports of silk cloth from France in 1854, following a steep rise in the cost of food since 1853. (See Graph 5.) The absolute difference between decline, in the one case, and fall, in the other, within such short space of time, was greater than at any previous time since 1830. Since exports cannot serve as a proxy for employment, however -- especially in the absence of wage and price data -- this still does not prove firmly that the 'crisis' was exceptionally severe in comparison with the past.

least ceased to rise. The pébrine disease, however, infected an ever-widening range of European silkworms, so that the shortage worsened from one year to the next. Only imports of eggs and cocoons from distant regions in the Orient could relieve such growing shortages, and until these new supplies adjusted to the needs of the European silk industries, prices of raw silk fluctuated severely at best, and rose steeply at worst. Uncertainty concerning raw silk costs made fabric buyers reluctant to place orders and fabricants reluctant to put out silk thread until the state of the year's cocoon harvest was known. This reluctance was translated into more frequent work stoppage than in periods of 'normal' harvest conditions.

As we saw in the last chapter, putting-out to the countryside was one response of the fabricants to rising prices of raw silk in an industrial environment characterized by high negative price elasticity of demand for silk fabrics. Because of its lower cost, rural labor was preferred over urban labor for weaving of plain silk fabrics in such an environment. Because of this preference, unemployment seems to have affected urban weavers more often than rural weavers -- or at least seems to have afflicted the former first -- during periods of raw silk shortages and falling sales of silk fabrics in the 1850's. In October 1856, for example, the prefect of the Rhône reported a loom inactivity rate of one-third for the fabrique of Lyons, due to a stagnation in production following a poor harvest of raw silk cocoons and an absence of cloth orders, but the prefect indicated that the industries of Villefranche, Givors, Tarare and Thizy, in the countryside, were "in

full activity."<sup>17</sup> Although he did not specify which of the country industries were flourishing -- cotton, silk or others -- the absence of any reference to stagnation in these silk-weaving areas suggests that the silk-weaving was among the active industries. Only in the reports of January 1857 and July 1858 was there any intimation that the countryside was sharing in the unemployment crises of the city, and then only mildly.<sup>18</sup> In nearly all other reports of the decade, industry in the countryside remained active through all the fluctuations of employment and output in the city. Apparently urban weaving labor was the first to be sacrificed to the uncertainties and adversities of raw silk markets, when these were becoming more frequent and severe. This was a very different pattern from that of the past, when the city absorbed nearly all remaining work during periods of rising prices of raw silk or falling sales of silk fabrics.

Another probable consequence of putting-out to the countryside was the growing inflexibility of the supply of weaving labor in the city to changes in demand for it. In the past, notably in the 1830's,

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<sup>17</sup> Report from Prefect of Rhône to Minister of Interior, October 13, 1856, AN, Fic III Rhône 5.

<sup>18</sup> Reports from Prefect of Rhône to Minister of Interior, January 15, 1857 and July 12, 1858, AN, Fic III Rhône 5. In October 1859, the prefect reported a "less favorable" situation in the industries of the countryside while the fabrique of Lyons was active. (Report from Prefect of Rhône to Minister of Interior, October 4, 1859, ibid..) Presuming that the rural silk weavers shared in this slowdown of countryside industry, this 'anomaly' probably resulted from the exceptionally large output and sales of fancy silks in 1859 (see Graph 2, Chapter II), of which the city had a monopoly of production.

a floating population of unskilled journeymen weavers migrated from the surrounding farms and villages into the inferior weaving specialties of the city during periods of rising employment and returned to the countryside to work in agriculture or elsewhere during periods of declining employment in the urban silk industry.<sup>19</sup> By the late 1850's, these migrant journeymen seemed less responsive to the return of prosperity in Lyons. During the recovery of 1858, for example, the president of the Conseil des Prud'hommes reported that the "young people sent back to their families during the previous recession hesitate to return ...," creating an acute shortage of weaving labor in the city, "especially for the articles which are usually entrusted to the less able hands of apprentices."<sup>20</sup> As a result, the fabricants putting out plain silks "found themselves obliged to send agents or circulars into the countryside to look for workers there, and to increase on their own initiative the amount of the piece-rate, which thus rose about 30% in a short period of time."<sup>21</sup> One probable reason for the hesitation of these workers to return was the uncertainty of continued demand for their labor. The prefect declared, in the same report on labor shortage, that in spite of the increased activity of

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<sup>19</sup>Robert Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge: Harvard University Press, 1974), pp. 23, 45.

<sup>20</sup>Report from President of Conseil des Prud'hommes de Lyon to Prefect of Rhône, August 3, 1858, ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

<sup>21</sup>Report from Prefect of Rhône to Minister of Interior, January 10, 1859, AN, Fic III Rhône 5.

production, the harvest of raw silk had been deficient. The consequent rise in the price of silk thread, if it continued, "as it is feared," would soon lead to another decline in weaving orders.<sup>22</sup> Another probable reason of more lasting importance, was the diminishing appeal of urban weaving to natives from the countryside, as more and more orders for silk cloths were put out to their own villages and farms. Their decision to remain at home indicated the growing division of the labor market for silk weaving into two distinct zones, urban and rural, separated by a wall of differential economic opportunity -- consisting of unstable employment in the city and more stable employment in the countryside -- and competing with one another for work in the industry, rather than complementing one another as they had done in the past.

C. The Social Effects of Crisis: Old and New Kinds of Disorder

During the 1850's, the effects of these two new sources of urban unemployment -- the rise of raw silk prices and rural weaving -- were strongest on relations within the households of the weavers, between masters and their non-family subordinate workers, and on relations between masters and merchant manufacturers. Conflicts between masters and their subordinates, on the one hand, and between masters and their employers, on the other hand, became both more frequent and more acute. Short-run economic interest replaced the sanction of contract, the imperative of authority and duty, and the attachment of affective solidarity in household and class relations, as the uncertainties of unemployment and rising production costs intensified throughout the decade. The consequence of such replacement was 'demoralization' -- the word used by weavers and others to describe what appeared to be a deterioration of traditional work relationships in the fabrique.

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<sup>22</sup>Ibid.

### 1. Disorder in the Household

The change was strongest in the households of the weavers. In the 'structural' image of the fabrique, inscribed in the tradition of the weavers, the internal order of the household was conceived as insulated from the periodic disorder of economic crisis. According to this image, the household economy and society were part of the regime of order, and economic crisis -- the manifestation of disorder -- altered only the class relations of weavers to merchant-manufacturers. Change within the household, even change forced upon it by a decline in output, occurred within certain limitations of contract, duty and sentiment defined by the particular relation of social solidarity between the master and each of his subordinates. These limitations together described, in effect, the solidarity of the household.<sup>23</sup>

During the 1850's, the sources causing more frequent unemployment outside this household order also altered relations between masters and their subordinates within, beyond the limitations traditionally set by contract, duty and sentiment. Where authority, responsibility and affection had once guided these relations, insubordination, exploitation and sheer calculation prevailed. As a result, the traditional solidarity of the household disintegrated. Once part of the regime of order, the household became a center of disorder.

Such disorder was evident, for example, in relations between masters and journeymen. According to contemporary observers, journeymen became more independent-minded, more irresponsible at work and more unstable in the 1850's than they had been in the past. They no

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<sup>23</sup>Chapter I, Section I-B-1.

longer submitted to the master in the daily work of the shop, and they no longer took pride in their craft. Their independence was especially evident in the decline of "living-in" with the master. "Several years ago," wrote Pierre Dronier in 1860, "the workers almost all ate and slept in the home of the masters who employed them. It is hard to say how much this way of living was better than that which is general today, that is, workers' going to eat in very sad-looking inns and having their own rooms."<sup>24</sup> According to Audiganne, this practice had weakened the traditional bond of mutual affection between journeyman and master. It made the journeyman unruly, in particular:

By breaking the bond of the old workshop, this change has come to weaken the idea of hierarchy ... One hardly sees reigning any more between master and journeyman this friendly sympathy which apparently ought to have emerged from the similarity of their situations. The latter often finds in the worker an unruly collaborator whose peevish and fickle desires he must submit to because of commitments made.<sup>25</sup>

Besides being unruly in the shops, journeymen sometimes neglected their duties. In 1857, Louis Reybaud described an inn filled with smoke, beer and -- journeymen weavers: "They have left a piece of cloth on the loom which must be delivered the next day: the master groans, his wife wails, the fabricant will get angry, that makes no difference, the journeyman is above all such concerns: his pocket is filled with money, that is all that counts."<sup>26</sup> Such irresponsibility

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<sup>24</sup>Dronier, Essai sur la décadence actuelle, p. 6.

<sup>25</sup>A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon en 1852," Revue des deux mondes, 22ème année - nouvelle période, XV (August 1, 1852), 516-517.

<sup>26</sup>Reybaud, Etudes... Condition des ouvriers en soie, p. 170.

was not uncommon. In 1853, 1855 and 1857, nearly a third of all cases brought before the Conseil des Prud'hommes concerned conflicts between masters and journeymen. (See Table 10.) Nearly all of these cases were due to departures from the master's shop by journeymen leaving unfinished cloths on the loom. These journeymen had failed to give the eight days' prior notice of departure required by law (huitaine).<sup>27</sup> Thus Jules Simon remarked in 1861 that the journeymen weavers seemed "to have become nomads, roaming from shop to shop..."<sup>28</sup>

Insubordination among journeymen weavers was itself not new. Robert Bezucha described a similar situation for the early 1830's.<sup>29</sup> What was new was the persistence and generality of such behavior, not only among the untrained, uprooted "floating population" of journeymen weavers to whom Bezucha referred, but also among the best, most skilled journeymen.<sup>30</sup> "The most able journeymen, who know that they are needed, are sometimes the most insubordinate: they accept the chef d'atelier neither as master nor as equal, but as a renter of looms, a sort of co-participant in the piece-rate."<sup>31</sup> Such attitudes reflected in part the growing

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<sup>27</sup>Felix Bertrand, Report of President of Conseil des Prud'hommes de Lyon to Prefect of Rhône, June 29, 1854; Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes de Lyon, année 1855 (Lyons: C. Bonna-viat, 1856), p. 9; Report from President of Conseil des Prud'hommes to Prefect, August 3, 1858, ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

<sup>28</sup>Jules Simon, L'ouvrière (Paris: L. Hachette, 1861), p. 30.

<sup>29</sup>Bezucha, The Lyon Uprising of 1834, p. 23.

<sup>30</sup>Ibid...

<sup>31</sup>Audiganne, Revue des deux mondes, XV(August 1, 1852), 516.

economic power of the journeymen as a result of the increased demand for their labor. In 1854, for example, the president of the Conseil des Prud'hommes remarked that the large increase in the number of contests between masters and workers during the previous year derived mainly from the fact that "work being more active, the demands of the journeymen became greater."<sup>32</sup>

Besides unruly journeymen, apprentices and other child laborers submitted less readily to their masters in the early 1850's than before. "The spirit of insubordination which, for a certain time, has been notable among the apprentices" accounted for many of the master-apprentice conflicts heard by the Prud'hommes in 1853. These represented more than a quarter of the total cases that year.<sup>33</sup> In 1855, 1856 and 1857, such conflicts remained more than a fifth of the total (Table 10), and in 1855 the Council annulled 140 apprenticeship contracts, mostly for the cause of "insubordination of apprentices."<sup>34</sup> The master châle weavers complained of the same problem with child lanceurs (shuttle-throwers) at about the same time. In July 1853 several chefs d'ateliers of châles au quart from the Croix-Rousse informed the prefect that the looms of many masters lay idle because of a lack of lanceurs. "As soon as they have some advances, or other ideas,"

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<sup>32</sup>Bertrand, Report from President of Conseil des Prud'hommes to Prefect of Rhône, June 29, 1854.

<sup>33</sup>Ibid.

<sup>34</sup>Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes, année 1855, p. 10.

wrote the masters, they "suddenly abandon the workshop to go roaming about..."<sup>35</sup> As in the case of journeymen weavers, heavy demand for the labor of apprentices and lanceurs encouraged their unruliness. Other masters needing their labor provided the enticements for their irresponsible behavior. Apprentices whose contracts were annulled for insubordination in 1855, for example, had "allowed themselves to be led on by perfidious advice and bad examples."<sup>36</sup>

Such insubordination was sometimes a response to bad treatment by masters. The latter tried to compensate their short-term labor shortages, without incurring long-term obligations, by bending the traditional apprentice-contract agreements, or by avoiding a contract altogether, in order to exploit the labor of their apprentices. In 1850, the master-weaver Weichmann signaled "abuses of apprenticeship," such as short contracts, bad and inadequate food and overwork, as reasons for insubordination. He attributed such abuses to greed or poverty of the master. According to Weichmann, these were most flagrant in the countryside. Contracts of six months or less were common there, and children of peasants were "solicited with unrealizable promises and illusions to exchange the life of the fields for industry" in weaving factories, at miserable wages and conditions of work.<sup>37</sup> Many of the

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<sup>35</sup>Letter from Pierre Matras and Jean Bas to Prefect of Rhône, July 22, 1853, AML, F2 - Fabrique de Soies - Règlement - Tarif - Affaires diverses (1810 à 1874).

<sup>36</sup>Bertrand, Compte-rendu ... , année 1855, p. 10.

<sup>37</sup>Weichmann, 'L'apprentissage,' "Mémoires recueillis par le citoyen Weichmann, chef d'atelier, rue du sentier, no. 8 à la Croix-Rousse," April 2, 1850, AN, F12 - 2203(2): Machines à tisser (1844 à 1866).

conflicts conciliated by the Prud'hommes in the 1850's, involving masters and apprentices, originated in similar kinds of exploitation by masters in the city of Lyons. Many of the contracts annulled in 1855 "had been contracted for children too young and too weak; several contracts had also been [annulled] for lack of care on the part of the masters who, forgetting the duty the law places on them, impose on their apprentices an exploitation all the more blameable for ruining the health of these youth."<sup>38</sup>

Most cases of exploitation must have gone unnoticed. Few masters and apprentices left written contracts, and many probably relied on verbal agreements, which were almost impossible to enforce.<sup>39</sup> The failure to formalize agreements in writing reflected the unwillingness of masters to commit themselves to employment beyond the period of immediate economic need. Such failure also indicated a lack of concern for the quality of the work performed under their direction. "[For] the majority of agreements made ... during the prosperity of the fabrique, the master-weavers are little concerned about the choice they make of their apprentices; provided they find hands able to operate their looms, they concern themselves little with the formalities stipulated by the law."<sup>40</sup> Masters forced such agreements on unsuspecting, poor peasants from distant areas, such as Savoy, where paid embaucheurs were sent to recruit child labor.<sup>41</sup> Apprenticeship thus became identified with the

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<sup>38</sup>Bertrand, Compte-rendu ... , année 1855, p. 10.

<sup>39</sup>Ibid.; Bertrand, Report, June 29, 1854.

<sup>40</sup>Bertrand, Report, June 29, 1854.

<sup>41</sup>Ibid.; Weichmann, 'L'apprentissage,' "Mémoires recueillis ...," April 2, 1850

exploitation of ignorant, impoverished peasant labor, used to weave the cheap plain cloths during periods of heavy demand in the city. By 1857 Reybaud remarked that "the apprentices are no longer as they used to be, their number declines and their quality is inferior; they are formed only strictly according to need."<sup>42</sup>

In 1853, the number of conflicts between masters and dévideuses also increased at the Prud'hommes over the previous years and remained greater than 11% of all cases in 1855, 1856 and 1857.<sup>43</sup> These conflicts concerned primarily demands of dévideuses for wages owed them by their masters.<sup>44</sup> These wages usually formed part of the piece-rates given the master by the fabricant. Since she was "depository of material which cannot be her security," the dévideuse was "forced to rely on the good faith of her debtors" (the masters) for the amount of the wage owed.<sup>45</sup> Some chefs d'atelier retained a portion of this wage to compensate their own low piece-rate, but sometimes also "in times of prosperity."<sup>46</sup> This exploitation of dévideuse labor did not depend on conditions in the industry.

The combined effect of insubordination and exploitation of subordinates was a "deplorable disorder which exists in certain shops."<sup>47</sup>

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<sup>42</sup>Reybaud, Etudes ... Condition des ouvriers en soie, p. 193.

<sup>43</sup>Table 10.

<sup>44</sup>Bertrand, Report, June 29, 1854.

<sup>45</sup>Ibid..

<sup>46</sup>Ibid..

<sup>47</sup>Bertrand, Compte-rendu ... , année 1855, p. 10.

The distribution of types of cases conciliated and adjudicated by the Conseil des Prud'hommes between 1853 and 1857 indicated the extent of the disorder:

Table 10.

Types of Conflicts Conciliated and  
Adjudicated by the Conseil des  
Prud'hommes of Lyons  
(1853 - 1857)

<u>Year</u>	<u>Total Cases</u>	<u>External Order</u>		<u>Internal Order</u>						
		<u>Merchants- Masters</u>		<u>Masters- Journeymen</u>		<u>Masters- Apprentices</u>		<u>Masters- Dévideuses</u>		<u>Internal Order</u>
		<u>Number</u>	<u>% Tot</u>	<u>Number</u>	<u>% Tot</u>	<u>Number</u>	<u>% Tot</u>	<u>Number</u>	<u>% Tot</u>	
1853	4813	1416	27.4	1530	31.2	1302	27.0	565	11.7	72.6
1855	4624	1616	34.9	1505	32.5	966	20.9	537	11.6	65.1
1856	5187	1947	37.5	1411	27.2	1213	23.4	616	11.9	62.5
1857	4275	1556	36.5	1336	31.2	874	20.4	509	11.9	63.5

Sources: Reports of President of Conseil des Prud'hommes de Lyon to Prefect of Rhône, 1854, 1856, 1857, 1858, ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

More than 60% of all cases during these years involved conflicts internal to the household, that is, between masters and subordinate workers. Reports by the president of the council for 1853 and 1855 suggest that such conflicts, especially those with apprentices and dévideuses, were more frequent than in the past.<sup>48</sup>

The sources of this disorder were those causing frequent unemployment in the industry, and the effects of these, and of unemployment itself, on the labor market. Insubordination of dependent workers derived from shortages of weaving labor in periods of prosperity, giving them

<sup>48</sup> Ibid.; Bertrand, Report, June 29, 1854.

greater economic power on the labor market. As we saw earlier, these shortages were induced by the uncertainty of continued employment in the city, and by the opportunity of rural weaving, making the floating journeymen from rural areas more hesitant to return during industrial recovery. Part of the masters' demand for journeymen labor was therefore transferred to an increased demand for apprentice labor, since the latter were usually as competent as journeymen for weaving the inferior-quality étoffes unies. This demand for apprentices raised the bargaining power of the latter and sometimes even persuaded them to break their contracts with one master in order to improve their position with another.<sup>49</sup> This was probably a major source of the increased conflicts between masters and apprentices at the Prud'hommes during the recovery of 1856.<sup>50</sup>

Exploitation of subordinate workers by masters, especially apprentices and dévideuses, resulted from the increasing competition of rural weaving and from continued unemployment in the city even during periods of prosperity. The competition of cheap rural weaving kept returns on plain cloths lower than in the past. Urban masters compensated for these low returns by exploiting the subordinate workers most dependent on them. For the same reason, they were more reluctant to make long-term commitments to subordinate workers, such as formal contracts of apprenticeship.

Shortage of weaving labor, growing competition of rural weaving and uncertainty of employment in the silk industry thus made masters and their subordinate workers less concerned with the sanction of contract or with the attachment of sentiment once nurtured by commensality

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<sup>49</sup>Bertrand, Report, June 29, 1854.

<sup>50</sup>Table 10.

and more concerned with their short-run economic interest. The traditional solidarity of the household disintegrated as a result. At the same time, masters and workers of plain silks cared less about the quality of the fabrics they wove and more about the earnings they made from their work. Journeymen often left their pieces on the looms before finishing them, and masters recruited the labor of untrained apprentices irrespective of their skills or the quality of their work. Thus, as the consumers in the fabric markets abandoned quality consumption for a bargain in price, the masters and their subordinates sacrificed quality of product for their own financial interests. The traditional association of their craft identity and status with a high-quality product and with superior skills suffered as a consequence.

To restore their authority in the shop, broken by the insubordination of journeymen, and to insure regular execution of their cloth orders, master-weavers employed compagnonnes, or journeywomen, to weave the plain cloths, which required less physical strength. Women had always worked in the fabrique of Lyons in larger numbers than men, in all types of work -- weaving and auxiliary work -- and even in all states of the craft -- apprentice, journeyworkers and even master. The novel feature of their employment in the 1850's was their numerical predominance over men in the state of journeyworker. In the past there had always been fewer females in this state than males. In "the whole class of silk workers," wrote Villermé in 1835, there were "more women than men; but among the weavers, and especially among the journeymen, more men than women."<sup>51</sup> In 1833, 883 of the 2286 journey workers in

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<sup>51</sup>Louis-René Villermé, Tableau de l'état physique et moral des ouvriers employés dans les manufactures de coton, de laine et de soie (Paris: J. Renouard, 1840), I, 358-359.

the Croix-Rousse were female (39%), and in 1844-45, 1278 of 3483 journey workers (37%) were of the female sex.<sup>52</sup> By 1866, however, most journey weavers in the fourth arrondissement (Croix-Rousse) were feminine -- 3602 of 6386 journey workers (56%).<sup>53</sup> The concentration on plain-cloth weaving, for which females were equally capable as males, favored this feminization of the journey worker state.

These journeywomen were usually more docile and sober than the journeymen.<sup>54</sup> The master frequently lodged and fed them.<sup>55</sup> Such an arrangement was less onerous than lodging and feeding males, for, according to Louis Reybaud and Jules Simon, the women ate less and had fewer needs.<sup>56</sup> They were treated in fact as "children of the shop ... attached as to the hearth of the family."<sup>57</sup> Hence their lodging and food formed part of the family budget and not, as in the case of the journeymen, part of the expenses of the shop. As such their wage, of which food and lodging formed a part, was subject to the erosion of lowered standards of living imposed by the master on his own family. These compagnonnes were therefore taken on as 'transitional-state' workers in the tradition of apprentices and dévideuses à gage. Since

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<sup>52</sup> AML, Recensement: Croix-Rousse, 1833; 1844-45.

<sup>53</sup> M. Robin, "Situation de Fabrique," June 1, 1866, presented to Chamber of Commerce of Lyons in June 1870, Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1869, 1870, 1871, p. 101.

<sup>54</sup> Simon, L'ouvrière, p. 41; Reybaud, Etudes ... Condition des ouvriers en soie, p. 154.

<sup>55</sup> Ibid..

<sup>56</sup> Simon, ibid.; Reybaud, Etudes, p. 169.

<sup>57</sup> Reybaud, ibid., p. 154.

the journeymen who 'lived in' with the master were not usually considered as transitional-state workers, the feminization of the journey state shifted it from one of employment to one of domesticity. In this new state, affective solidarity between masters and their journeywomen was encouraged, while relations of masters with journeymen became more contractual and less affective than in the past, and relations with the traditional 'transitional-states' of apprentice and dévideuses became more exploitative.

## 2. Disorder in Relations of Class

Disorder also spread to relations between masters and merchant-manufacturers, and even to relations among masters, during the 1850's. Unlike disorder in the households, that affecting class relations was normal and expected in the traditional, 'structural' image of the fabrique. As described in Chapter I, such disorder was the product of crisis. The institutional responses to such crises, especially by the government, asserted and strengthened the solidarity of the polis. During the 1850's, the nature of such class conflicts did not change significantly, but they seemed to become more frequent, especially towards the end of the decade. Even more important, a pattern of grievances emerged by 1860 indicating a diminishing respect for contractual obligations and for traditional usages by the merchant-manufacturers. Such grievances resulted from practices adopted by some of the latter in response to the same uncertainties and pressures of rising production costs that weakened the bonds of contract, duty and sentiment between masters and their subordinates in the households.

Conflict between masters and their employers increased only gradually throughout the decade. In the early 1850's, relations between the two classes were in fact rather agreeable. In 1853, for example, Felix Bertrand, president of the Conseil des Prud'hommes, reported a decline in the number of contests between masters and fabricants over the preceding years. This "reduction is a clear sign of the good harmony which exists in their transactions," wrote Felix Bertrand.<sup>58</sup> By 1855, the number and percentage of master-fabricant contests increased somewhat (Table 10), and several partial strikes of silk weavers demanding higher piece-rates broke out in scattered quarters of the city. These conflicts were easily resolved, however. The strikes, for example, "remained unknown to a large part of the population of Lyons and produced only a mild sensation."<sup>59</sup> The authorities suppressed them without difficulty. The president of the Conseil des Prud'hommes remained convinced that, in spite of these conflicts, "the best harmony has continued to reign in relations between the negociants-fabricants and the chefs d'atelier."<sup>60</sup> In 1855, harmony was, in fact less notable among master-weavers. Some masters, desperate for labor, seduced journeymen away from other masters, offering to protect them from prosecution for failure to acquit their debts with the latter.<sup>61</sup> Conflicts thus prevailed as much, or even more, within the class of masters as between the master-weavers and the merchant-manufacturers.

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<sup>58</sup>Bertrand, Report, June 29, 1854.

<sup>59</sup>Report from Prefect of Rhône to Minister of Interior, June 15, 1855, AN, Fic III Rhône 5; Bertrand, Compte-rendu ... année 1855, pp. 11-12.

<sup>60</sup>Bertrand, Compte-rendu ... année 1855, p. 8.

<sup>61</sup>Ibid., p. 10.

Despite the apparent harmony between the two classes, however, individual conflicts heard by the Prud'hommes increased absolutely and relatively in 1855 and 1856 and remained more than a third of all conflicts in 1857 despite the decline in their number during this latter year. (See Table 10, p. 247.) Even more important, in 1860 the master-weaver prud'hommes petitioned the Emperor for redress of four major grievances against the fabricants, three of which concerned certain irregular (illegal or unusual) attempts by the latter to reduce piece-rates.<sup>62</sup> Apparently the 'harmony' of the earlier years of the decade diminished thereafter as a result of growing competition over fragile returns in an economy of highly elastic product demand and inflexible, unpredictable supplies of raw material and weaving labor.

Such competition seemed strongest during periods of prosperity, especially during the recovery of 1858-1859. Shortages of weaving labor during such periods, caused by emigration from the urban fabrique during previous recessions, induced a rise in piece-rates. Unable to resist the demands of weavers for higher wages by legal use of their economic power, some fabricants, especially those putting out plain silks, were tempted in such circumstances to reduce piece-rates by illegal or uncommon means, in defiance of the traditional usages of the fabrique.<sup>63</sup> Three of these means cited in the petition of 1860 were

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<sup>62</sup>Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860, ACCL, Soieries Carton 41 - I - Législation - Usages (an 8 à 1936), 13. - Pétition remise à l'Empereur, à son passage à Lyon les ouvriers en soie.

<sup>63</sup>The word usage means literally 'custom' or 'practice.' As used here, it has a stronger connotation, approaching the sense of 'law.' An

especially galling to the weavers -- arbitrary measurement of woven cloths for determination of the wage, inadequate allowance for wastes of silk thread, and elimination of compensation for tirelles and peignes woven into the cloth. By using cannes à coulisse "the length of which is arbitrary," rather than the meter length, to measure the newly-woven cloth returned by the weaver, the unscrupulous fabricant easily deceived his worker concerning the true length of the woven cloth and thus cheated him of a portion of his wage. By giving the weaver silk thread heavily 'loaded' with foreign ingredients by the dyer or previously 'humidified' in the storeroom of the fabricant, the latter could insure a larger waste of silk thread by the weaver and deduct the excess from his wage. By removing tirelles (cloth edges used to attach the fabric to the roller during weaving) and peignes (portions of the warp at the end of a fabric which could not be woven into it) from the cloth before weighing it, or by making a standard fifteen-gram allowance for tirelles regardless of the size of the cloth, the fabricant could reduce the wage by eliminating one of the elements of the cloth traditionally counted in wage allotments. Such action was protected legally by inscribing "on the livret of the worker, without tirelles ... and very often the worker did not know that it was written on his livret."<sup>64</sup>

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usage served as the standard for judging respective obligations of different parties to a conflict conciliated or adjudicated by the Conseil des Prud'hommes, such as a conflict between a master-weaver and a merchant-manufacturer. In some instances, a written contract could supercede an usage, but otherwise the latter usually had the force of law. See, for example, Usages du Conseil des Prud'hommes de la ville de Lyon pour les industries de la soierie (Lyon: L. A. Bonnaviat, 1872). (BMTL, C.1558)

<sup>64</sup>Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860.

The temptation to 'gnaw at' the weaver's piece-rate in these ways was especially strong in an economy where the product market was more sensitive to price than ever before and where raw silk output was less predictable, less flexible and less abundant than it had been in the past. As raw silk prices rose, plain cloths were more difficult to offer at the low prices to which the consumers were more responsive in their purchases of silk fabric. In 1859 and 1860, just before the weavers made their petition to the Emperor, average cocoon prices rose to 7.14 and 7.25 francs per kilogram respectively, higher than the annual average of 6.25 francs for the period 1854 - 1860.<sup>65</sup> This increase probably encouraged further resort to the practices against which the weavers complained in 1860. Such practices indicated the extent to which the combined pressures of high costs and changing demand in the silk industry had weakened the sanction of contract and the bonds of tradition in relations between master-weavers and some merchant-manufacturers.

### 3. The Moral Effects of Disorder: 'Demoralization'

Such diminishing respect for law and custom in household and class relations produced an environment described by contemporaries as 'demoralizing.' 'Demoralization' referred not only to moral and intellectual faults, such as vice, fraud, irresponsibility, lack of purpose and ignorance, but also to adverse material conditions, such as poverty, insecurity and exploitation. When considering the actions of the fabricants and their relations with themselves, the weavers understood 'demoralization' as infidelity, exploitation and lack of concern for the quality of product, and the effects of these on the

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<sup>65</sup>Table 6, Chapter II.

weavers and on the industry. In their petition of 1860, for example, the master-weaver prud'hommes described the practices used by certain fabricants to reduce piece-rates as "usury on labor" and "abuses," in order to stress the 'immoral' disregard for the traditions of the fabrique they represented. Such disregard even had the effect of "inducing some [weavers] to engage in the shameful traffic of piquage d'once [pilfering silk thread]" and thus 'demoralized' these weavers and their industry by spreading this "plague" even further.<sup>66</sup> In earlier years, the weavers referred to the 'demoralization' caused by competition among the fabricants. In 1850, for example, the master-weaver Weichmann described such competition as an "infamous struggle in which the workers are pressured, demoralized by frequent reductions of wage ..."<sup>67</sup> In 1849, the master-weaver Vernay included among the effects of local competition among the fabricants the pilfering of raw materials, ruining the 'honorable' merchant-manufacturers, and fraud and carelessness in cloth manufacture, harming the reputation of the industry of Lyons. According to Vernay, liberty "without restriction" was "a license which favor[ed] intriguing and greedy men."

This license has engendered local competition, the results of which are the ruin of honorable merchants and the deep impoverishment of workers; whence develop inevitably these violent hatreds and this tendency to a fatal demoralization which makes the victims believe in a single remedy to their woes, namely the abolition of the right of property...<sup>68</sup>

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<sup>66</sup>Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860.

<sup>67</sup>Weichmann, 'Causes de la décadence de l'industrie,' "Mémoires recueillis ...," April 2, 1850.

<sup>68</sup>Vernay, chef d'atelier, La vérité au sujet du malaise de la fabrique des étoffes de soie à Lyon. Moyens d'y remédier. Mémoire pour servir à l'enquête (Lyon: J.-M. Bajot, 1849), p.4, (BMTL, C.1559)

The weavers petitioning in 1860 probably had the same attitudes towards free competition and understood its 'demoralizing' effects in the same way, for they, like Weichmann and Vernay, advocated a more stringent regulation of industry to limit competition and to prevent such "abuses."<sup>69</sup>

'Demoralization' resulting from the disintegration of household solidarity referred instead to irresponsibility and lack of assiduity at work, prodigality leading to indebtedness, and vice among subordinate workers. The journeyman weaver was especially 'demoralized' in this sense by his new habits of independence. The journeyman Pierre Dronier complained that

... a rapid demoralization has invaded this unfortunate state of the silk worker; the principal cause is undoubtedly poverty, because it is the mother of all vice. But how much this habit of eating outside adds to it: For the worker, when he took his meals with the master-weaver, was not accustomed to frequenting taverns; he absorbed, in this almost familial existence, better principles, and saw better examples; he was more assiduous at work, and practiced much less what is called Holy-Monday: thus one saw many workers<sup>70</sup> save their best, in order to set up a shop on their own ...

Louis Reybaud noted that the most able journeymen earned 800 to 1500 francs per year, but were often in debt, because they saved so little.<sup>71</sup> Little "concerned about the future," wrote the president of the Conseil des Prud'hommes in 1856, "the workers of this class regard an increase

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<sup>69</sup>Ibid., pp. 14-16; Weichmann, 'Création d'une commission spéciale,' Mémoires recueillis ...," April 2, 1850; Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860.

<sup>70</sup>Dronier, Essai sur la décadence actuelle, pp. 7-8.

<sup>71</sup>Reybaud, Etudes ... Condition des ouvriers en soie, p. 170.

of wages only as a means of satisfying their needs of spending and pleasure: hours, entire days are spent far from the shop, and their improvidence will lead them back, on the day of unemployment, as destitute of money as before the upsurge of production."<sup>72</sup> 'Demoralization' also infected the situation of child laborers -- lanceurs and apprentices. The mayor of the fourth arrondissement wrote the prefect in 1853, concerning the condition of lanceurs:

after having spent their youthful age at such arduous work, [they] are then thrown into society, without any other principles than those picked up on the street and in the shop, amidst workmen who, for the most part, acquired their immorality by beginning their career in the work of lanceur...<sup>73</sup>

The master shawl-weavers who brought the problem of the lanceurs to the attention of the authorities argued in favor of establishing a residence-placement office for these young workers, "whose moral training would be the constant preoccupation of the Director of the Bureau [of Placement] ." <sup>74</sup>

The police commissioner of the Croix-Rousse claimed, however, that the same master-weavers must bear much of the blame for the 'demoralization' of these workers, because of "the too great liberty and little surveillance given these youth" by the masters. <sup>75</sup> A. Audiganne

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<sup>72</sup>Bertrand, Compte-rendu ... , année 1855, p. 9

<sup>73</sup> Letter from Baussuge, Mayor of Fourth Arrondissement of Lyons to Prefect of Rhône, August 16, 1853, AML, F2 - Fabrique de Soies - ... - (1810 à 1874).

<sup>74</sup> Letter from Matras and Bas to Prefect, July 22, 1853, AML, ibid..

<sup>75</sup> Report of Police Commissioner, First Quarter, Fourth Arrondissement of Lyons to Prefect of Rhône, July 23, 1853, AML, ibid..

agreed that many masters were lax in their duty of protecting their young workers, especially their young female workers, from 'immoral' abuse. "The chefs d'atelier act most of the time as if they were absolved of all responsibility in this matter."<sup>76</sup> Although the best masters gave their apprentices professional instruction, added Reybaud in 1857, they did not educate them morally.<sup>77</sup> Masters' exploitation of Savoyard apprentices and helpless dévideuses -- including, for the latter, sexual abuse as well as underpay<sup>78</sup> -- confirmed these impressions of the demoralization of the household, only here impugning the character of the masters rather than that of their subordinates.

## II. The Response to Disorder

The general uncertainty of the silk-weavers' economy, the disorder in their household and class relations, and the 'demoralizing' effects of this disorder induced the government, the merchant-manufacturers, and other notable citizens of Lyons to try several different measures to restore order in the industry or at least to assuage the suffering and mitigate the conflict caused by disorder. Nearly all of these measures had one or both of two characteristics. They were philanthropic, promoting collaboration of class, and/or they were political, involving citizens and government of the polis -- of imperial France generally and of Lyons in particular -- in collecting and distributing aid to the weavers as fellow citizens. In order to promote class

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<sup>76</sup>Audiganne, Revue des deux mondes, XV(August 1, 1852), 515.

<sup>77</sup>Reybaud, Etudes ... Condition des ouvriers en soie, pp. 158-159.

<sup>78</sup>Bertrand, Compte-rendu ... , année 1855, p. 10.

collaboration between weavers and fabricants and to attach the weavers' political loyalties to the imperial polis, these philanthropic and political measures appealed to prior social solidarities that identified the craft of the weavers with the city of Lyons, on the one hand, and that focused on the silk weavers as a central object of concern within the working population of the city, on the other hand. Such were respectively the solidarity of craft, identifying silk-weaving with Lyons, and the solidarity of the polis, concentrating on the silk weavers as 'representatives' of the working population, of the 'people', of the city.

The continued association of the fabrique with Lyons during the 1850's, before the urban craft became a mere vassal to the industry of the countryside, maintained the material foundations of urban craft solidarity and the urban weavers' prominent place in it. Despite the economic instability caused partly by the development of rural weaving, the city continued to share, most of the time, in whatever prosperity favored the industry during the 1850's. By 1854, for example, the number of urban looms increased to 37,609 from 33,500 in 1848, despite the growth of rural weaving.<sup>79</sup> During part of the decade, the city may even have maintained the pre-dominant position it held in the industry in 1848, when the number of its looms exceeded those in the rural areas.<sup>80</sup> At least the weavers

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<sup>79</sup>Report from Prefect of Rhône to Minister of Interior, March 10, 1854, An, Fic III Rhône 5; Table 7, Chapter II,

<sup>80</sup>In 1848, there were 30,000 looms in the countryside and at least 33,500 looms in Lyons and its suburbs. By 1861-65, the countryside had overtaken the city, with 80,000 looms, as compared with the city's 32,215 looms. (See Table 7, Chapter II.) Unfortunately, the sources for this data do not reveal exactly when the countryside began to 'dominate' the city in terms of number of looms. Apparently

did not feel abandoned to the countryside, as they did after 1860, and so belief in the centrality of the city in the fabrique remained strong. The central place of the weavers in the city, especially in its working population, also remained throughout the 1850's, despite the rapid growth of other industries and trades. In 1856, for example, the percentage of silk weavers among all workers remained as high as 31%, according to a police survey in that year, as compared with 32% in 1833, when the weavers were clearly the most prominent workers in the city. The percentage of silk workers as a whole, including auxiliary workers of the fabrique in addition to weavers, was even higher in 1856 (45% of all workers) than in 1833 (38% of all workers).<sup>81</sup> The philanthropic and political responses to disorder in the fabrique thus appealed to the belief in a city-centered craft and to the recognition of the silk weavers as the most prominent working people in the city. Such response reaffirmed,

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the urban weavers did not feel the dominance of the countryside very strongly until 1860, when they complained against rural weaving in their petition to the Emperor Napoleon III (for the first time, it seems, according to the documents I consulted). (Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860.)

<sup>81</sup>Survey of workers in various trades in Lyons, October 31, 1856, AML, 12-47(B), Corporations: ouvriers en soie (1819 à 1870), No. 182; "Tableau statistique des ouvriers de Lyon et des faubourgs en 1833," AML, Documents Gasparin, t. 7, as tabulated in Bezucha, The Lyon Uprising of 1834, p. 33 (Table 6). The data and percentages were computed as nearly as possible in the same manner for each year. For 1856, the total number of weavers is that of the number of occupied looms. For 1833, the totals include masters, journeymen and women (not working children) for silk-weaving and for other trades. Since the calculation for weavers in 1833 presumes that each woman worked a loom (so that the total for this year can be compared with that for 1856), and since many women in 1833 probably did not work a loom but served as auxiliary workers instead, the percentage of weavers for 1833 is probably somewhat too high for exact comparison with the percentage for 1856. Such overestimation, however, suggests even more strongly the prominent place of the weavers in the working population of Lyons in 1856.

in turn, the moral unity of the polis -- the responsibility of the government towards its people, especially towards its workers, and that of the upper classes of the city towards the lower classes, in times of material need. The forms of this response were both old and new -- in particular, a new movement of voluntary association for mutual aid.

A. The Old Form of Response: Public and Private Charity

As we saw in Chapter I, the traditional response of the government and citizens of Lyons to unemployment crises in the silk industry and to subsistence crises among the workers and the poor included public and private charity, regulation of food and labor markets, and government orders of silk cloths. During the unemployment and food crises of the 1850's, the government of Napoleon III practiced and encouraged these measures more than most regimes that preceded it. Besides setting up "charity workshops" to relieve unemployment and distributing bread vouchers to mitigate the effects of high food prices, the prefect of the Rhône organized collections of gifts from private citizens for the unemployed and the destitute, opened wholesale graneries and auction markets for beef, fowl and dairy products, and formed "alimentary societies" to prepare cheap meals for the poor during the food-price inflation and unemployment crises between 1853 and 1855.<sup>82</sup> In these instances, the government did not merely regulate markets or encourage private citizens to take action on their own in favor of the poor, but

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<sup>82</sup>Reports from Prefect of Rhône to Minister of Interior, January 10, November 12, 1854, AN, Fic III Rhône 5.

joined them as the leading partner in a philanthropic enterprise. Such collaboration of public and private charity gave concrete form to the moral unity of the polis, and enhanced its solidarity under the imperial regime at the same time.

The reports of the prefect on these various activities give a sense of the strength of this solidarity under the early Empire. These reports reveal his proud delight in the eager response of the affluent citizens of Lyons to appeals for aid for the destitute. In 1854, the prefect reported the formation "by my efforts" of

a commission composed of notable persons ...  
to seek and gather funds for the poor and to  
organize on a large scale the charity of  
private citizens which, in this city, has  
never been deaf to such appeals.<sup>83</sup>

Two months later, the prefect announced the receipt of 200,000 francs from this collection, distributed among the destitute, at the prefect's request, by "priests, pastors and Rabbis" and by the official welfare bureaus.<sup>84</sup> Another commission formed later in the year, again sponsored by him, and "at the head of which [were] the mayors of the five arrondissements," organized collections for an "alimentary society" to "come to the aid of the working class in a more direct manner," by preparing "health and adequate meals at a very modest price."<sup>85</sup> In November 1854 he reported that contributions to the society "seem to have

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<sup>83</sup>Report from Prefect of Rhône to Minister of Interior, January 10, 1854, AN, Fic III Rhône 5.

<sup>84</sup>Report from Prefect of Rhône to Minister of Interior, March 10, 1854, AN, Fic III Rhône 5.

<sup>85</sup>Report from Prefect of Rhône to Minister of Interior, November 12, 1854, AN, Fic III Rhône 5.

been sufficiently abundant to enable all sections of the city to share in the benefits of the new establishment."<sup>86</sup> By January 1856, five of these societies had opened in three different workers' sections, a sixth was planned in one of these for the near future, and a grocery store selling food and coal at wholesale prices opened in the silk-weaving section of the Croix-Rousse, apparently under the same auspices.<sup>87</sup> In these ways, then, the weavers receiving assistance experienced the solidarity of the polis as the paternal solicitude of the government and as the philanthropic empathy of the notables of the city. This experience of public and private charity was not new to the weavers but was rather an intensification of their traditional experience of response to disorder in their industry on the part of the authorities and the upper classes.

B. A New Form of Response: The Revival and Reorientation of Mutual Aid

A more novel attempt to improve the weavers' lot at a time of economic and social disorder was the revival and re-orientation of their movement of mutual aid societies. Like the more traditional paternal-philanthropic response to unemployment and food crises, this revival involved the government and local notables as benefactors and thus appealed to the sentiments of the latter in favor of charity. In 1850 the notable merchant-manufactures of the Chamber of Commerce of Lyons organized a city-wide mutual aid society and pension fund for

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<sup>86</sup> Ibid.

<sup>87</sup> Report from Prefect of Rhône to Minister of Interior, January 18, 1856, AN, Fic III Rhône 5.

the silk workers, financed in large part by the merchant-manufacturers themselves. In 1852 the Emperor Napoleon III invited the smaller, independent mutual aid societies to apply for "approved" status, conferring special benefits, including subsidies. Unlike the 'old' response to crisis, however, this re-orientation of mutual aid involved the workers themselves as participants, both financially and administratively, in the organization of assistance, and not merely as the objects of the concern of others. Silk workers contributed monthly dues along with philanthropic honorary members in the mutual aid society and pension fund set up by the Chamber of Commerce, and dues from worker members constituted the financial base of the smaller "approved" societies, the subsidies from the government and dues of honorary members forming only a supplement. Workers were represented equally with honorary members on the administrative council of the former, and they dominated the choices of administrators for all positions other than president in the smaller societies. Government paternalism and private philanthropy thus merged with workers' self-help in the mutual aid movement of the 1850's, rather than remaining separated from the latter, as it usually had done in the past. This merging permitted a new kind of response to economic and social change in the weavers' world of work, one that concerned itself not only with their periodic, short-run crises of unemployment and food prices but also with the long-run change in their general economic and social experience. The assertion of the solidarity of the polis -- the traditional consequence of the paternal-philanthropic response to periodic crises -- extended to a concern with household and class relations as well, at a time when both were worsening.

1. The Pre-emption of a Workers' Movement: Philanthropy, Paternalism and Control

The mutual aid society was a rather old form of voluntary association among the workers of Lyons by 1850. Silk workers began forming mutual aid societies in the earliest years of the century. By 1850 there were 97 societies in the city of Lyons and an additional 23 in its suburbs -- the Croix-Rousse, Vaise and Guillotière.<sup>88</sup> Most of these were rather small, averaging about 53 members each in 1850.<sup>89</sup> Twenty-three of the 120 societies in Lyons and its suburbs were societies of silk weavers (as indicated by their titles, conditions of admission and predominant membership), but nearly all weavers belonging to them were male masters.<sup>90</sup> In September 1848, three months after the workers' insurrection in Paris, more than a hundred merchant-manufacturers of silk cloths petitioned the Chamber of Commerce to form a large mutual-aid society to extend the benefits of mutual aid to silk workers not currently participating in the small independent organizations. These included journey workers, apprentices, auxiliary workers and unorganized masters, both male and female. The petition proposed that the Chamber sponsor the society and finance it by a tax on all raw silk passing

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<sup>88</sup> Report on mutual aid societies in Lyons (1850) and in the Croix-Rousse, Guillotière and Vaise (October - December, 1850), ADR, 5X-1954-Sociétés de secours mutuels, Objets divers.

<sup>89</sup> Ibid.

<sup>90</sup> Ibid. This information is based on extensive examination of statutes and/or membership lists of most mutual aid societies in the individual society dossiers in ADR, 5X-1954-Sociétés de secours mutuels.

through the Condition des Soies, which the Chamber controlled. In 1849, it accepted the proposition and formed two separate societies under its aegis, one for sickness and accident benefits -- the Société de secours mutuels des ouvriers en soie de la ville de Lyon (subsequently referred to as the Silk Workers' Society for Mutual Aid, or simply the Silk Workers' Society) -- and one for pensions -- the Caisse de retraites des ouvriers en soie (referred to as the Silk Workers' Pension Fund). In 1850 the two societies received formal approval from the government and, in July of that year, were "recognized as establishments of public utility" (or simply "recognized"), allowing them to receive bequests from private individuals and groups and subsidies from the government.<sup>91</sup>

The Silk Workers' Society for Mutual Aid differed from the smaller societies both by the size and quality of its membership and by its systematic pursuit of class collaboration. The membership of the former totalled 1,185 in 1852. Of these, many were subordinate workers in silk-weaving households, and 52% were female.<sup>92</sup> The Society promoted

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<sup>91</sup>Chambre de Commerce de Lyon, Rapport, Projet de Statuts et Délibérations pour l'Etablissement à Lyon d'une Caisse de Secours et de Retraites pour les Ouvriers et Employés, Des deux Sexes de la Fabrique d'Etoffes de Soie (Lyon: Imprimerie de Barret, 1849), séance de 7 juin 1849, ACCL, Société de Secours Mutuels et Caisse de Retraites des Ouvriers en Soie de la Ville de Lyon Carton 1-I-Origines-Statuts et Règlement, 1848 à 1921; J.-C. Paul Rougier, Les associations ouvrières. Etude sur leur passé, leur présent, leurs conditions de progrès (Paris, 1864), pp. 161-174.

<sup>92</sup>Société de secours mutuels des ouvriers en soie de la ville de Lyon, "Résumé statistique et financier depuis la fondation de la Société jusqu'au 31 décembre 1860," ACCL, Société de Secours Mutuels ... de la ville de Lyon Carton 2 - III - Questions diverses (1850 à 1936), Résumé statistique (1851 à 1860).

class collaboration through the extensive role it gave to the merchant-manufacturers in financing and administering the society along with the participating (silk-worker) members. The Chamber of Commerce, dominated by the silk fabricants, organized and sponsored the Society, its president served ex officio as president of the Society, and its Condition des Soies financed the society with taxes collected from all fabricants and silk merchants using its services, which meant nearly all of those doing business in Lyons. The Society also recruited "donating," or "honorary" members more extensively than the smaller societies, and most of these were also merchant-manufacturers of silk cloths.<sup>93</sup> They paid monthly dues, just like the "participating" members, and shared equally with the latter in the administration of the Society; but they received no benefits. Thus, by adding their resources and services to those which the workers provided on their own, these fabricants collaborated with the latter in an on-going, joint enterprise instead of merely helping them in times of exceptional need. Such collaboration was intended to strengthen the solidarity of the two classes not only within their common industry, recognizing in effect the centrality of the urban craft to the industry as a whole, but also within their city, affirming the moral and economic importance of the weavers among the urban workers in general. The prominence of the weavers in the social and political events of the early Second Republic in Lyons highlighted their importance

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Statuts de la Société Lyonnaise de Secours Mutuels pour les Ouvriers en Soie de Lyon et des Communes Suburbaines et de la Caisse des Retraites y annexé (1850), ACCL, ibid. Carton 1 - I.

in the city,<sup>94</sup> and the promoters of the Silk Workers' Society were very aware of this prominence as they tried to promote class harmony through mutual aid. As a unifier of the two classes in the city, the solidarity of the urban polis, in the conception of the promoters of the Society, was founded on social order. The assurance against social disorder, such as that recently observed in Paris during the insurrection of the 'June Days,' was therefore one of their major intentions for organizing the Silk Workers' Society in September 1848.

Concern over the solidarity of the polis, this time within a national framework, and concern for social order upon which such solidarity was presumed to lie, motivated a more radical transformation of the mutual aid movement soon after the founding of the Silk Workers' Society. Such a transformation was the work of Louis Napoleon. Inspired perhaps in part by the example of the Silk Workers' Society of Lyons, which he had officially authorized in 1850 while still president of the Second Republic, Napoleon made the sponsorship of mutual aid the keystone of his imperial social policy after the coup d'état of 1851 and the imperial plebiscite of 1852. He sought to construct a 'positive' policy -- that is, one that favored the workers with concrete benefits -- to win their loyalty to the regime, rather than one that merely controlled them by police repression and surveillance. By his decree of March 26, 1852,

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<sup>94</sup>For a discussion of the role of the silk weavers in the events of 1848 in Lyon, see Francois Dutacq, Histoire Politique de Lyon pendant la Révolution de 1848 (Paris: Edouard Cornély, 1910), and Mary Lynn McDougall, "After the Insurrections: the Workers' Movement in Lyon, 1834 - 1852" (unpublished Ph.D. dissertation, Department of History, Columbia University, 1974), pp. 245 ff.

the Emperor invited the small, autonomous mutual-aid societies throughout France to partake of the same advantages as the large "recognized" Society of Lyons and to receive additional benefits besides, especially government subsidies, by submitting to the conditions for "approved" status. Three conditions were required for "approval": appointment of the society's president by the Emperor, admission of honorary members, and agreement not to distribute unemployment benefits.<sup>95</sup> These "approved" societies remained subject, however, to thorough and regular scrutiny of accounts, membership and administration.<sup>96</sup> By offering the carrot of financial assistance to these societies, the Emperor thus sought to capture the loyalties of the workers involved in the mutual-aid movement and, at the same time, to keep this last vestige of indigenous workers' organization under firm control. His policy also sought to promote class collaboration through the institution of the honorary membership, and so combined the twin goals of social harmony and political solidarity under the Empire.

Armed with the favors of the decree of 1852, the prefect of the Rhône encouraged existing mutual-aid societies to apply for "approval" and promoted the organization of new societies throughout the department. This 'paternal' takeover of the movement of mutual aid was apparently quite successful. In 1852, 139 societies existed in the department, with a total of 11,216 participating and honorary

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<sup>95</sup>Sreten Maritch, Histoire du mouvement social sous le Second Empire à Lyon (Paris: Rousseau, 1930), p. 31.

<sup>96</sup>Such scrutiny is responsible for the voluminous dossiers of these societies in ADR, 5X - 1954 - Sociétés de secours mutuels.

members. By 1865, the department had 217 societies with 25,255 members. Of these, 191 were approved, representing 91% of the total membership.<sup>97</sup> In the city of Lyons and in its suburbs, all silk weavers' societies but one applied for and received "approved" status. Most of the latter were approved within one year of the decree instituting the new policy.<sup>98</sup> The Silk Workers' Society of Lyons also shared in this growth. Participating membership in the Society rose from 1,185 in 1852 to 4,384 in 1861.<sup>99</sup>

## 2. The Ideology of Mutual Aid: Security, Order and Moralization

The success of the decree of 1852 and of the Silk Workers' Society for Mutual Aid resulted primarily from the material benefits conferred by both. Among the silk weavers, however, such success also derived (at least to some extent) from the ideological appeal of mutual aid. This appeal was strongest when it addressed the social and economic problems facing the weavers in the 1850's, especially the three discussed earlier - frequent unemployment and its effects, especially economic uncertainty; the deterioration of household and class relations; and the 'demoralization' of the weavers and their industry. Promoters of mutual aid in the 1850's often focused on these concerns and on the merits of association for mutual aid to relieve them, in

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<sup>97</sup>Préfet du Rhône, Sociétés de Secours Mutuels du Rhône, Renseignements Statistiques (1865), ACCL, Sociétés de Secours Mutuels ... de la Ville de Lyon Carton 7 - Questions générales et diverses (1848 à 1880), Renseignements communiqués par la Préfecture du Rhône, 1860 à 1866.

<sup>98</sup>See individual dossiers of the following silk-weavers' societies of Lyons in 1864 in ADR, 5X - 1954 - Sociétés de secours mutuels: 3, 8, 10, 12, 18, 20, 22, 23, 25, 28, 43, 61, 64, 67, 80, 86, 88, 93, 97, 98, 110, 114, 122, 133, 150, 175.

<sup>99</sup>Annual report of the Société de secours mutuels des ouvriers

their efforts to revive and re-orient the movement in a paternal and philanthropic direction. In this way, the movement attracted the weavers to the ideals of class harmony and solidarity under Empire, by demonstrating the relationship of these ideals to the disorder of their lives of work and the importance of obtaining these ideals for mitigating the efforts of such disorder.

This ideological appeal was not always direct; that is, it did not always address explicitly the specific disorders of unemployment and worsening social relations experienced by the weavers. Rather it addressed the anxieties, fears and confusion caused by these disorders or intensifying their psychological effects. Such was notably the relationship of mutual aid to the crises of unemployment and food shortage. As indicated earlier, "approved" societies were not allowed to distribute unemployment benefits, and the Silk Workers' Society of Lyons did not do so either. Moreover, the mutual-aid societies were not, to my knowledge, prominent in the organization of collections for the destitute during the food-price inflation of the mid-1850's. They did not mitigate unemployment or high food prices directly, in other words, for their purpose was the relief of unforeseen sickness or accident afflicting individuals, rather than relief of distress affecting masses of workers at once. They did allay, however, the uncertainty caused by individual adversity which aggravated the general uncertainty resulting from unemployment or rising food prices. They promised the individual member greater security, in other words, in

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en soie de la ville de Lyon, December 31, 1861, AML (Bibliothèque), 702.068.

confronting adverse circumstances of his daily life, whatever these circumstances might be. Thus, in the words of the president of the Silk Workers' Society, mutual aid offered "to man the security of assistance when health or strength abandon[ed] him and when he [found] himself deprived of the resources that his work [ordinarily] provide[d] him."<sup>100</sup> Such promise of security must have been especially welcome, or at least best understood, among the masses of weavers during times of general uncertainty of employment and living costs, as in the 1850's.

The promise of social security made mutual aid even more appealing to the silk weavers of Lyons when combined with an assurance to preserve the solidarity of the household. One of the clearest manifestations of their economic insecurity during the decade was the social disorder in their households. Mutual aid did not propose to restore order between masters and their subordinate workers by any coercive or persuasive (interest-oriented) economic or legal means, but rather sought to strengthen the bonds of affection and respect between masters, their families and their non-family charges by preserving the moral influence of the former at home in times of adversity. "The chef de famille who has the **wisdom** to bring us his small monthly savings," declared the president of the Silk Workers' Society, "will no longer be obliged to leave his home in order to recover his health at the cost of abandoning those whom God has entrusted to his care."<sup>101</sup>

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<sup>100</sup>Annual report of the Société de secours mutuels des ouvriers en soie de la ville de Lyon for 1850 - 1851 (Lyon, 1852), AML (Bibliothèque), 702.068.

<sup>101</sup>Ibid..

Thus, by means of mutual aid,

the bonds of the family will be strengthened: a mere illness will no longer be enough to upset a household, the dignity and authority of the father and mother will be maintained in all their integrity: moreover, even while the head of the household is kept in his bed by sickness, his presence will be no less imposing to his children, to his apprentices, even to his workers; the sight of his suffering will carry with it such great respect, elevating the spirit and giving the mind such wholesome thoughts ...<sup>102</sup>

At a time when economic interest was replacing affection, duty and respect for authority in the social relations of the weavers' households, when masters' subordinates were unruly, irresponsible and disdainful, such an appeal must have fallen on many welcome ears among masters in the fabrique of Lyons.<sup>103</sup>

Another disorder in the fabrique during the 1850's was that of class relations. As noted earlier, the new forms of mutual aid initiated by the Chamber of Commerce of Lyons and by the imperial government sought to allay class conflict by means of the honorary membership. In August 1850, while still president of the Second Republic, Louis Napoleon articulated this purpose in an address to the newly-formed Silk Workers' Society of Lyons. "The mutual-aid societies, as I understand

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<sup>102</sup>Ibid...

<sup>103</sup>Ironically, the speech from which the above statements were extracted was made largely to subordinate workers who constituted the majority membership of the Silk Workers' Society. The intent of the appeal was therefore probably as much the moralization of these subordinates, by identifying the aims of mutual aid with the promotion of traditional household solidarity, as the attraction of master-weavers to membership in the Society. It is quite likely, moreover, that the statements represented general arguments for mutual aid made by promoters of the smaller mutual aid societies, composed largely of master-weavers, as well. In other words, such statements probably reflected an ideology of mutual aid in general, and not only the ideology of the Silk Workers' Society. Unfortunately, I have no documents to demonstrate this conclusively.

them," declared Napoleon,

have the precious advantage of uniting the different classes of society, of bringing to an end the jealousies that might exist between them; of neutralizing, to a large extent, the effect[s] of poverty by bringing together the rich man, voluntarily, with the surplus of his fortune, and the worker, with the product of his savings, in an institution where the hard-working laborer will always find advice and support.<sup>104</sup>

At least some of the societies transformed under the decree of 1852 seem to have had this effect. In May 1854, for example, during the severe unemployment crisis in the silk industry of Lyons, Collombant, president of the "12th Society of Mutual Aid of Manufacturers [that is, of Weavers] of Silk Cloths" and master-weaver for the establishment Millon and Servier, wrote the prefect of the Rhône to inform him of "the rare devotion to the working class" displayed by these merchant-manufacturers of plain silk cloth:

I ... declare that during the crisis endured by our industry, this establishment never once retired its looms, that despite the loss that this might have caused it, this commercial House kept more than 600 looms occupied continuously.<sup>105</sup>

Both merchant-manufacturers were honorary members of the 12th Society, and very likely their close contact with the weavers in this mutual-aid society -- some of whom were their own employees -- encouraged their "rare devotion to the working class." The Society also offered the occasion to recognize, in a semi-official manner, through its president appointed by the Emperor, the gratitude felt by the weavers towards

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<sup>104</sup> Emile Laurent, Le Pauperisme et les associations de prévoyance (Paris, 1865), p. 286.

<sup>105</sup> Letter from Collombant, President of the 12th Société de secours mutuels, to Prefect of Rhône, May 21, 1854, ADR, 5X - 1954 - Sociétés de secours mutuels, 11 à 15, No. 12.

the fabricants of this establishment for their exceptionally favorable treatment during the critical period. Keeping the weavers employed out of a concern for their welfare befitted the 'honorable' merchant-manufacturer, as the weavers traditionally conceived him. In this way, mutual aid appealed to inter-class solidarity, at a time when that solidarity was under strain and, as we will see in a later chapter, soon to dissolve.

The ideology of mutual aid raised the concern with security and order, deriving from the psychological uncertainty and material disruption caused by disorder, to the level of moral purpose by stressing 'moralization' as one of its major aims. This aim addressed only the 'demoralization' of the weavers and their households, rather than that of the fabricants in their relations to the weavers or to their industry. It concentrated, moreover, on individual attitudes and behavior in which such 'demoralization' became apparent and ignored the social and economic causes of the latter. As a result, the moral ideology of mutual aid diverted the weavers from understanding or questioning the ever less stable social and economic order of their industry. Since the promoters' goals of class harmony and imperial political solidarity presumed the conservation of this order, such an ideology facilitated the acceptance of these goals by the weavers as well.

The promoters in the government and upper classes stressed most strongly the moral purposes of mutual aid. In 1849, for example, the Minister of Agriculture and Commerce emphasized the moral benefits of

mutual aid in a circular to the prefects of France directing them to promote mutual-aid societies in their departments. The Minister wrote:

funds for assisting mutual-aid societies have everywhere had the most happy results for the well-being and moral training [moralisation] of the worker. They ought to be improved, developed [and] encouraged, by appealing to all men of charity to offer their services and to help [these societies] by adding their own savings to those of the latter.<sup>106</sup>

In 1853, the president of the Silk Workers' Society of Lyons, who was also the president of the Chamber of Commerce of that city, specified more precisely the meaning of such moralisation; namely, the promotion of individual virtue. Moralisation meant, in particular, "favoring economy, encouraging foresight" and thus preserving the rewards of diligent labor, not substituting for them.<sup>107</sup> According to the president, mutual aid did not intend to eliminate "the possibility of evil, the inequalities of wealth and position in the world," for it is "only by virtue and by work that man makes himself the highest form of creation and raises himself in the social order." Nor did it intend to relieve its participants from the responsibility and consequences of their own actions by throwing this burden on society:

The man of pluck must ... accept courageously the responsibilities of life; he cannot nor should he abandon his individuality and abdicate responsibility for his actions, either on society or on others ...<sup>108</sup>

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<sup>106</sup>Ministre de l'Agriculture et du Commerce, Questions relatives aux caisses de retraites et aux sociétés de secours mutuels, June 26, 1849, ACCL, Société de Secours Mutuels ... de la Ville de Lyon Carton 7, Projets d'établissements de Prévoyance (1848 à 1871).

<sup>107</sup>Annual report of the Société de secours mutuels des ouvriers en soie de la ville de Lyon for 1852 (Lyon, 1853), AML (Bibliothèque), 702.068.

<sup>108</sup>Ibid...

Thus, in the purposes articulated by its upper-class promoters, mutual aid sought to reform the behavior of individuals, not the organization of society, and therefore "reject[ed] firmly any affinity with the errors of our age" -- the 'errors' of socialism especially, to be sure -- "an affinity which for us would be a germ of dissolution and demise."<sup>109</sup>

Although weavers and other workers participating in mutual-aid societies did not stress so firmly the preservation of the established social order, they too shared the same interpretation of 'moralization' as the promotion of individual virtue. In 1857, Leon Genton, joiner (menuisier) and president of the 122nd mutual-aid society composed largely of silk weavers, declared that participants in mutual-aid societies "doubled the forces of morality and incentive, and ... eliminate[d] the vices of men caught in the web of indolence."<sup>110</sup> The statutes of the smaller societies usually contained moral provisions for admission of new members and for proper behavior of present members that stressed the same promotion of individual virtue. Candidates for admission to the 10th Society for Mutual Aid ("of Stocking and Tulle Weavers and Other Related Professions") had to demonstrate "good conduct" in their daily lives, and members could be expelled from the society for "irregular and notoriously scandalous behavior."<sup>111</sup>

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<sup>109</sup>Ibid..

<sup>110</sup>Leon Genton, "Discours prononcé Par le Président de la 122e Société de Secours Mutuels," March 1, 1857, ADR, 5X - 1954 - Sociétés de secours mutuels, 116 à 122, No. 122.

<sup>111</sup>Articles 6 and 8, Statuts, 10e Société de secours mutuels des fabricants de bas et de tulle et autres professions analogues (1853), ADR, ibid., 1 à 10, No. 10.

Admissions to the 25th Society for Mutual Aid ("of Master-Weavers of Silk and Other Trades")<sup>112</sup> required "possession of a good reputation," and "those members who offend[ed] good morals in their private lives or whose conduct cause[d] scandal" were subject to expulsion from the Society.<sup>113</sup> Apparently even the weavers and other workers considered the moral benefits of mutual aid to have had little to do with reforming their social order and more with enabling individual workers to survive in that order with dignity.

The ideology of mutual aid, stressing security, order and moral education, thus appealed to the conservative sentiments of the workers. The promise of greater security addressed the anxieties induced by individual adversity, aggravating those produced by the general uncertainties of employment and food prices, but it did not mitigate the latter directly nor did it penetrate the causes of general economic uncertainty. The appeal to order within the household and between classes presumed the acceptance of a 'right' order of household and class relations where mutual responsibility, respect and affection were recognized by all parties. The weavers associated such an order with the 'traditional' regime of the fabrique, threatened by some of the changes in the economy and society of their industry during the 1850's. Their longing for this regime again focused their attention on the effects of actual 'disorder' in their lives of work rather than on its causes. The promotion of

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<sup>112</sup>Title taken from Statuts, 25e Société de secours mutuels dite des chefs d'atelier tisseurs sur la soie et autres professions (1859), ADR, ibid., 22 à 30, No. 25.

<sup>113</sup>Articles 2 and 64, Statuts, 25e Société de secours mutuels (1853), ADR, ibid.,

moral education, finally, sealed this conservative longing with the cement of moral purpose. This sealing especially served the interests of those promoting mutual-aid societies in order to foster class collaboration and imperial political solidarity without upsetting the established order of society.

### III. The Reactions of the Weavers: The Solidarity of the Imperial Polis

These promoters were only partly successful in achieving industrial peace and in winning the loyalty of the workers to the regime of the Emperor, by patronizing their mutual aid societies. Although there were few strikes in the silk industry during the decade, individual conflicts between weavers and their employers became more frequent. And although the remaining secret societies and revolutionary 'demagogues' received little attention in the workers' quarters of Lyons, the workers themselves nevertheless registered a quiet protest against the government by electing the Republican Henon, soon to become one of les Cinq opposition delegates in the Corps législatif, as deputy of the Rhône in 1857.<sup>114</sup> At most, the workers were not inclined towards social or political revolution, but this did not mean that they were content with their social situation, with their economic conditions or with the imperial government.

Neutralizing any penchant towards revolution was nevertheless a significant achievement in this decade of frequent 'crises' of unemployment and inflation. The imperial government especially reaped the fruits

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<sup>114</sup> Maritch, Histoire du mouvement social à Lyon, p. 44.

of this achievement by its swift, well-publicized responses to these crises, by its grandiose public-works program, providing additional jobs for workers, and by its active patronizing of mutual aid. These efforts convinced many workers that the regime was less anti-labor than it had appeared to be on the morrow of the coup d'état of 1851, when it brutally suppressed most workers' associations. These efforts even persuaded some workers that the regime of Napoleon III was more sympathetic to their needs than the Republic. As a result, the social policy of the Second Empire succeeded at least in establishing the regime as protector and benefactor of the workers and won the active support and loyalty of some of these workers besides. As their 'protector,' the government served as their intermediary with their employers and thus temporarily resolved the 'demoralizing' relations of class by absorbing these into the solidarity of the imperial polis.

This success was especially evident among the silk workers. Often during periods of unemployment or high food prices, the prefect observed a "calm" among the workers of the fabrique despite their want and attributed this "calm" to the solicitude for their welfare demonstrated by the imperial government and by the local notables. In May 1854, for example, the prefect wrote the Minister of the Interior:

despite this poverty, [public] order has not once been troubled and the indigent population has not voiced any complaint against the Government ... The people have learned to recognize and appreciate all that has been done together by the State, by the local authorities and by private charity to improve their conditions.<sup>115</sup>

In October 1856, when unemployment and high food prices again ravaged the

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<sup>115</sup>Report from Prefect of Rhône to Minister of Interior, May 9, 1854, An, Fic III Rhône 5.

silk-weaving quarters, the prefect noted again

that the workers ... have not voiced, to this day, the complaints and grumbling which ordinarily emerge in such a situation and which are directed most often against the Government. This time they seem to regard the future without too much fear and to rely with confidence on the concern for the working classes of which the Emperor has given so much proof.<sup>116</sup>

This seeming appreciation for the firm, "traditional" response of the government to unemployment and food crises was also evident for its more novel form of promoting their welfare by means of mutual aid. In November 1852, the police commissioner of the Hotel-Dieu quarter of the second arrondissement reported a favorable reaction to the decree concerning "approval" among the societies in his quarter, three of which were weavers' societies. "All seemed disposed to follow this route," declared the commissioner. "Some even accepted the proposal with gratitude."<sup>117</sup> Of course, Audiganne noted the suspicions of some workers concerning this official sponsorship of mutual aid, for they imagined it "as a trap extended to the good faith of the workers, as a net in which [the government] hoped to enmesh them in order to enslave them better."<sup>118</sup> But such adverse reaction was exceptional. Among the leadership of these societies at least -- as extant documents suggest -- the more typical attitude was that expressed by Léon Genton, president of the silk-weavers' Society No. 122, in an address to the members in March 1857. "His Majesty the Emperor," declared Genton,

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<sup>116</sup>Report from Prefect of Rhône to Minister of Interior, October 10, 1856, AN, Fic III Rhône 5.

<sup>117</sup>Report from Police Commissioner, 2e Arrondissement, 2e Quartier (Hotel-Dieu) concerning sociétés de secours mutuels in this quarter, November 30, 1852, ADR, 5X - 1954 - Sociétés de secours mutuels, Objets divers.

<sup>118</sup>Audiganne, Revue des deux mondes, XV(August 1, 1852), 539.

wanted very much to lend his assistance to the Societies, by the subsidies he grants them. Gentlemen, we can count on him who cares for the future of his subjects; for under no other regime have we seen the Head of State give so much attention, with such enthusiasm, to the working classes; thus, Gentlemen, for my part, I am grateful for this kindness ...<sup>119</sup>

Perhaps with some excessive optimism, the prefect of the Rhône increasingly attributed the "calm" of the workers of Lyons and their gratitude for the benefits offered their mutual-aid societies as signs of their growing attachment to the regime of the Emperor. "As for the people," reported the prefect in September 1854,

they ... seem to divorce themselves more each day from concern with political issues to draw appreciably closer to the government of the Emperor. This happy effect is due especially to the able and firm manner ... with which our foreign policy is directed, to the powerful impetus given to all publicly-useful works, and to the concern of the regime for all questions that deal with the well-being of the working classes.<sup>120</sup>

In January 1859 the prefect still noted the "indifference to the question of political parties" among the masses and growing attachment to the imperial government.<sup>121</sup> Even allowing some exaggeration in this assessment, at least for the political opinions of the workers, the prefect correctly observed a growing confidence of the workers in the government for industrial matters. Among the silk weavers especially, imperial paternalism strengthened the 'traditional' conviction that the government alone could resolve the various disorders in their economic and social environment, especially those concerning relations with the fabricants.

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<sup>119</sup>Genton, "Discours ...," March 1, 1857, ADR, 5X - 1954 - Sociétés de secours mutuels, No. 122.

<sup>120</sup>Report from Prefect of Rhône to Minister of Interior, September 9, 1854, AN, Fic III Rhône 5.

<sup>121</sup>Report from Prefect of Rhône to Minister of Interior, January 10, 1859, AN, Fic III Rhône 5.

At the end of the decade, for example, the weavers turned to the government to resolve four grievances they had against the merchant-manufacturers, three of which, as we saw earlier, concerned piece-rates and the fourth of which involved the mounting of looms. In their petition, they proposed a codification of the various unwritten customs of the fabrique into law and the extension of the powers of the Prud'hommes to enforce this law. Their model for such a "code of industry" and for the government intervention into industry implied by this code was the craft corporation of the ancien régime. As they declared in their petition:

The Law alone,  
 By formulating an industrial code  
 By extending the powers of the prud'hommes in the direction  
 of those possessed by the old master-guards:  
 By submitting usury on labor to the same repression as usury  
 on money,  
 The law alone can restore life to this industry.<sup>122</sup>

They dramatized their appeal for government intervention by presenting their petition personally to the Emperor during his visit to Lyons in August 1860.<sup>123</sup> Although the government turned a deaf ear to most of the weavers' grievances, after receiving an unfavorable response to the petition from a commission composed largely of merchants and merchant-manufacturers,<sup>124</sup> the sentiment expressed by the petition in favor of

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<sup>122</sup>Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860.

<sup>123</sup>Ibid..

<sup>124</sup>Response of the commission composed of Arlès-Dufour, Galline et al., September 18, 1860, ACCL, Soieries Carton 41 - I - Législation - Usages (an 8 à 1936), 13. - Petition remise à l'Empereur, à son passage à Lyon par les ouvriers en soie.

government intervention in their industry remained strong among the weavers themselves.

The weavers had accepted, in effect -- at least in matters affecting their industry -- what the government had been trying to encourage throughout the decade: namely, the solidarity of the polis as transcending and mediating other solidarities, especially the solidarity of class. The immediate profit from their acceptance accrued to the regime of Napoleon III. Whether or not the weavers approved its authoritarian rule, they had learned to depend upon it morally and materially to restore order, or the semblance of order, in their world of work. Thus the solidarity to which they turned when other solidarities were weakening or dissolving was that of the Second Empire.

After 1860, this solidarity weakened in turn, allowing others to emerge again to the fore. The crisis in urban silk-weaving during the 1860's finally broke the tenuous bonds associating craft with city; and the liberal ideology of that decade, affecting even the policies of Empire, broke the even stronger bonds uniting paternal government with economic and social order. The combination of economic necessity and social freedom emerging from these dissociations encouraged new forms of voluntary organization among the silk weavers, independent of government support or control, to restore order in their world of work by their own efforts.

## CHAPTER IV

### The Transformation of the Craft

"Whenever they speak of the fabrique, they say more than ever before that it is [all] over for Lyons ..."<sup>1</sup> Often the police of Lyons heard comments like this in the silk-weavers' quarters during the 1860's. Such comments described the sense of deep crisis the weavers believed they were witnessing in their urban craft, worse than any they had experienced in the past. For the first time in the history of their industry, it seemed, unemployment in some cloth specialties and low piece-rates in others endured for nearly a decade, with little reprieve since 1860. 'Crisis' was no longer a periodic, cyclical phenomenon, but instead was chronic -- the 'normal' situation of their industry. For the first time, moreover, a long and deep crisis afflicted their urban craft while their industry as a whole prospered. Urban silk-weaving was being dismantled, so it seemed, in favor of silk-weaving in the countryside and abroad.

Such dissociation of weaving from the city was an old phenomenon in the history of European textile industries. In the woolen industry of Yorkshire, England, for example, country and small-town industry replaced that of the cities of York and Beverley during the fifteenth and sixteenth centuries, as lower labor costs and freedom from guild regulation favored

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<sup>1</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies," September 9, 1867, AML, I2-47(B), Situation de l'industrie lyonnaise: ... rapports sur la soierie et les ouvriers en soie ... (1819 à 1870), No. 305.

the country over the city in a period of rising demand for woolen cloths. For the older weaving cities, the transition to rural industry caused a total, or near-total, abandonment of the urban trade and with it a decline in the urban economy.<sup>2</sup> The dissociation of silk weaving from the city of Lyons, at a much later period, was a more subtle process. The dissociation did not eliminate urban weaving nor did it ruin the economy of the city of Lyons. Instead it preserved the urban sector as the last vestige of the quality manufacture that made the silks of Lyons famous throughout the Western world. However, it subjugated this sector to the economic imperatives of rural production, as the price for its continued survival. The urban weavers, or rather some of the urban weavers, continued to make relatively high-quality fabrics, but for lower returns, because of more frequent unemployment, more changes of style and, in some cases, lower piece-rates. Perhaps because silk fabrics retained a sizable luxury market for a longer period of time and held on to such market more tenaciously than had English woolens in earlier centuries, the silk industry of Lyons -- somewhat like the fine woolen industries in the older Flemish and Brabantine towns of the fourteenth century<sup>3</sup> -- could afford

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<sup>2</sup>Herbert Heaton, The Yorkshire Woollen and Worsted Industries, Vol. X of Oxford Historical and Literary Studies, eds. C.H. Firth and Walter Raleigh (Oxford: The Clarendon Press, 1920), pp. 58-59.

<sup>3</sup>Herman Van Der Wee, "Structural Changes and Specialization in the Industry of the Southern Netherlands, 1100 - 1600," Economic History Review, 2nd series, XXVIII, No. 2 (May 1975), 209. In the Flemish and Brabantine woolen industry, the shift of demand to cheaper, lighter "new draperies" was not permanent, like the shift to cheaper étoffes unies in the silk industry of the nineteenth century. In fact, finer woolens were temporarily favored on export markets during the depression of the fourteenth century, since the depression affected the lower-income consumers of the "new draperies" more adversely than the higher-income consumers of the finer woolens.

the 'luxury' of a sizable urban production even after world demand for silks permanently shifted its preferences towards the cheaper cloths. The merchant-manufacturer of the city meanwhile reaped the returns from putting-out to the countryside, and they, or other urban industrialists, profited from servicing rural weaving with thread preparation, thread dyeing and cloth finishing. Their activities, along with the growth of newer industries in the city, insured the growing wealth and continued prosperity of Lyons despite the migration of most of its silk weaving to the countryside.

Although it did not eliminate the urban fabrique nor undermine the urban economy, the dissociation of silk weaving from the city of Lyons destroyed the traditional craft solidarity among the silk weavers and, along with this solidarity, the economic foundations of hierarchical status associated with it. This made the experience of such dissociation more painful 'morally' for the weavers of the better-quality fabrics than it would have been, had their specialties been simply eliminated. They received some work commensurate with their skills, but their earnings fell to the same level, or below the level, of those of weavers with lesser skills or working on lesser-quality fabrics. They retained their status associated with these skills, largely as the vestige of an older order of their industry, but their earnings in the present economy of silk weaving did not confirm that status 'objectively,' or materially, as they had in the past. Thus the traditional 'vertical' solidarity of craft, based on a recognition of a hierarchy of cloth categories, of weaving and mounting skills and of earnings corresponding to these, disintegrated as the economic situations of 'superior' and 'inferior' weavers were equalized. This disintegration of 'vertical' solidarity

joined that of the traditional 'horizontal' craft solidarity once identifying the weaving craft with the city of Lyons. The latter dissolved as silk weaving migrated increasingly to the countryside, and as urban and rural weavers competed with one another for work on the silk fabrics no longer retained exclusively by the city -- on the inferior-quality étoffes unies for which the market was growing.

At the same time, however, the economy of the silk industry was laying the foundations of a new kind of craft solidarity, to replace the old kind that was disintegrating. In the 'vertical' dimension of the craft -- in the relations among its different cloth 'categories' and corresponding weaving and mounting skills -- this solidarity was based more on similarity than on hierarchy of economic situations. In terms analogous to Durkheim's types of social solidarity, it was becoming more 'mechanical' and less 'organic.'<sup>4</sup> This similarity of situation characterized not only the earnings of different categories of urban weavers but also, as the next chapter will demonstrate, the social structures of their households. In the 'horizontal' dimension of their craft -- in its geographical relations between urban and rural weaving -- the solidarity became more industrial and not only commercial; that is, based on the common pursuit of industry and not only on the exchange of the products of rural agriculture with those of urban industry. Within this common industry, moreover, the economic and social positions of urban and rural domestic weavers became more alike, to the extent that both manufactured silk cloths as domestic master-weavers, instead of one

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<sup>4</sup>Emile Durkheim, The Division of Labor in Society, trans. George Simpson (New York: The Free Press, 1933, 1964), pp. 96-132.

(the rural weaver) serving the other (the urban weaver) as a 'floating journeyman' in the household of the latter. This likeness intensified as more rural weavers specialized in silk weaving, to the exclusion of other activities, approaching the traditional model of the urban weaver, and as more urban weavers concentrated on inferior-quality étoffes unies, for which cheaper rural labor had been 'traditionally' favored.

The new kinds of craft solidarity did not emerge fully during the 1860's, for this was a decade of transition. As a result, an awareness of new solidarity of craft, and a groping for such, joined a yearning for the restoration of the traditional form of solidarity in the ideological orientations and in the patterns of organization of weavers' movements of voluntary association during the decade. In the cooperative movement, for example, the new forms of craft solidarity were reflected in the 'democratic' organization of the producers' cooperative of silk weavers, without any formal distinction among cloth categories or weaving skills, but the old sense of 'vertical' solidarity was retained in the informal predominance of fancy-cloth weavers in its leadership. The old sense of 'horizontal' solidarity also remained in the restriction of the membership to urban weavers and in its intention to prevent further migration of their industry to the countryside. In the resistance movement, the new craft solidarity explained the initiative of plain-cloth weavers in the organization of the resistance federation of nearly all weaving categories and in the extension of this organization, and of its financial support, to striking rural weavers as well. But the old craft solidarity insured a certain administrative autonomy to each of the cloth categories within this federation and probably encouraged the latter's active support for

the strike of fancy-cloth weavers in June-July 1870, for restoring their traditionally higher piece-rates.

This chapter explores the nature and some of the sources of the disintegration of the old solidarity of craft and the emergence of a new solidarity during the 'crisis' decade of the 1860's. The chapter also suggests some of the effects of this concurrent disintegration and reformation on the organization and aims of some of the weavers' movements of voluntary association. It focuses largely on the urban craft, and examines rural weaving only to the extent that the latter influenced the economy of silk weaving in the city. Subsequent chapters will examine, in turn, the effects of the 'crisis' of the 1860's on the weavers' household, class, neighborhood and political relations, and some of the manifestations of these effects in their movements of association.

#### I. The Crisis of 'Horizontal' Craft Solidarity: From Urban to Regional Economy

As we saw in an earlier chapter, the dissociation of silk weaving from the city of Lyons, by means of putting-out to the countryside, was the result of changing tastes and increasing price elasticity of demand in fabric markets, at a time of rising costs of raw silk. These trends favored the manufacture of the cheaper étoffes unies, and for such manufacture rural weaving was highly competitive with urban weaving because of its lower labor cost and its ability to weave cheaper cloth specialties as well as the city. During the 1850's the competition of rural weaving was felt only by some of the urban weavers -- those manufacturing the unis specialties. Continued (although not rapidly growing) demand for fancy cloths gave the urban weavers of façonnés enough work in their specialty, and the skills and surveillance needed

for mounting and weaving the façonné insulated them from rural competition. In 1860, the loss of the American market, the largest consumer of French fancy fabrics, suddenly plunged the fancy-cloth weavers into a severe depression lasting for more than a decade. The reaction of most was to shift to plain-cloth weaving, but such a shift also ended their insulation from rural competition. As a result, rural weaving competed with urban weaving generally, as more of its weavers shifted to the inferior cloths. The qualitative difference between rural and urban weaving, based on cloth specialties, diminished as a consequence.

The sudden loss of the foreign market for fancy silks was the most notable feature of the crisis of the 1860's. Exports of fancy cloths fell dramatically from 330,925 kilograms in 1860 to 47,905 kilograms in 1866 (- 86%). The decline continued further into the 1870's. Exports averaged 12,377 kilograms between 1872 and 1874. Demand revived seriously in 1876, but foreign sales did not surpass 100,000 kilograms until 1880.<sup>5</sup> The major result of this loss was a shift to plain from fancy-cloth weaving by the households. Table 11 suggests the extent of this shift by comparing the distribution of occupied looms in the city in 1846, over the three categories of plains, fancies and velvets, with the distribution of members of the weavers' resistance society, the Société civile de prévoyance et de renseignements pour le travail des tisseurs de la fabrique lyonnaise (SCPR) in 1873. The table indicates an increase in the percentage of plain-silk weaving at the expense of fancy-silk and (largely fancy-) velvet weaving. Unfortunately, the uncertainties

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<sup>5</sup>Administration des douanes, Tableau décennal du commerce de la France (Paris: Imprimerie nationale), 2e Partie, for the years 1857 à 1866, 1867 à 1876, 1877 à 1886.

Table 11

Distribution of Looms and  
Weavers in Lyons by  
Category of Silk Cloth  
(1846, 1873)

<u>Category</u>	<u>1846*</u>		<u>1873**</u>	
	<u>Number of Occupied Looms</u>	<u>% of All Occupied Looms</u>	<u>Number of City Persons in SCPR</u>	<u>% of All City Persons in SCPR</u>
Plain Silks	14,060	59.9	7,634	75.1
Fancy Silks	7,562	32.2	2,081	20.5
Velvets	<u>1,829</u>	<u>7.8</u>	<u>445</u>	<u>4.4</u>
Total	23,451	100.0	10,160	100.0

Sources: 1846: Recensement, Lyon, 1846, AML  
 Recensement, Croix-Rousse, 1844-45, AML  
 1873: Société civile des tisseurs, List of  
 Members, July 5, 1873, ADR, 10M-2,  
Associations des tisseurs.

\*Includes first, second and fifth arrondissements and town of the Croix-Rousse (1844-45 for latter). Excludes Guillotière and Vaise.

\*\*Includes all arrondissements of Lyons (1,2,3,4,5,6). The category "Plain Silks" includes categories 1 (taffetas), 5 (satins-armures) and 7 (foulards, grèges) of the SCPR. The category "Fancy Silks" includes categories 2 (robes, confections, châles soie), and 3 (meubles, ornements). The category "Velvets" includes SCPR categories 4 (gilets, velours faconnés), 9 (velours frisés, peluches) and 10 (velours à 2 pièces).

concerning the comparability of the two sets of data give this indication only the value of suggestion. (See Appendix III.)

A more precise indication of the shift to plain-cloth weaving is provided by comparing the percentage distribution of occupied looms (over different cloth categories) in 1833 and 1844-45 with that of unoccupied and occupied looms in 1866, in the traditionally fancy-weaving district of the Croix-Rousse (Fourth Arrondissement). (See Table 12, A and B.) In this case, no distortions or uncertainties in the data cloud the comparison, as in that of looms with weavers in Table 11. The conclusion suggested by the latter table -- that a significant shift occurred from fancy-cloth weaving to plain-cloth weaving from 1846 to 1873 -- is nevertheless supported rather strongly for the arrondissement in which this shift was least likely to occur and for the period up to 1866. Despite its traditionally high concentration of fancy-cloth weaving (the highest concentration of façonnés among all weaving districts in Lyons), the Fourth Arrondissement, like other arrondissements in the city, wove more plain silks than fancies after 1860, even though the total number of looms increased by 71% from 1844-45. As Table 12-B demonstrates, this substitution of plain cloths for fancy cloths represented a replacement of exclusively fancy-loom households by plain-loom households, not merely an addition of plain looms and plain-loom households to the existing stock of fancy looms and fancy-loom households. The numbers in fact underestimate the extent of plain-cloth weaving in 1866. The number and percentage of unoccupied looms was much greater in 1866 than in 1833 and 1844-45. (The percentages were 39% in 1866, 19% in 1844-45, and 5% in 1833.) Because of different methods of aggregating the data, these unoccupied looms are included in the table for 1866 but not in

Table 12

Distribution of Weaving  
in the Croix-Rousse by  
Loom Type (1833, 1844-45,  
1847 and 1866)

A. Distribution of Looms  
in the Aggregate

<u>Category</u>	<u>1833</u>		<u>1844-45</u>		<u>1866</u>	
	<u>Number of Occupied Looms</u>	<u>% of All Occupied Looms</u>	<u>Number of Occupied Looms</u>	<u>% of All Occupied Looms</u>	<u>Number of Looms Occ and Unocc</u>	<u>% of Total Looms</u>
Plains	2,254	35.8	2,819	33.9	7,648	53.7
Fancies	3,416	54.3	4,453	53.5	5,295	37.1
Velvets	534	8.5	916	11.0	704	4.9
Other	91	1.4	135	1.6	604	4.3
Total	6,295	100.0	8,323	100.0	14,251	100.0
Unoccupied	332		1,391		5,524	

B. Distribution of Households  
According to Loom Type  
(Based on Occupied Looms  
Only)

<u>Loom Type of Household</u>	<u>1847</u>		<u>1866</u>	
	<u>Number of Households</u>	<u>% of Total</u>	<u>Number of Households</u>	<u>% of Total</u>
Fancy Looms Only	99	63.5	43	33.1
Fancy Looms > Plain Looms	3	1.9	1	.8
Fancy Looms = Plain Looms	2	1.3	1	.8
Plain Looms > Fancy Looms			2	1.5
Plain Looms Only	52	33.3	83	63.8
Total Households	156	100.0	130	100.0

Sources: Aggregate: Recensement, Croix-Rousse, 1833, AML.  
 Recensement, Croix-Rousse, 1844-45, AML.  
 Dénombrement, 1866, Lyon, 4ème Canton,  
 Tomes XVI, XVII, ADR, 6M-Dénombrement.  
 Household: Sample, Recensement, Croix-Rousse,  
 1847, AML.  
 Sample, Dénombrement, 1866, Lyon, 4ème  
 Canton, ADR, 6M-Dénombrement.  
 (See Appendix V for Construction  
 of Samples)

those for the two previous dates. Since the incidence of unemployment was generally greater for fancies than for plains in 1866, the extent of actual fancy weaving (occupied fancy looms) was probably lower than the table figure of 37%. Moreover, some weavers with Jacquard looms probably also accepted orders of plain cloths to weave on these looms.<sup>6</sup> Such cases would raise further the level of plain-cloth weaving in the Croix-Rousse in 1866.

As more of the urban industry shifted to plain-cloth weaving in this manner, competition with the rural areas affected the economy of most of the fabrique of Lyons. Such competition had an impact on the scale or capacity of economic activity, as measured by the number of occupied and total looms respectively; it affected levels of employment and occasions of unemployment; and it influenced movements and levels of piece-rates. After 1860 this competition became more severe than before that year, as rural weaving extracted not only a rising share of the increase in production of silk cloths but also a portion of the production originally carried out in the city. During the 1850's -- that is, between 1848 and 1861-65 -- the number of urban looms increased 5.1% from 33,500 to 35,215, while the number of rural looms increased 166.7%, from 30,000 to about 80,000.<sup>7</sup> During this period rural weaving merely extracted a larger share of the increase of total cloth production<sup>7a</sup> than urban weaving, as estimated by the relative number of looms. But it did not reduce the absolute level of plain-cloth production, so the city

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<sup>6</sup>As indicated in Chapter I, section I-B-1. Jacquard looms could be used to weave plain silk cloths.

<sup>7</sup>Table 7, Chapter II.

<sup>7a</sup>More precisely, total cloth production potential. Actual production (output) of each loom depended on activity and on technology (hand or mechanical) of each loom. The same remark applies to 'production' and 'output' as used in the remainder of this paragraph.

shared somewhat in the growth of aggregate production. Between 1861-65 and 1872, however, the number of urban looms decreased by 14.8%, from 35,215 to 30,000, while the number of rural looms increased an additional 12.5%, from 80,000 to 90,000.<sup>8</sup> Rural weaving thus replaced a portion of the current output of the city, besides siphoning off an increasing percentage of the extra output of plain cloths in the industry as a whole.

Three effects of this growing competition of the countryside were more frequent unemployment even during periods of growing demand for plain silks and a steady decline in piece-rates for weaving these. As noted in the last chapter, the first effect appeared initially during the 1850's. After 1860 urban unemployment at a time of rural prosperity became not only a more frequent phenomenon but also a 'structural' attribute of the economy of the industry. In September 1861, for example, three-fourths of the plain looms in the city were inactive, but police reports on the state of the industry at this time did not suggest any simultaneous slowdown in weaving in the countryside. In June 1866, one-half of the urban plain-silk weavers were unemployed, but again the rural fabrique seemed to remain active.<sup>9</sup> In December 1866, in fact, the reports noted that "labor tends to emigrate to the countryside . . .,"<sup>10</sup> and in June 1867, the police observer remarked, more generally, that

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<sup>8</sup> Ibid.

<sup>9</sup> 'Etoffes unies,' "Situation de l'Industrie à Lyon au 13 7bre 1861" (September 13, 1861), AML, I2-47(B), No. 174; 'Etoffes unies,' "15 Juin 1866," AML, I2-47(B), No. 187.

<sup>10</sup> 'Etoffes unies,' "Situation de l'industrie à Lyon au 15 Decembre 1866," AML, I2-47(B), No. 193.

before that year, the work of "the several looms spread throughout the nearby countryside ... held up for a long time almost without rest."<sup>11</sup> Only in June 1867 did the observer indicate that the rural looms had "also experienced a light employment during this trimester."<sup>12</sup> Rural weaving apparently required a severe decline in sales of plain silks before sharing in the unemployment of the city, for exports of plain cloths dropped suddenly to 2,153,536 kilograms in 1867 from 2,323,490 kilograms in 1866.<sup>13</sup> Even the rural unemployment rate was not as high as that of the urban weavers, which reached two-thirds of all plain-cloth looms.<sup>14</sup> As several fabricants admitted in the early 1870's, unemployment generally afflicted "the workers of the city more directly" than the rural weavers, since the latter were kept working as long as possible during periods of falling sales of cloth, while the former were dismissed at the least intimation of decline.<sup>15</sup> The vassalage of the urban fabrique to rural industry had indeed become rooted in the structure of the silk-weaving economy of Lyons.

More unusual than frequent unemployment were the occasional slow-downs in urban weaving during periods of stable or increasing foreign

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<sup>11</sup>'Etoffes unies,' "Situation industrielle au Juin 1867," AML, I2-47(B), No. 197.

<sup>12</sup>Ibid.

<sup>13</sup>Ibid.; 'Etoffes unies,' "Situation industrielle au 15 7bre 1867," (September 15, 1867), AML, I2-47(B), No. 198; Administration des douanes, Tableau décennal, 1857 à 1866.

<sup>14</sup>Ibid.

<sup>15</sup>"Réponses de la Chambre Syndicale des Soieries de Lyon," Enquête Parlementaire Sur les Conditions du Travail en France (Rhône, 1872-1875), Second Questionnaire B, IX, AN, C 3021, Enquête sur les Conditions du Travail en France (1872 à 1875), Région du Sud-Est (Rhône).

demand for plain cloths and the persistence of low wages for most types of plain cloths even during periods of high or rising employment. Between June 15 and October 3, 1859, for example, up to one-half of the plain looms in the city were immobilized due to insufficient orders. Average daily wages for journeymen weavers declined from 3.50 francs to 2.00 francs for the cheapest articles and from 4.00 francs to 2.50 francs for the better plain fabrics.<sup>16</sup> During the same period exports of plain silks rose continuously from 1,260,242 kilograms in 1858 to 1,574,725 kilograms in 1860.<sup>17</sup> During the year 1866, plain-silk exports again rose to 2,323,490 kilograms from 2,171,341 kilograms in 1865, and yet the proportion of unemployed weavers of plain cloths in Lyons increased steadily from one-fourth on March 15, 1866 to one-half on June 15.<sup>18</sup> Except for a short, light recovery between September and December, the decline continued into the near-total unemployment of 1867. Even during the recoveries of 1862, 1865 and 1868-69, the average annual (daily) wage for weaving most types of plain silks remained very low -- ranging from 1.10 francs to 1.75 francs for the inferior articles (as compared with 2.00 francs to 3.50 francs in 1859), and from 1.25 francs to 3.50 francs for the better plain silks (as compared with 2.50 francs to 4.50 francs in 1859).<sup>19</sup>

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<sup>16</sup> 'Etoffes unies,' "Situation industrielle au 15 Juin 1859" and 'Etoffes unies,' "Situation industrielle au 3 7bre 1859," (September 3, 1859), AML, I2-47(B), Nos. 166, 167.

<sup>17</sup> Administration des douanes, Tableau décennal, 1859 à 1866.

<sup>18</sup> Ibid.; 'Etoffes unies,' "Situation industrielle - 15 mars 1866 - Soieries et industries qui s'y rattachent" and 'Etoffes unies,' "15 Juin 1866," AML, I2-47(B), No. 186, 187.

<sup>19</sup> 'Etoffes unies,' "Situation industrielle," 1859, 1862, 1865, 1868, 1869, AML, I2-47(B), Nos. 166-168, 176-177, 179, 183-185, 201-205 bis, 206-208, 211-212.

Both of these phenomena -- urban unemployment during periods of industrial prosperity and low piece-rates -- were, again, effects of rural competition. Both reflected the increasing dependence of the urban silk-weaving economy on that of the region, dominated by the low-wage labor market of rural household and factory weavers.

In reaction to this dependence, the urban weavers organized a producers' cooperative and a federation of resistance societies to halt the migration of their industry to the countryside and to restore to the urban craft its traditional pre-eminence in determining piece-rates and conditions of work in the fabrique. The producers' cooperative, the Association of Weavers, sought to take over urban weaving by putting out silk thread and cloth orders directly to the weavers, its members, without the intermediation of the fabricants. These weavers were exclusively urban, and they hoped to prevent the further decline of the urban craft by controlling ever larger shares of production and by favoring urban over rural weavers in the distribution of cloth orders. In October 1866, following a threatened demonstration against the emigration of the fabrique to the countryside, the silk weavers accepted government approval of their association as a société anonyme and a loan to help it begin business, instead of restriction of putting-out to the countryside, as they had originally demanded.<sup>20</sup> They withdrew the latter demand so easily in part because they believed that their association would achieve the same end. As the police reported in December 1866, the weavers of

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<sup>20</sup>"Les Réclamations des Tisseurs," Le Progrès (Lyon), October 20, 1866; "Lettre de M. de la Valette sur le chômage lyonnais" and letter from weavers Gargnier, Chépié et al. in response, Le Progrès, October 28, 1866.

Lyons "place[d] much hope for revival of the fabrique on the establishment which is being organized under the large association of weavers."<sup>21</sup>

The weavers harbored the same expectations of halting the movement to the countryside and thereby 'reviving' their industry through their organization of resistance societies later in the decade to enforce recently-negotiated increases in piece-rates. In December 1869, when the resistance movement was entering the stage of 'mass' organization under the leadership of the plain-cloth category, the police described the movement as "a great awakening among the weavers."

Conversations on the subject are heard everywhere, and everyone has this tremendous enthusiasm for preventing the fabrique from leaving Lyons, for bringing it back instead. They expect to attract labor from the countryside to the city -- not all labor but some which left the city -- and they see no other way [of achieving this] than making all the fabricants pay the same piece-rate.<sup>22</sup>

Thus, besides halting the emigration of the fabrique, the weavers expected their resistance societies to eliminate the worst consequences of rural competition. In particular, they expected their organization to force all piece-rates up to a level determined by the collective strength of the urban weavers instead of allowing urban rates to fall to a level determined by the dispersion, lower living costs and poverty of rural labor. In this way, the city would again dominate the labor market of silk-weaving as a whole and no longer be subject to the labor

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<sup>21</sup>"Rapport à Monsieur Delcourt, Commissaire Spécial, sur la situation de la fabrique des étoffes de soies au 4e Trimestre Xbre 1866," December 8, 1866, AML, I2-47(B), No. 301.

<sup>22</sup>"Rapport à Monsieur Delcourt, Commissaire Spécial, sur la situation de la fabrique de soieries," December 7, 1869, AML, I2-47(B), No. 315.

market of the countryside.

In order to revive this domination by the city, however, the rural weavers also needed to be organized into the resistance movement. Unless their piece-rates were raised, by the collective force of resistance, to the levels of the city, they would continue to compete against urban weavers. This simple law of economics destroyed any attempt to keep the resistance movement exclusively urban and anti-rural. Economic necessity forced traditional aspirations for a city-concentrated, city-dominated craft to merge with a newer vision of the silk-weaving trade including both urban and rural elements. In this newer vision the 'horizontal' solidarity of the craft was extended from an urban to a regional framework of economic activity, and the purpose of organization, especially organization for industrial resistance, was to make solidaire what had once been competitive in the labor market defined by this regional framework. In the confrontation between its original motivation and the organizational necessity imposed by economic reality, industrial resistance thus carried the germ of a profound ambivalence of ideological purpose. Resistance aimed to restore the 'traditional' identification of craft with city, and, at the same time, to realize the newer vision of 'horizontal' solidarity identifying craft with region.

This ambivalence was reflected in the first strike support action of the newly-formed resistance federation of silk weavers, the Société civile (SCPR). This was the strike of rural weavers in the department of Isère in March-April 1870. The strike was directed against several fabricants of Lyons putting out cloth in this area, and its major demand was an increase of piece-rates. In March 1870 several embryonic séries (organizational cells) of striking weavers of the arrondissement of

La-Tour-du-Pin (Isère) appealed to the members of the SCPR for financial assistance, at the organizational meeting of the society. One of the members of the SCPR, Clatel, a leader of the fancy-weavers' delegation, expressed some doubts concerning the wisdom of supporting the rural weavers so soon.<sup>23</sup> He articulated, in effect, the hesitations of those members of the new association who regarded its mission as exclusively urban, or least primarily urban. Such a view was probably more typical of the fancy-cloth weavers, among whom, as we will soon see, the 'traditional' view of the city-centered craft was strongest.

The assembly, dominated by the plain-cloth weavers, greeted Clatel's hesitation with "so to speak generalized reprobation." They responded to the rural weavers' request not only with funds but also with the dispatch of envoys to stir up support for the strike in the countryside of Isère.<sup>24</sup> The urban weavers of the SCPR, especially the plain-cloth weavers constituting its largest single category, clearly regarded high piece-rates for rural weaving in their own interest as well. In fact, only by raising rural piece-rates to the level of those in the city could the urban weavers defend their gains against threats of further migration of the industry to the countryside. This perception of their ties with rural labor, to the point of planning "rural séries" in the statutes of their resistance organization, indicated a conception of their craft and the 'proper' frontiers of its labor market much larger than in the past. This conception included not only the urban craft

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<sup>23</sup> Report from Police Commissioner of the Brotteaux to Prefect of Rhône concerning meeting of weavers, March 28, 1870, AML, I2-45, Sociétés coopératives de production et de consommation (1849 à 1870), No. 156.

<sup>24</sup> Ibid.; report from Police Commissioner of Canton of Morestel to Under-Prefect of La-Tour-du-Pin, April 2, 1870, ADI, 166M-1: Grèves (1858-1877).

but also silk weaving in the countryside. Thus, despite the hopes of these weavers for a restoration of their urban craft -- an aspiration articulated in extreme form by the fancy-cloth weaver Clatel as a revival of exclusively urban 'horizontal' solidarity -- their vision extended to a new form of 'horizontal' solidarity as well, one based on the region rather than on the city alone.

## II. The Crisis of 'Vertical' Craft Solidarity: From Hierarchy to Equality

The transformation of the framework of 'horizontal' craft solidarity from urban to regional occurred as traditional 'vertical' solidarity of craft disintegrated and as such solidarity was reformed on a new economic and social basis. Disintegration followed the separation of the different cloth 'categories' and of the different 'specialties' within each category according to their differing experience of economic conditions, especially conditions of employment and movements and levels of piece-rates. The hierarchy of earnings corresponding to that of skills required for weaving these different categories and specialties of silk cloths also dissolved as this separation of conditions reduced the earnings of the more highly-paid categories and specialties to those of the more lowly-paid. This equalization of earnings (that is, of annual income) created the basis for a new kind of solidarity among the qualitatively different categories and specialties of cloth weaving. This solidarity was built upon equality and similarity of economic situation rather than upon hierarchy and difference of situation. Such a dual movement consisting of disintegration of traditional 'vertical' solidarity, on the one hand, and of the emergence of a new kind of 'vertical' solidarity, on the other hand, was evident both in conditions

of employment of silk weavers during the 1860's and in movements and levels of average daily wages they received for their work.

Disintegration of 'vertical' craft solidarity resulted primarily from the radical dissociation of conditions of employment and movements of piece-rates between the 'superior' (fancy-cloth) categories of the fabrique and the 'inferior' (plain-cloth) categories after 1860. Loss of the American market for fancy silks plunged weavers of the latter into severe, secular unemployment, while weavers of plain silks remained employed more regularly, because of rising demand for their product at home and -- after the Anglo-French Commercial Treaty of 1860 -- abroad as well. Piece-rates of plain-cloth weavers plummeted, however, as rural weaving competed more intensively with urban weaving. Piece-rates of fancy-cloth weavers remained relatively high, because of their insulation by their skills from competition of rural labor. Their subjection to very different economic forces after 1860, therefore, made weavers of fancy silks experience their economic conditions differently than plain-silk weavers -- more differently, in fact, than in the past. These differences destroyed the solidarity of experience of cycles of employment especially -- an experience which had served as an economic basis for their craft solidarity in the past. At least one of weavers' movements of voluntary association, the resistance movement of the late 1860's, recognized this dissociation of craft solidarity by favoring organizational and administrative autonomy for each of the different cloth categories.

Equalization of earnings, dissolving the hierarchy of earnings associated with different cloth categories, was primarily the result of more frequent or secular unemployment in the more highly-paid

'superior' categories, reducing their earnings to the level of the more lowly-paid, but more regularly employed, 'inferior' categories. A more subtle erosion of the hierarchy of earnings derived from the inversion of traditionally primary relations among movements and levels of wages, for the different cloth categories, from relations corresponding to qualitative differences among these to relations corresponding to quantitative differences between their maximum-wage specialties and minimum-wage specialties considered together, irrespective of category. In other words, differences between maximum wages and minimum wages paid within each qualitatively-different cloth category became more significant indicators of differences in relative movements and levels of compensation than differences among wages corresponding respectively to certain cloth categories. The combined effect of equalization of earnings and subordination of quality-based hierarchy of wage movements and levels to quantity-based differences was the economic erosion of traditional 'vertical' solidarity of craft, based upon a qualitative hierarchy of the cloth categories. Economic situations once differing among these categories became more alike. Thus a new 'mechanical' solidarity, based on this similarity of situations, emerged to replace the disintegrating 'organic' solidarity, based on a hierarchy of differences. As in the case of changing 'horizontal' solidarity of craft, the weavers reacted to this equalization of situations in an ambivalent manner, in their movements of voluntary association. They resisted it, attempting to revive the 'traditional' differences of earnings and piece-rates among the cloth categories and, with these differences, those of status within the craft associated with each category. And they embraced equalization, recognizing in effect the strength of organization based upon equality

of situation and directing this strength either to a renaissance of the urban craft in the cooperative movement, or to the building of weavers' economic power in the resistance movement.

#### A. Conditions of Employment and Their Effects

The dual movement affecting 'vertical' craft solidarity -- dissociation of economic conditions, destroying traditional solidarity, and equalization of economic situations, reforming craft solidarity on a new economic basis -- was evident most directly in the conditions of employment of weavers during the 1860's and in the effects of these conditions on earnings. The movement was observable on two levels -- that differentiating silk cloths by 'categories', especially that differentiating 'inferior' plain-cloth categories from 'superior' fancy-cloth categories -- and that differentiating cloth 'specialties' within each category, in particular 'common' specialties from 'rich' specialties. Unemployment and rural competition (the latter affecting absolute levels of piece-rates), separated the economic conditions of the plain-cloth categories (étoffes unies and velours unis) from those of the fancy-cloth categories (étoffes façonnées, velours façonnés, châles and ornements d'église) and also the economic conditions of 'common' specialties within each of these six categories from the 'rich' specialties. The consequences of these differing conditions on earnings equalized, however, the economic situations of weavers in plain and fancy categories, on the one hand, and of weavers of 'common' and 'rich' specialties within each category, on the other hand. This section will trace in closer detail this combined separation and equalization, using the quarterly reports of the local police on the situation of the silk industry in Lyons as a

guide.<sup>25</sup> (See Appendix IV for a discussion of this source.)

The change in conditions of employment after 1860 was most striking among weavers of fancy silk cloths (étoffes façonnées) -- those most affected by the loss of the American market. Weavers who continued to accept fancy orders concentrated largely on dress ornament and haute nouveauté rather than on the rich dress fabrics which had established the reputation of Lyons in the past. "The rich fabrics with large designs have not been in style for several years," reported the police observer of the fabrique in March 1866, "which means that this article goes always from bad to worse and cannot hope to be restored except by the caprice of fashion."<sup>26</sup> Such dresses were made only on order, and such orders "became more and more rare."<sup>27</sup> Fancies for ornamenting silk and other textile dress fabrics were still in demand, however, along with passementerie, the traditional ornamenting ribbon enjoying a new prosperity in the 1860's.<sup>28</sup> But such petits façonnés had to be produced in greater variety than in the past, in order to satisfy the ever fickle craving for novelty. Weavers of these 'common' fancy cloths thus made many varieties of samples, to attract potential buyers with large displays. Manufacture of samples increased in 1866 and 1867 to prepare for the displays at the Exposition of Paris. The maison Schultz, for example,

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<sup>25</sup> Reports on the industrial situation of the fabrique of Lyons from June 1859 to March 1870, AML, I2-47(B), Nos. 166-213.

<sup>26</sup> 'Etoffes façonnées,' "Situation industrielle - 15 mars 1866 - Soieries et industries qui s'y rattachent," AML, I2-47(B), No. 187.

<sup>27</sup> 'Etoffes façonnées,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

<sup>28</sup> See for example, 'Etoffes façonnées,' "Situation industrielle - 15 mars 1866 - ...," AML, I2-47(B), No. 186.

one of the most prominent manufacturers of fancy haute nouveauté, accelerated its annual invention of new styles between 1862 and 1869, especially between 1865 and 1867 to prepare for the Exposition. (Table 13)

Table 13

Number of Varieties of  
Haute Nouveauté Silk  
Styles Displayed Annually  
by the Maison Schultz of  
Lyons, 1861 to 1870

<u>Year</u>	<u>Number of Varieties</u>	<u>Year</u>	<u>Number of Varieties</u>
1861	22	1866	58
1862	45	1867	56
1863	41	1868	45
1864	48	1869	61
1865	52	1870	17

Source: Archives of Samples of Maison Schultz, BMTL.

For the weavers of these petits façonnés, samples manufacture required frequent changes of design and mountings of the loom. This made their work more complex and less profitable, for reasons discussed in Chapter I.<sup>29</sup> Such efforts did not succeed in attracting many new clients in any case.<sup>30</sup> The demand for most designs was therefore short-lived. As a result, even though such work earned more per piece than work on plain silks, frequent mountings and delays between orders made the

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<sup>29</sup>Chapter I, section I-B-2.

<sup>30</sup>'Etoffes façonnées,' "Situation industrielle au Xbre 1867," (December 1867), AML, I2-47(B), No. 200.

overall economic situation of these skilled fancy weavers little different from that of the plain-cloth weavers. "If labor is compensated better in this article," wrote the police observer in March 1865, "the fluctuations and unemployment it experiences make the situation of the major part of the workers as bad as that of workers manufacturing the common cloths."<sup>31</sup> Three years later the observer reported that the "ordinary fancies always occupied some looms; but the interruptions of work which occur frequently, combined with many changes of design on the looms, are forcing the worker little by little to abandon a profession whose product is insufficient to provide for his needs."<sup>32</sup>

Weavers of plain cloths did not face the secular decline in employment forced upon the fancy silk weavers. They endured occasional short periods of partial unemployment in 1859, 1861, 1866-67 and 1868-69, but these differed little from the short-term cyclical crises to which they had been accustomed in the past, even during the 1850's. Only in 1861 and 1867 did such crises produce near-total work stoppage. Even then the plains produced more orders than the fancies.<sup>33</sup> Instead, the weavers of plain silk cloths were subject to a rapid and severe decline in piece-rates and to the persistence of low piece-rates throughout the decade. As we saw earlier, these low rates were the result of

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<sup>31</sup>'Etoffes façonnées,' "Situation industrielle - 15 mars 1866 - ...," AML, I2-47(B), No. 186.

<sup>32</sup>'Etoffes façonnées,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

<sup>33</sup>'Etoffes unies,' "Situation industrielle," October 3, 1859; March 13, June 13, September 13, 1861; March 15, June 15, 1866; March 15, June, September 15, December 1867; March, June, December 12, 1868; March, June 15, September 14, 1869, AML, I2-47(B), Nos. 168, 172-174, 186-187, 196-198, 200-201, 204, 206-208, 211.

rapidly growing competition of rural weaving. Such competition also caused urban weavers of plain cloths to suffer unemployment even during periods of rising demand for their product. In both respects their economic conditions differed from those of fancy-cloth weavers, who were more insulated by their skills and by the need for surveillance of their work from the competition of rural weavers. Their piece-rates remained higher than those of plain-cloth weavers, and when these declined, they did not do so as severely or as rapidly as those of plain-cloth weavers. Although unemployment of fancy-cloth weavers was more severe and chronic than that of plain-cloth weavers, it did not persist when demand for their product occasionally revived.

The invasion of the countryside had a varied record of success in imposing its low-wage, 'perverse' employment solution on the different specialties within the plain-cloth category. The 'rich' plains -- armures, satins, gros de Naples -- were generally more insulated from such competition than the 'common' plains, such as the taffetas. In June 1860, many urban weavers of plain silks recovered from their unemployment of the previous year by switching to armures. "The armure seems to have a much larger following this year," reported the police observer. The "workers have generally abandoned the other articles to make the latter which requires only a few small changes in the looms."<sup>34</sup> In June 1866, when the slowdown affected half of the plain-cloth weavers,

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<sup>34</sup>'Etoffes unies,' "Situation industrielle au 15 Juin 1860," AML, I2-47(B), No. 170.

the armure was "the only one which procured continued work..."<sup>35</sup> In September 1867, when the crisis affecting rural weaving as well left two-thirds of the 'common' plain silk looms inactive, the 'rich plains, such as: satins, armure, Gilets, ombrelles, were a bit more favored..."<sup>36</sup> Wages for weaving these better plain fabrics were also less sticky (upwards) during favorable periods than were wages of the 'common' cloth weavers. Between September 15, 1866, and March 15, 1867, "maximum" wages for plain-cloth weaving (wages for 'rich' plains) remained 3.50 francs each semester, at least as high as the wages for the last two trimesters of 1859 (3.50 francs and 2.50 francs respectively). "Minimum" wages (for 'common' plains) during the same period 1866-67 were 1.50 francs by comparison, lower than the lowest recorded wage of the year 1859 (2.00 francs).<sup>37</sup> During the recovery of plain silks, from March to June 1868, "many fabricants were forced to increase by 5 and 10 centimes per meter the wage of certain articles, such as: gros de Naples and armures," because of a lack of workers.<sup>38</sup> Rural labor could not fill such a labor shortage for the 'rich' plain silks as it could for the 'common' plain silks. The 'rich' cloths required greater skill and surveillance during weaving, which only urban weavers could provide. This consideration effectively insulated the more

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<sup>35</sup>'Etoffes unies,' "15 Juin 1866," AML, I2-47(B), No. 187.

<sup>36</sup>'Etoffes unies,' "Situation industrielle au 15 7bre 1867" (September 15, 1867), AML, I2-47(B), No. 198.

<sup>37</sup>'Etoffes unies,' "Situation industrielle," 1859, 1866, 1867, AML, I2-47(B), Nos. 166-168, 186-187, 192-193, 196-198, 200.

<sup>38</sup>'Etoffes unies,' "Situation industrielle au Juin 1868," AML, I2-47(B), No. 204.

skilled plain-cloth weavers of this specialty from rural competition. The fashions of London and Paris also favored the weavers of 'rich' unis to some extent. For their best dress models, fashion in the two capitals still relied on quality fabrics, which the 'rich' weavers were accustomed to producing.

Towards the end of the decade, however, such advantage of 'rich' plain-silk weavers began to weaken. As early as June 1866, the police observer noted the beginnings of a slowdown in the 'rich' cloth specialties. In September he remarked that the "common plains article is the only one which occupies some hands at this time; all the others are, not in unemployment, but in a worse situation than last trimester..."<sup>39</sup> In late 1867, when a light recovery favored the 'rich' cloths, the political events of Rome "put a complete stop to this spurt and the situation of these articles fell back down to the level of the others."<sup>40</sup> By late 1868 - early 1869, the 'rich' cloth no longer had any advantage over the 'common' cloth. "In the last trimester we noted a little bit more activity in the manufacture of some articles than in others," wrote the police observer in March 1869; "today they are all at the same level."<sup>41</sup> Later in the year, this equalization of employment conditions reverted back to inequality, this time in favor of the 'common' cloths. "The manufacture of articles of inferior quality is that which provides

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<sup>39</sup>'Etoffes unies' "Situation de l'Industrie au 15 7bre 1866," (September 15, 1866), AML I2-47(B), No. 192.

<sup>40</sup>'Etoffes unies,' "Situation industrielle au Xbre 1867," (December 1867), AML, I2-47(B), No. 200.

<sup>41</sup>'Etoffes unies,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

most work ... As for the manufacture of articles of superior quality, it faces short but very frequent periods of unemployment."<sup>42</sup> By September the outlook was even worse for the 'rich' unis. While inferior plain silks provided "rather regular work," there "was not the least activity in the manufacture of the other articles..."<sup>43</sup> Though insulated from the competitive pressures of the rural labor market, the 'rich' unis finally succumbed to the same change in taste in the markets of fashion which had relegated fancy-cloth weaving to a much smaller-scale activity with a very uncertain future.

The 'victory' of weavers of 'common' plain silks was Pyrrhic at best. While their work became more regular, their wage remained so low that they had to weave day and night merely to satisfy their very basic needs. Even then they did not earn the full value of their piece. The poorer quality of silk thread put out to them for their low-grade cloth increased their thread wastes and slowed their weaving speed through frequent thread breakages. The poor thread quality was most often the result of 'loading' the expensive fiber with foreign material during dyeing. As we saw earlier, this was one means used by fabricants of black plain silks during the 1860's to add weight to the fabric. Such 'loading' limited severely the extent to which the weaver of these silks could increase his income, even when work was abundant and when wages did not fall. In June 1868, for example, the police observer reported that

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<sup>42</sup>, 'Etoffes unies,' "Situation industrielle au 15 Juin 1869," AML, I2-47(B), No. 208.

<sup>43</sup>, 'Etoffes unies,' "Situation industrielle au 15 Septembre 1869," AML, I2-47(B), No. 211.

The situation of the said article is now in a more satisfactory condition than last trimester, in terms of the quantity of work; but, unfortunately, the bad quality of silks resulting either from their origin but more from their excessive loading in dyeing... makes their manufacture more and more difficult and causes the worker losses of time.<sup>44</sup>

High and uncertain raw silk prices, which were responsible for such 'loading' to begin with, aggravated even further the situation of weavers of 'common' plain cloths. Fabricants of these articles were less willing to put out new orders before silk prices could be quoted with some certainty. "In fact, the indecision which still exists in commercial transactions," reported the police observer in March 1868, "hurts the pursuit of large affairs; manufacture takes place only step by step, and a large number of fabricants wait as much as eight days between the receipt of a completed piece and the putting-out of a new one."<sup>45</sup> Even such small delays could be disastrous for a weaver of 'common' unis forced to live on a daily wage of 1.25 to 1.75 francs. The combined effect of cyclical unemployment, low wages and wastes and delays caused by bad thread produced genuine destitution for the largest number of such weavers. "To this unemployment," reported the police observer during the crisis of 1867, "... has been added the bad quality of silks to be woven, so that the loss of time experienced by the worker reduces his day to such a minimal wage that it is no longer possible for him to provide for his needs."<sup>46</sup>

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<sup>44</sup>, 'Etoffes unies,' "Situation industrielle au Juin 1868," AML, I2-47(B), No. 204.

<sup>45</sup>, 'Etoffes unies,' "Situation industrielle au Mars 1868," AML, I2-47(B), No. 201.

<sup>46</sup>, 'Etoffes unies,' "Situation de l'Industrie à Lyon au 15 Mars 1867," AML, I2-47(B), No. 196.

Fancy velvets and plain velvets displayed the same comparative tendencies as étoffes façonnées and étoffes unies, with differences between them even more exaggerated in some respects. The major difference was the more regular employment of weavers of plain velvets, but at a very low wage, because of rural competition, and the severe and frequent unemployment of the very highly-paid fancy-velvet weavers, because of the preference of fashion for cheap unis over rich brocades. The wages of plain velvet weavers had been traditionally the lowest in the fabrique, because of the relatively unskilled quality of the work and the consequent availability of cheap rural labor. In 1859, a year of good wages, velvet weavers in Lyons received at best only 1.75 to 2.00 francs per day for their work, as compared to 2.00 francs to 2.50 francs for weavers of étoffes unies during their worst trimester of that year. Such wages did not decline much below this 1859 'subsistence' level for velvet weavers during the 1860's. The lowest wage was 1.25 francs in the first trimester of 1862, and this was exceptional.<sup>47</sup> But plain-velvet wages did not rise much either, or rather rose only exceptionally and very briefly, despite the strong demand for this velvet fabric. The availability of rural labor explained largely the persistence of low wages at a time of favorable demand. Assimilation of urban and rural labor for weaving velvets was achieved more easily than for weaving étoffes unies. Because of this assimilation, differences between city and country in experiencing cycles of employment were much weaker throughout most of the decade than in the regular plain-silks

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<sup>47</sup>'Velours unis,' "Situation industrielle," 1859 - 1870, AML, I2-47(B), Nos. 166-213.

category. In December 1866, the recovery from a mild recession of the previous trimester was felt equally in both sectors. The "movement which occurred in the city in the manufacture of velvets has extended to the surrounding areas as well," declared the police observer of the fabrique.<sup>48</sup> Both areas also experienced together the more severe unemployment which began to set in in late 1867. "The slowdown of work which has been noted in this category towards the end of the last semester," wrote the observer in September 1867, "has increased during this one, as much in the city as in the country."<sup>49</sup> Even though the same police agent remarked earlier, in June 1866, that outside Lyons "work is more regular, more abundant and the looms are almost all occupied," the difference between these 'normal' conditions of the rural areas and the worst conditions of the urban fabrique of velvets was small. "Its situation [in Lyons]," reported the observer, "had changed little in several years now and never can one count more than a third of the looms in a state of inactivity."<sup>50</sup>

The relative homogeneity of the plain velvets category facilitated this assimilation of urban and rural labor markets. The category had few 'rich' specialties insulated from the rural market by special skills or need for surveillance. As a result of this homogeneity, velvet weaving migrated to the countryside more rapidly and in larger

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<sup>48</sup>'Velours unis,' "Situation de l'industrie à Lyon au 15 Décembre 1866," AML, I2-47(B), No. 193.

<sup>49</sup>'Velours unis,' "Situation industrielle au 15 7bre 1867," (September 15, 1867), AML, I2-47(B), No. 198.

<sup>50</sup>'Velours unis,' "15 Juin 1866," AML, I2-47(B), No. 187.

proportions than weaving of étoffes unies. This migration left few weavers in Lyons to assert an urban autonomy in methods and cycles of production. "There exist very few looms in Lyons," declared the police observer in June 1859. "The manufacture of plain velvets tends every day to move into the countryside."<sup>51</sup> The small number of weavers of better plain velvets -- those who earned wages of 3.00 or 3.50 francs in 1866 and 1867<sup>52</sup> -- were therefore more vulnerable than the weavers of the 'rich' étoffes unies to elimination in unfavorable periods. In 1868, for example, these weavers could not resist with their skills alone the total migration of plain velvet weaving to the countryside, when demand for better styles in most categories plummeted. Nor could they resist the subsequent reduction of all wages in the category to the lowest rural levels. In the last months of 1868, fabricants of plain velvets launched an unconcealed campaign against urban weaving. The police observer explained the campaign as a program for the final equalization of urban and rural labor markets:

The bad situation of this article on the site of Lyons is due in large part to the assimilation made by the négociant of the wages of the countryside to those of the city. The expense which burdens the worker living in Lyons does not permit him to work at the same rate as the worker of the country and forces him little by little to abandon an industry whose return is inadequate to provide for his needs and for those of his family.

By acting in this manner, the négociants will succeed, as they wish, to transport the manufacture of velvets entirely outside of the cities.<sup>53</sup>

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<sup>51</sup>'Velours unis,' "Situation industrielle au 15 Juin 1859," AML, I2-47(B), No. 166.

<sup>52</sup>'Velours unis,' "Situation industrielle," 1866, 1867, AML, I2-47(B), Nos. 186-187, 192-193, 196-198, 200.

<sup>53</sup>'Velours unis,' "Situation industrielle au 12 Xbre 1868," (December 12, 1868), AML, I2-47(B), No. 206.

For the first time in the decade, at least, urban velvet weavers were forced into widespread unemployment, while the looms of the countryside continued to work at full capacity. "The unemployment which is being felt in the city, does not weigh on the large number of looms dispersed in the surrounding areas of Lyons, where the work is said to be abundant and regular." It "is probable," wrote the same observer, "that, in a few years, this article will be manufactured only in the countryside."<sup>54</sup> The urban weavers did not allow this to happen, however, at least not this soon. They mobilized resistance to the forced reduction of wages, organized rural weavers around their program and, favored by an upswing in demand for silk goods, managed to impose a wage increase on the fabricants towards the end of 1869. Their new Corporation des tisseurs de velours unis, ville et campagne maintained the increase for four years.

Weavers of fancy velvets were insulated by their skills and by the luxury of their cloth, requiring close watch during weaving, from the competition of rural labor. But their category was more acutely susceptible to long periods of unemployment which fashion and political events, such as the American Civil War, imposed on most 'rich' cloths. The story of fancy velvet weaving during the 1860's was in fact similar to that of the étoffes façonnées. Beginning in 1861, a decade of secular unemployment set in for the 'rich' fancies for clothing. Only a few brief spells of relief, in June 1864 and June 1865, for example, interrupted this unemployment. As in the case of the étoffes façonnées

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<sup>54</sup>'Velours unis,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

for dress fabric, fashion turned its attention to cheaper, less elegant cloths. "The fashion of velvet clothing has been de-throned by that of clothing of fantaisie, which has in its favor the advantage of cheapness."<sup>55</sup> To resist the decline of the 'rich' cloths, fabricants of fancy velvets began in 1865 to put out orders for velours nouveautés. Though less finished than the dress velvets, such nouveautés favored a much wider variation of style to attract the novelty-seeking buyer and was less expensive besides. But as in the case of the fancies ornament and hautes nouveautés, such variety required more frequent changes of design on the loom, retarding the weaver's work and diminishing his return. This problem was especially serious between 1865 and 1867, when fabricants tried promoting their new product with sample displays. "Half of the looms are still inactive," reported the police agent in September 1866, "and those which are operating are employed in the manufacture of samples, work which gives the worker almost no return, because of the many changes [of design] made in the loom!"<sup>56</sup> Because of such changes of design, the higher wage received by the fancy-velvet weavers, as compared with other categories, often did not compensate for the loss of work. Consequently, the overall situation of many of these skilled workers differed little from that of weavers of lower-paid plain cloths. "Nothing has changed in the wages of the worker who, although relatively better compensated, is constantly drawn back to the same

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<sup>55</sup>'Velours façonnés,' "Situation industrielle - 15 Mars 1866 - ...," AML, I2-47(B), No. 186.

<sup>56</sup>'Velours façonnés,' "Situation de l'industrie au 15 7bre 1866," (September 15, 1866), AML, I2-47(B), No. 192.

situation as the worker of other categories by unemployment and by the loss of time occasioned by the changes of looms."<sup>57</sup>

Even though interrupted by frequent delays, the weaving of velours nouveautés proved a more enduring source of employment than the fancy dress velvets. Towards the end of the decade, the comparative situation of the superior 'rich' cloths and the inferior 'common' cloths (nouveauté) in the fancy velvet category was similar to that of grands façonnés and petits façonnés. In good months, such as June-September 1868 and April 1869 - March 1870, the "rich article continued to suffer ... but the article nouveauté provided rather abundant and regular work."<sup>58</sup> And in less favorable months, such as September 1868 - March 1869,<sup>59</sup> the 'typical' state of affairs was very much like that described for the first trimester of 1869:

The manufacture of rich fancy velvets which, during the last trimester, was in an unsatisfactory condition, has remained since then in a completely stagnant state.

The ordinary nouveauté article still occupies some looms, but the worker faces many interruptions of work as a result of the difficulty he encounters in the renewing of orders on the part of the merchant.<sup>60</sup>

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<sup>57</sup>'Velours façonnés,' "Situation industrielle - 15 Mars 1866 - ...," AML, I2-47(B), No. 186.

<sup>58</sup>'Velours façonnés,' "Situation industrielle," June, September 12, 1868; March, June 15, September 14, December 1869; March 15, 1870, AML, I2-47(B), Nos. 204, 205 bis, 207-208, 211-213. Citation taken from 'Velours façonnés,' "Situation industrielle au 12 Septembre 1868," AML, I2-47(B), No. 205 bis.

<sup>59</sup>'Velours façonnés,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

<sup>60</sup>Ibid.

Weavers of shawls and church fabrics -- among the most elegant, skillfully wrought products of the fabrique lyonnaise -- fared at least as well as the weavers of étoffes façonnées and velours façonnés, though frequently better because of the special kinds of markets for their products. Although they experienced frequent periods of unemployment throughout the decade, such was not abnormal for shawls and church cloths. Seasonal changes were traditionally stronger for them than for most other types of silks. Favorable seasonal factors sometimes perked up an otherwise faltering demand and obscured, for a few months at least, the underlying reality of stagnation. Church cloth weaving revived during the Easter and Christmas seasons, for example, and during the season of the Fête-Dieu, between 1865 and 1868, even though the "real situation of this category did not remain any less unfavorable than before" the seasons of religious celebration.<sup>61</sup> Moreover, neither church cloths nor shawls depended as strongly on the American market as the étoffes façonnées. Consequently, they did not suffer long secular decline like the latter. During the first half of the year 1866, orders for church ornaments from Mexico and the United States supplemented the seasonal demands "occasioned by the solemnities of the Fête-Dieu," to provide "a certain animation," even "a light improvement in the activity of labor..."<sup>62</sup> Wages in both categories also remained high throughout most of the decade. Even during the worst periods of unemployment, the conditions of shawl and church-cloth weavers were

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<sup>61</sup>'Ornements d'église,' "Situation industrielle au 12 Septembre 1868," AML, I2-47(B), No. 205bis.

<sup>62</sup>'Ornements d'église,' "Situation industrielle - 15 Mars 1866 - Soieries et industries qui s'y rattachent," AML, I2-47(B), No. 186.

usually considered better than those of weavers of other categories of silk cloth.

Yet some aspects of the specialized markets of these highly-skilled weavers made them susceptible to especially severe unemployment. "[R]elations interrupted for a long time with Mexico, Italy and Spain,"<sup>63</sup> one result of Napoleon III's controversial diplomacy during the late Second Empire, caused the worst crisis of church-cloth weavers in the decade. This crisis extended the "dead season" of 1866 first into "an absolute lack of orders, at a time when one observes every year, on the contrary, a recovery of work,"<sup>64</sup> and then into unemployment of two-thirds of the workers in 1867.<sup>65</sup> Revolution in Italy and war in Germany in 1866 and 1867 immobilized one-half to two-thirds of the shawl looms because of a sudden fall in orders from these two major foreign buyers.<sup>66</sup> The highly-skilled shawl and church-cloth weavers did not escape, moreover, the influence of changes in fashion in favor of inferior cloths. Such influence was especially strong in the shawls category towards the end of the decade. In the first trimester of 1869, the police observed a tendency to substitute a lighter, inferior-quality shawl, cheaper to manufacture, for the high-quality shawl for which Lyons had been

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<sup>63</sup>'Ornements d'église,' "Situation industrielle au 15 7bre 1867," (September 15, 1867), AML, I2-47(B), No. 198.

<sup>64</sup>'Ornements d'église,' "Situation de l'industrie à Lyon au 15 Decembre 1866," AML, I2-47(B), No. 193.

<sup>65</sup>'Ornements d'église,' "Situation industrielle au 15 7bre 1867."

<sup>66</sup>'Châles au 1/4,' "Situation de l'industrie au 15 7bre 1866," (September 15, 1866); 'Châles au 1/4,' "Situation industrielle au Juin 1867," AML, I2-47(B), Nos. 192, 197.

traditionally renowned. "Except for one or two houses which are determined to keep their specialty, the others, being little concerned about the reputation which Lyons had acquired, have for some time put out an excessively light article which earns them a premium of 10, 15 and up to 20 centimes on the price of labor."<sup>67</sup> This tendency was in fact a reaction to the steadily growing competition of Paris and the Nord in the production of shawls, which was first noted at the end of 1865.<sup>68</sup> This competition was so severe in 1868 that shawl weavers began leaving Lyons for the weaving centers of northern France.<sup>69</sup> This migration left the impression that the specialty tended "each day to disappear from Lyons."<sup>70</sup>

As a result of these changes, the same differences in conditions of employment between weavers of 'rich' shawls and weavers of 'common' shawls characterized this category as other fancy-cloth categories. In 1866, the only difference between "the rich article" and "the common article" was the wage offered for weaving each. By June 1868, however, some fabricants had reduced the wages of 'rich' shawl weavers to the levels of 'common' shawl weavers in order to resist competition from the north.<sup>71</sup> One year later, the major difference between the two

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<sup>67</sup>'Châle au 1/4,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

<sup>68</sup>'Châle au 1/4,' "Situation industrielle," December 15, 1865; March 15, 1866; December 1867, AML, I2-47(B), Nos. 185, 186, 200.

<sup>69</sup>'Châle au 1/4,' "Situation industrielle au 12 Xbre 1868," (December 12, 1868), AML, I2-47(B), No. 206.

<sup>70</sup>'Châle au 1/4,' "Situation industrielle au Mars 1869," AML, I2-47(B), No. 207.

<sup>71</sup>'Châle au 1/4,' "Situation industrielle au Juin 1868," AML, I2-47(B), No. 204.

shawl specialties was that familiar to the categories of étoffes façonnées and velours façonnés: "The manufacture of the rich shawls [was] in a state of inactivity and there [were] only the light articles, less favorable to the workers, which [occupied] the largest number of looms."<sup>72</sup> The same difference marked the two specialties in the church-cloths category. In December 1867 the police observer reported that "repairs and the manufacture of common cloths alone provide a bit of work to the ordinary worker, but those who work only on the production of rich cloths, and especially the embroiderers, have been unemployed for a long time."<sup>73</sup> Apparently it took an exceptional ecclesiastical event -- the convocation of the First Vatican Council -- combined with Christmas celebrations in the year 1868 to revive work for weavers of 'rich' and 'ordinary' vestments alike.<sup>74</sup> Such sporadic factors in the demand of this category softened the experience of crisis among its weavers, and shielded them from full exposure to the market forces which forced down wages and levels of employment without respite for their fellow craftsmen in other categories of the silk industry of Lyons.

The crisis of the 1860's thus separated not only the conditions of the 'plains' categories from that of the 'fancies' categories but also the conditions of 'common' and 'rich' specialties within each

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<sup>72</sup>'Châle au 1/4,' "Situation industrielle au 15 Juin 1869," AML, I2-47(B), No. 208.

<sup>73</sup>'Ornements d'église,' "Situation industrielle au Xbre 1867" (December 1867), AML, I2-47(B), No. 200.

<sup>74</sup>'Ornements d'église,' "Situation industrielle au 12 Xbre 1868," (December 12, 1868), AML, I2-47(B), No. 206.

category, especially during the second half of the decade. The criteria of separation were primarily the level and stability of employment. These were high in the 'plains' categories and in the 'common' specialties, and low in the 'fancies' categories and in the 'rich' specialties. At the same time, however, the economic situation of weavers in the various categories and specialties, as measured by their annual earnings, became more alike. Because of their differences in employment, weavers of fancy cloths and 'rich' specialties received little more income, and sometimes less, than weavers of plain cloths and 'common' specialties. In other words, as economic conditions dissociated the traditionally similar employment experiences of weavers in the different categories and specialties, these conditions also equalized their traditionally different economic situations. The same process that destroyed one of the economic foundations of traditional 'vertical' solidarity of craft, based on a hierarchy of economic situations, thus created the foundations for a new kind of 'vertical' solidarity, based on equality of situation.

#### B. Movements and Levels of Wages

As for wages, the impact of the crisis of the 1860's was less apparent. Observers commented generally that weavers of plain cloths received very low wages, and weavers of fancies, shawls and church cloths received much higher wages which did not, however, always compensate for their loss of employment. The structure of wages in fact changed more than such general comments suggested. As described earlier, relative movements and levels of wages 'responded' more to quantitative differences within the cloth categories than to qualitative differences between them, associated with different cloth

types, weaving techniques and weaving skills. In other words, differences between 'specialties,' indicating maximum and minimum wages for each cloth category, rather than differences between the categories themselves, determined relations among movements and levels of wages. This change occurred generally after 1865 and affected some cloth categories more than others. This effect was experienced as more or less intensive dissociation of minimum from maximum specialties within each category and as a corresponding merging of specialties in different cloth categories according to the similar quantitative criterion (maximum wage versus minimum wage). In this way, the changes in wage movements and levels, just like the changes in conditions of employment, both destroyed an economic foundation of traditional 'vertical' craft solidarity and created an economic basis for a new 'vertical' solidarity.

Such changes in relative wage movements and levels are revealed by a systematic analysis of the same data from which the observation of contemporaries concerning conditions of employment were made. These data consist of readings of end-of-trimester minimum and maximum wages for each of six 'categories' of silk cloth: étoffes unies, étoffes façonnées, velours unis, velours façonnés, châles, and ornements d'église. The reading covers a twenty-nine trimester period beginning in April 1859 and ending in March 1870. Twelve of these are trimesters between 1859 and 1863 and seventeen between 1865 and 1870.<sup>75</sup>

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<sup>75</sup>Trimesters ending June, October 1859; June, September, December 1860; March, June, September 1861; March, September, December 1862; December 1863; June, September 1865; September, December 1866; March, June, September, December 1867; March, June, September, December 1868; March, June, September, December 1869; March 1870. Source: AML, I2-47(B), Nos. 166-213.

The wages represent average daily earnings of journeymen weavers gathered by agents of the local police who observed and reported in detail the conditions of the industry during each trimester. Too much credence must not be given, of course, to the absolute levels of these wages, because of large variations in piece-rates according to particular circumstances and products. Differences between category and specialty values, as well as differences between maximum and minimum values, however, reasonably indicate the prevailing situation with some accuracy, since such differences were a major concern of the trimestrial reports and were reported systematically. Such reporting, moreover, was conscientious, and reliable. Few claims were made on the basis of mere speculation or hypothesis. In September 1869, for example, the police observer frankly admitted his inability to make precise determination of the wage of church-cloth weavers, rather than offering a mere guess. "The piece-rate is always the same," he reported; "but the numerous periods of unemployment which the worker experiences do not permit establishing in a precise manner the average of his wage."<sup>76</sup> In a few cases, I have estimated such gaps in the reports to provide a complete series for calculating correlations between wage groups of similar size, basing such estimates on prior and succeeding wage levels. Appendix IV discusses in greater detail the reliability and utility of these police reports for analyzing wage movements and levles.

Two aspects of wage structure are espeically interesting for the study of relative changes in the twelve separate wage groups (six

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<sup>76</sup>Ornements d'église,' "Situation industrielle au 14 Septembre 1869," AML, I2-47(B), No. 211.

'categories', two 'specialties' -- 'rich' (maximum wage) and 'common' (minimum wage)--per category). These are the levels of wages and the movements of wages, or correlated changes in wage levels, among these twelve groups. Levels and movements are analyzed here successively for four sub-sets of these twelve groups -- the 'range' set, the 'category' set, the 'specialty' set, and the 'summary category' set of wages. The 'range' set consists of three wage series -- averages of all wages (of all twelve groups), labelled AVWG; averages of all minimum wages (of six minimum-wage groups), labelled AVNWG; and averages of all maximum wages (of six maximum-wage groups), labelled AVXWG. The 'category' set consists of six wage series, each representing averages of minimum and maximum wages for each cloth category -- étoffes unies (plain cloths) EU; velours unis (plain velvets) VU; étoffes façonnées (fancy cloths) EF; velours façonnés (fancy velvets) VF; châles (shawls) C; and ornements d'église (church cloths). OE. The 'specialty' set consists of twelve series, each representing one of the original twelve wage groups, and the 'summary category' set (to be explained later in more detail) averages plain categories (EU, VU) and fancy categories (EF, VF, C, OE). In the nomenclature for each group, N is the symbol for the minimum wage series of each cloth category, and X is the symbol for the maximum wage series, so that EUN, for example, represents the minimum wage series for étoffes unies and EUX the maximum wage series for the same category. Table 14 summarizes these four groups of wage series. Changes in patterns of related levels and movements of wages will be investigated within each of these four sets of wage series over the decade beginning June 1859 and ending March 1870. In particular, changes will be examined

TABLE 14

Summary of Wage Series

	<u>'Category' Set (Cg)</u>		<u>'Specialty' Set (S)</u>		<u>'Summary Category' Set (SCg)</u>		
	<u>Name</u>	<u>Symbol</u>	<u>Max (-X)</u>	<u>Min (-N)</u>	<u>General</u>	<u>Max (-X)</u>	<u>Min (-N)</u>
			<u>'Rich'</u>	<u>'Common'</u>			
Plains (U)	Etoffes unies	EU	EUX	EUN	AVU	AVUX	AVUN
	Velours unis	VU	VUX	VUN			
Fancies (F)	Etoffes façonnées	EF	EFX	EFN	AVF	AVFX	AVFN
	Velours façonnés	VF	VFX	VFN			
	Châles	C	CX	CN			
	Ornements d'église	OE	OEX	OEN			
<u>'Range' Set (R)</u>	→	AVWG	AVXWG	AVNWG			

Formulas

$$\begin{aligned}
 \text{'Range' (R)} &= \{ \sum C_g/6, \sum S_X/6, \sum S_N/6 \} \\
 \text{'Category' (Cg)} &= \{ (EUX + EUN)/2, \dots, (OEX + OEN)/2 \} \\
 \text{'Specialty' (S)} &= \{ EUX, \dots, OEX, EUN, \dots, OEN \} \\
 \text{'Summary Category' (SCg)} &= \left\{ \begin{array}{l} \text{General} = \{ \sum U/2, \sum F/4 \} \\ \text{Max} = \{ \sum U_X/2, \sum F_X/4 \} \\ \text{Min} = \{ \sum U_N/2, \sum F_N/4 \} \end{array} \right\}
 \end{aligned}$$

between the two periods October 1859 - December 1863 and June 1865 - September 1869.<sup>77</sup>

Relative wage movements will be studied first, by using correlation analysis to identify wage groups whose serial movements were closely related or relations among which changed most strongly from one period to the next. In other words, those cloth categories, and those range groups within such categories, will be sought in which wages rose and fell from one observed trimester to the next, together in the same direction (positive correlation), together in opposite direction (negative correlation), or 'irregularly,' that is, with no association between wage movements (zero or low correlation). By comparing such levels and directions of association for the two 'halves' of the decade (1859-63, 1865-69), some of the most prominent changes in the 'structure' of wage movements during the decade will be identified.

Graph 6 plots the 'range' set of wage series for the entire period for which data are available -- overall average wages AVWG, average minimum wages AVNWG, and average maximum wages AVXWG. The graph demonstrates the remarkable ability of the maximum wage groups to maintain high and occasionally increasing wage levels over most of the period, in spite of the relatively high incidence of unemployment

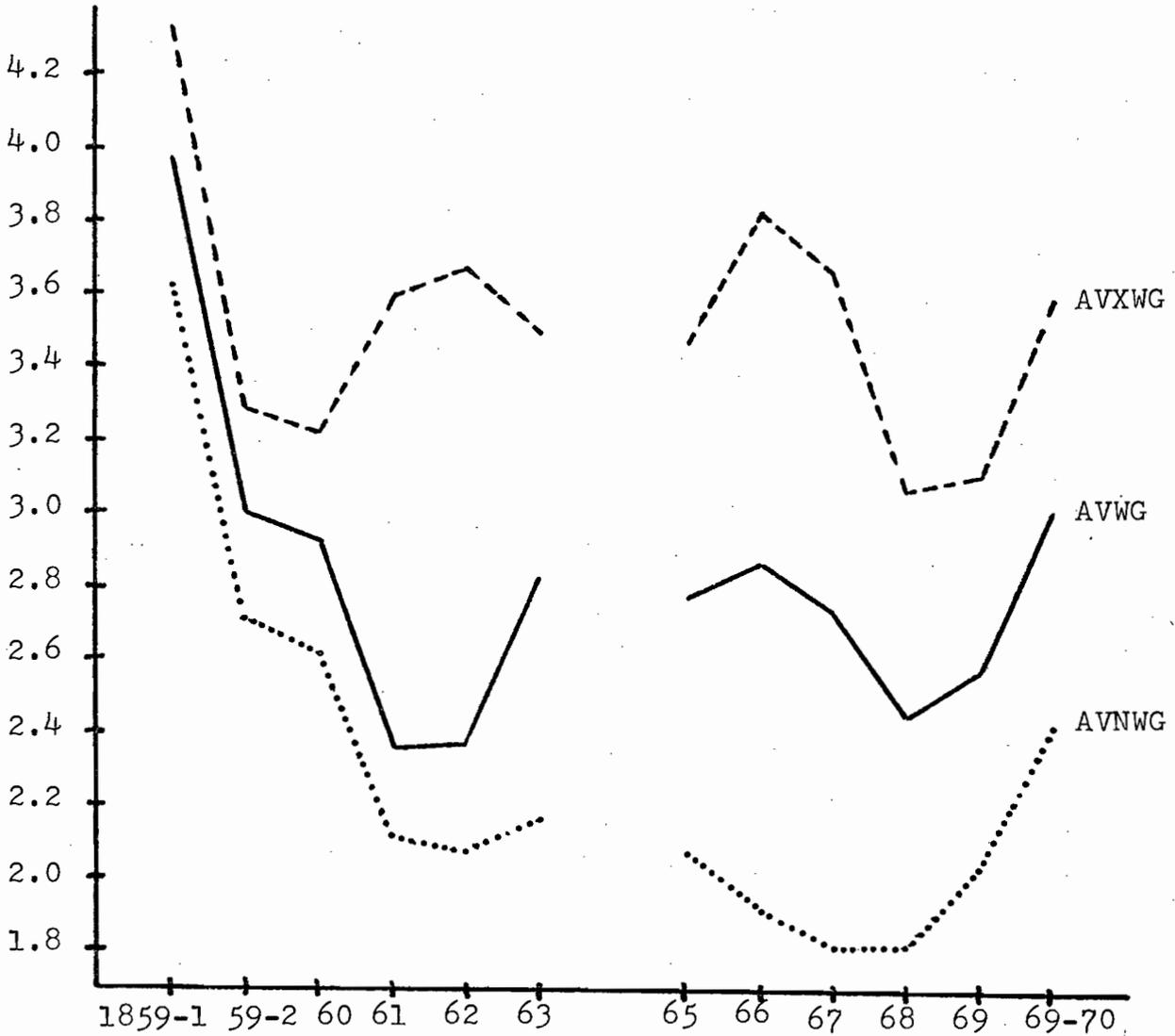
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<sup>77</sup>Averages for June 1859 and for December 1869 are separated from their respective year groups because of their exceptional character. The first period (June 1859) antedated the crisis under examination and therefore represented a pre-crisis situation. The second period (December 1869) witnessed the beginning of the weavers' resistance movement and the successful negotiation of wages in several cloth categories to pre-crisis levels. This resistance movement, and associated wage increases, continued through March 1870. The wage data for December 1869 and March 1870 are therefore averaged together as a single period group, representing, again, generally higher wage levels than those prevailing in the crisis of the 1860's.

Graph 6:

Average Daily Wages of Journeymen  
Silk Weavers in Lyons: General,  
Minimum and Maximum Wages  
(1859 - 1870)

Daily Wage  
in Francs



————— : AVWG - Average Wages  
 ..... : AVNWG - Average Minimum Wages  
 - - - - - : AVXWG - Average Maximum Wages

for the high-wage categories and specialties. The major exceptions occurred in late 1859-1860 and in 1868. In the first case, the Italian crisis affected demand for shawls, the American Civil War suddenly destroyed the market for fancy cloths, and a decline of the market for silks in general suddenly reduced the demand for skilled labor. In the second case, orders for the quality fabrics exhibited in Paris in 1867 had terminated and with these the demand for labor to weave samples. In both cases, piece-rates probably declined as a result of falling labor demand. The minimum wage groups, on the other hand, were unable to resist more general movements towards a fall in wages. They were also incapable of benefiting very much from tendencies to raise wages before 1869. So severe and persistent was the wage decline in the minimum wage groups that these depressed the overall average to a declining or only mildly rising position in years of marked rise in maximum wage groups, such as 1861, 1862 and 1866.

Even more important, the movement in minimum wage levels became increasingly independent of that of maximum wage levels and, to a lesser extent, of the overall average levels, in the second half of the decade, as compared with the first. This is evident from a comparison of the correlation coefficients of the three average-wage series for the period October 1859 to December 1863 (eleven trimestrial observations) with the coefficients for the period June 1865 to September 1869 (fifteen trimestrial observations). Table 15 summarizes the coefficients for these two periods:

Table 15

Zero-Order Correlation Coefficients  
for 'Range' Set of Wage Series  
(October 1859 - December 1863;  
June 1865 - September 1869)

Correlated Pair	1859-63 (NC=11)		1865-69 (NC=15)	
	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
AVWG - AVNWG	.94	.001	.35	.208
AVWG - AVXWG	.96	.001	.92	.001
AVNWG - AVXWG	.79	.004	-.05	.851

r: Correlation coefficient

s: Two-tailed t-test of significance ( $H_0: u_1 = u_2$ ;  $H_1: u_1 \neq u_2$ ). The higher the level of significance s, the less likely the means of the two series will be different; hence the less 'strength' there is to reject  $H_0$ . In other words, the higher the level of significance, the less likely one wage series is able to 'predict' the other wage series, hence the less correlated are the two series. The number of 'cases' (trimesters) upon which r and s are based is indicated by the abbreviation NC.

The very high correlation among wage movements of all three series in 1859-63 remained high in 1865-69 only for the overall series as compared with the maximum wage series (AVWG-AVXWG). The relationship between the movements of the overall series and the minimum and maximum wage series became much weaker in the later period, however. The relation between the maximum and minimum wage series (AVNWG-AVXWG) became clearly insignificant in this same period. Minimum wages for weaving silk cloths thus seem to have obeyed a different 'law' than maximum wages after 1865, whereas before that time they followed a trend not very different from maximum wages.

This result becomes more evident and significant when wage movements of cloth categories are compared with minimum and maximum wages as a whole. For the sake of simplicity, Table 16 analyzes the 'range' series of wages (AVNWX, AVXWX) correlated with only two silk-cloth category series, called 'summary category' series -- a plains category series (AVU) and a fancies category series (AVF). The plains series is the average of the series for étoffes unies (EU) and velours unis (VU), the fancies series the average of series for étoffes façonnées (EF), velours façonnés (VF), châles (C) and ornements d'église (OE). The average minimum wage series of the summary categories are labelled AVUN, AVFN ; the average maximum wage series of the summary categories are labelled AVUX, AVFX. (See Table 14 for summary description of these wage series.) Graph 7 shows that average plains wages (AVU) were lower than average wages in general (AVWX), and that average fancies wages (AVF) were higher than average wages (AVWX), throughout the decade. Yet, as 1-a of Table 16 demonstrates, wage movements of the two summary categories AVU and AVF did not dissociate after 1865 as did wage movements of the minimum series AVNWX as against the maximum series AVXWX. In fact, ties between AVU and AVF strengthened somewhat in 1865-69, as the increase in r and the decrease in s suggest. Correlations 2-a and 3-a show that this strengthening was largely the effect of a stronger association between the maximum wage sub-series of the two summary categories, AVUX-AVFX, after 1865, and a relatively unchanged, solid association between the minimum wage sub-series AVUN-AVFN.

Correlations 1-b show that ties between the low-wage AVU series and the minimum wage series AVNWX, and ties between the high-wage AVF series and the maximum wage series AVXWX, both weakened after 1865.

Table 16

Zero-Order Correlation Coefficients for 'Summary Category' Set of Wage Series as Compared with 'Range' Set of Wage Series.  
(October, 1859 - December, 1863; June, 1865 - September, 1869)

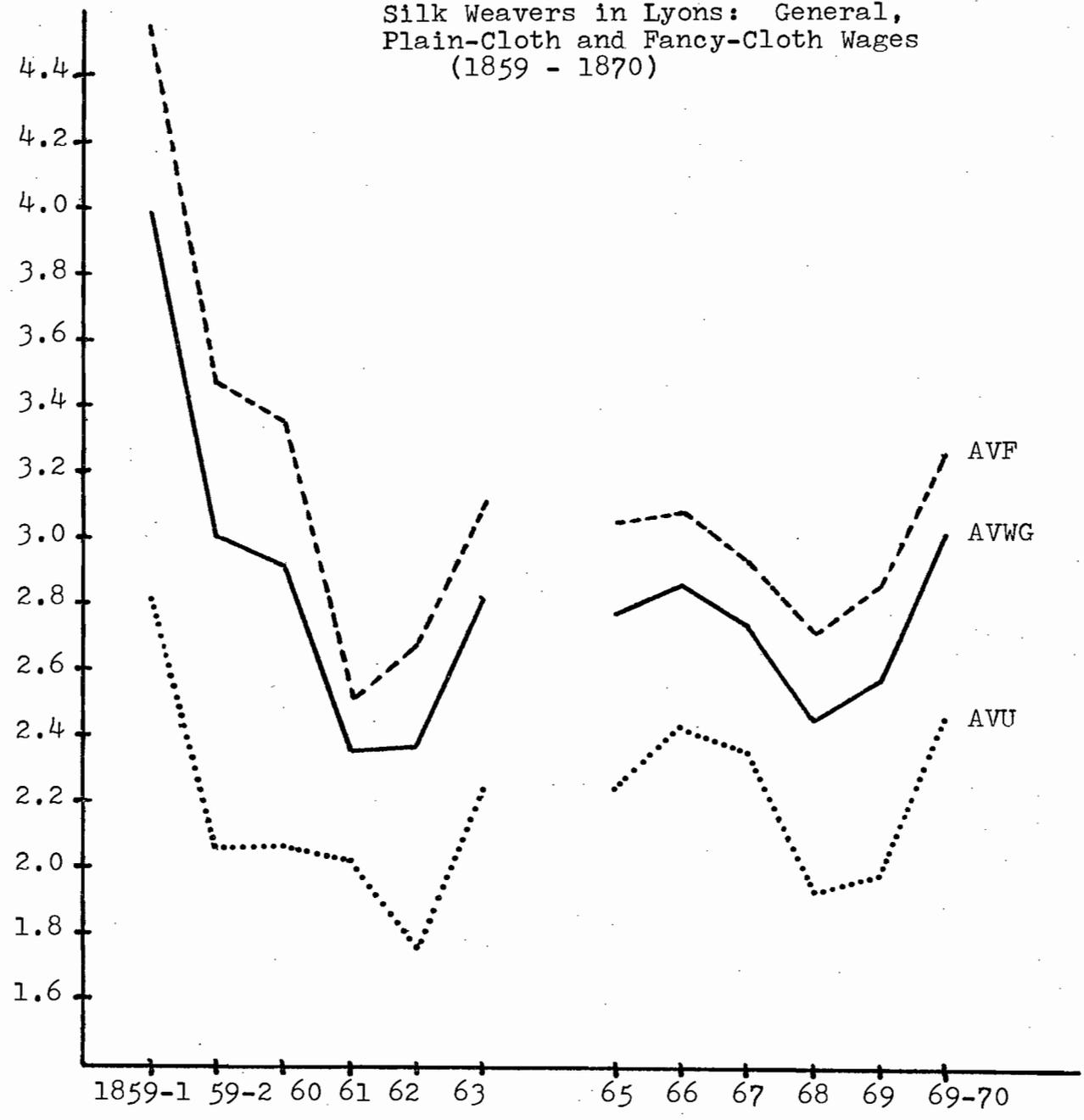
	<u>Correlated Pair</u>	<u>1859-63 (NC =11)</u>		<u>1865-69 (NC=15)</u>	
		<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
1-	a) AVU - AVF	.53	.094	.62	.013
	b) AVU - AVNWG	.66	.026	-.12	.673
	- AVXWG	.69	.018	.96	.001
	AVF - AVNWG	.91	.001	.60	.018
	- AVXWG	.93	.001	.74	.001
2-	a) AVUN- AVFN	.61	.045	.59	.020
	b) AVUN- AVNWG	.77	.005	.79	.001
	- AVXWG	.61	.046	-.34	.213
	AVFN- AVNWG	.97	.001	.96	.001
	- AVXWG	.77	.005	.08	.783
3-	a) AVUX- AVFX	.51	.106	.78	.001
	b) AVUX- AVNWG	.51	.107	-.31	.258
	- AVXWG	.70	.016	.94	.001
	AVFX- AVNWG	.79	.001	.21	.447
	- AVXWG	.97	.001	.94	.001

DF = Degrees of Freedom

Graph 7:

Daily Wage  
in Francs

Average Daily Wages of Journeymen  
Silk Weavers in Lyons: General,  
Plain-Cloth and Fancy-Cloth Wages  
(1859 - 1870)



————— : AVWG - Average Wages  
..... : AVU - Average Plain-Cloth Wages  
- - - - - : AVF - Average Fancy-Cloth Wages

This result, along with the strong correlation between minimum wage series AVUN - AVFN and between maximum wage series AVUX - AVFX, suggests that movements of wages were tightening up more strongly by range than by category after 1865. Minimum wages of either summary category, plains or fancies, moved in stronger association with minimum wages of the other summary category, and of minimum wages in general, and maximum wages of either did the same with maximum wages of the other category, and of maximum wages in general. Minimum wages, irrespective of category, meanwhile moved more independently of maximum wages, Correlations 2-b and 3-b demonstrate this for each combination of range and summary category series (AVUN, AVFN, AVUX, AVFX) with the two range series in general (AVNWG, AVXWG). In each combination of minimum category (AVUN, AVFN) with minimum in general (AVNWG), or of maximum category (AVUX, AVFX) with maximum in general (AVXWG), the strength of association  $r$  increased, or remained high, after 1865. In every combination of a minimum series with a maximum series, however, the strength of association decreased significantly. In no case did the category of silk cloth have any noticeable effect on the strength of association between wage series.

Movements of wage series after 1865 thus tended to become more strongly associated, or at least to remain as strongly associated, within maximum wage series as a whole and within minimum wage series as a whole, even when such series were differentiated internally according to their category components. Ties between maximum wage series and minimum wage series weakened, however, even when these were differentiated in the same manner. In short, after 1865, the difference between maximum wages and minimum wages became a more significant indicator of different

markets affecting the movement of wages, than the difference between the technologically-distinct, traditionally separate cloth categories, plains and fancies. The change was largely the result of the assimilation of the wage movements of the best-paid weavers of plain cloths to the movements of the best-paid weavers in the fabrique as a whole, and of the assimilation of the wage movements of the least-paid weavers of fancy cloths to the movements of the least-paid weavers in the fabrique.

The correlation coefficients between the two 'summary category' wage series (AVU, AVF) and the two 'range' series (AVNWX, AVXWX), on the one hand, and the six original 'category' series (EU, VU, EF, VF, C, OE), on the other hand, confirm this conclusion and locate more precisely the sources of the observed change. Table 17 summarizes these coefficients (r) and their associated significance levels (s) for each of the two periods within the decade, 1859-63 and 1865-69. As the table shows, ties between each of the two original plains category series EU and VU and the plains summary series AVU generally strengthened -- as indicated by the reduction in the values of s -- from a rather strong association in 1859-63. Ties between each of the original fancies category series VF, C, and OE, however, weakened after 1865. Thus the internal coherence of the summary category series -- the strength of association between each summary category series (AVU, AVF) and its respective category serial components -- increased after 1865 for the plains AVU and decreased for the fancies AVF. The only exception to the decrease of the latter was the association between EF and AVF, which remained as strong after 1865 as before that date.

While the two original plains category series (EU, VU) correlated

Table 17

Zero-Order Correlation Coefficients for Six-Group 'Category' Set of Wage Series as Compared with 'Summary Category' and Minimum-Maximum 'Range' Series.  
(October, 1859 - December, 1863; June, 1865 - September, 1869)

Category Symbol	Category Name	Correlated with AVU				Correlated with AVF				Correlated with AVNWG				Correlated with AVXWG			
		1859-63		1865-69		1859-63		1865-69		1859-63		1865-69		1859-63		1865-69	
		<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
EU	Plain Cloth	.75	.008	.90	.001	.84	.001	.84	.001	.80	.003	.19	.487	.90	.001	.93	.001
VU	Plain Velvet	.73	.011	.67	.006	.07	.828	.05	.818	.17	.616	.59	.021	.11	.755	.53	.043
EF	Fancy Cloth	.45	.167	.56	.031	.94	.001	.92	.001	.82	.002	.55	.035	.88	.001	.68	.006
VF	Fancy Velvet	.73	.011	.06	.833	.88	.001	.00	.940	.81	.002	.30	.277	.93	.001	.15	.589
C	Shawls	.64	.035	.40	.143	.81	.003	.51	.053	.91	.001	.18	.522	.70	.016	.47	.078
OE	Church Cloth	.14	.683	.20	.477	.87	.001	.43	.108	.68	.020	.53	.043	.78	.008	.18	.531

more strongly with their 'summary category' series (AVU), each of the former correlated less strongly with the minimum-wage 'range' series (AVNWG) after 1865, contrary to our expectations of the behavior of the wages in these relatively low-wage cloth categories. The correlation coefficient  $r$  between EU and AVNWG fell from a highly significant .80 in 1859-63 to a very insignificant .19 in 1865-69. The coefficient of correlation between VU and AVNWG changed from a weak positive value before 1865 to a strong negative value after 1865, indicating that the wages for plain-velvet weavers moved inversely to the average of minimum wages paid in all categories, again contrary to our expectations. Correlation between each of the plains categories EU, VU and the maximum-wage range series AVXWG, however, remained strong (for EU-AVXWG) or became stronger (for VU-AVXWG) after 1865. Wages of the traditionally low-paid plains categories thus moved in stronger association with wages of the highest-paid weavers in all categories after 1865. At the same time, wages of the traditionally higher-paid fancy categories (EF, VF, C, OE) moved in weaker association with the maximum-wage series AVXWG after 1865 than before and, more surprising still, less strongly than the plains category EU with AVXWG. These results enable us to identify the statistical source of the substitution of 'range' differences (minimum versus maximum wage series) for 'category' differences (plains versus fancies wage series), observed earlier as the major determinant of correlated wage movements after 1865. This substitution was apparently the result of an inversion of wage behavior on the part of plain-cloth wages and fancy-cloth wages with respect to their levels relative to one another. Lower-level plain-cloth wages moved more closely with maximum wages in the fabrique,

and less closely with minimum wages, while high-level fancy cloth wages moved in reverse fashion. The strong coherence of the plains category wages, moreover, intensified statistically the 'perversity' of their movement relative to maximum wages.

Table 18 traces the origins of this substitution even further, namely, in the correlation between the maximum wage series (-X) and the minimum wage series (-N) in each original category of cloth, on the one hand, and the two 'summary category' series (AVU, AVF) and the two 'range' series (AVNWG, AVXWG), on the other hand. As 18-a shows, both the stronger internal coherence of the plains summary category series and the stronger association of plain-cloth wage movements with maximum wage movements in all categories was exclusively the result of high correlations between wages paid to the best-paid weavers of étoffes unies (EUX) and of velours unis (VUX), on the one hand, and AVU and AVXWG, on the other hand. Wages paid to the least-paid weavers in the two first categories (EUN, VUN) correlated less strongly, or negatively, with plains category wages as a whole (AVU) and with maximum wages as a whole (AVXWG), after 1865 as compared to before, and as strongly or more strongly with minimum wages as a whole (AVNWG) in 1865-69. Both étoffes unies and velours unis split apart, in short, between their minimum wage specialties and their maximum wage specialties, each under the domination of a different 'alien' law -- the law of minimum wages in general and of maximum wages in general. Table 19, which pairs EUN-EUX and VUN-VUX directly, shows this split as a radical dissociation of EUN from EUX after 1865 (r falls from .86 to .07) and as a radical negative association, or opposition, between VUN and VUX (r falls from .89 to -.56) in the same period. The maximum-wage 'law' thus cemented the

Table 18

Zero-Order Correlation Coefficients for Twelve-Group 'Specialty' Set of Wage Series as compared with 'Summary Category' and Minimum-Maximum 'Range' Series.

(October, 1859 - December, 1863; June, 1865 - September, 1869)

Category Symbol	Correlated with AVU				Correlated with AVNWG				Correlated with AVXWG			
	1859-63		1865-69		1859-63		1865-69		1859-63		1865-69	
	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
EUN	.67	.024	.02	.950	.87	.001	.81	.001	.79	.004	0	.998
VUN	.77	.005	.59	.020	.35	.297	.43	.106	.19	.583	.70	.004
FUX	.76	.007	.95	.001	.70	.016	.03	.928	.93	.001	.98	.001
VUX	.68	.031	.74	.001	.01	.981	.63	.012	.02	.943	.65	.009

Category Symbol	Correlated with AVE				Correlated with AVNWG				Correlated with AVXWG			
	1859-63		1865-69		1859-63		1865-69		1859-63		1865-69	
	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
EFN	.89	.001	.78	.001	.85	.001	.77	.001	.69	.018	.33	.232
CN	.62	.041	.32	.250	.86	.001	.36	.188	.47	.140	.12	.665
OEN	.90	.001	.35	.197	.82	.002	.51	.052	.71	.015	.11	.709
VFN	.90	.001	.09	.747	.93	.001	.59	.021	.85	.001	.46	.087
EFX	.88	.001	.91	.001	.71	.015	.38	.163	.94	.001	.81	.001
CX	.81	.002	.51	.053	.81	.002	.09	.741	.75	.008	.66	.008
OEX	.76	.007	.45	.089	.49	.129	.53	.043	.70	.017	.20	.479
VFX	.80	.003	.06	.843	.67	.024	.65	.009	.42	.001	.42	.119

Table 19

Selected 'Specialty' Cross Relations  
 (October, 1859 - December, 1863; June, 1865 - September, 1869)

<u>Correlated Pair</u>	<u>1859-63</u>		<u>1865-69</u>	
	<u>r</u>	<u>s</u>	<u>r</u>	<u>s</u>
EUN - EUX	.86	.001	.07	.815
VUN - VUX	.89	.001	.58	.023
EFN - EFX	.77	.006	.76	.001
CN - CX	.65	.009	.29	.295
OEN - OEX	.77	.006	.97	.001
VFN - VFX	.84	.001	.22	.436
EU - VU	.09	.795	.27	.322
EUN - VUN	.17	.618	.38	.157
EUX - VUX	.07	.829	.59	.020
EUN - VUX	.11	.745	.63	.013
VUX - VUN	.18	.604	.70	.004
EU - EF	.83	.002	.79	.001
EUN - EFN	.80	.003	.71	.003
EUX - EFX	.88	.001	.80	.001
EUN - EFX	.71	.015	.40	.137
EUX - EFN	.61	.045	.36	.192

plain-cloth identity of both categories, by strengthening the association of each with AVU, but, in the process, weaned them away from their traditional deference to low-wage movements in the fabrique to cleave instead to itself, their new partner, high-wage movements in the industry. Minimum wage series in both plain-cloth categories meanwhile lost their 'category' identity but only to remain loyal to the traditional behavior of plain-cloth wages, following the movements of minimum rather than maximum wages.

The fancy-cloth categories did not manifest the same internal dissociation between their maximum and minimum specialties. Such internal splitting was severe only for shawls wages (CN, CX) and for fancy-velvet wages (VFN, VFX). Even for these, it was not as great as for the two plain-cloth categories. (See Table 19.) The deterioration of a fancy-cloth identity through falling correlation with the average wage series AVF, in those categories where such occurred (C, OE, VF), was shared by minimum and maximum wage series alike in each of these categories. (See Table 18-b.) Within each of the two important fancy categories étoffes façonnées (EF) and ornements d'église (OE), moreover, the association between minimum-wage series and maximum-wage series (EFN-EFX, OEN-OEX) remained strong in both periods (1859-63, 1865-69). After 1865 especially, this strong intra-category cohesion clearly distinguished these two fancies categories from the two plains categories EU and VU.

Besides causing significant differences in intra-category behavior, movements of minimum wages versus maximum wages not surprisingly were the source of maintained or strengthened inter-category associations of wage movements as well. Such inter-category correlations usually

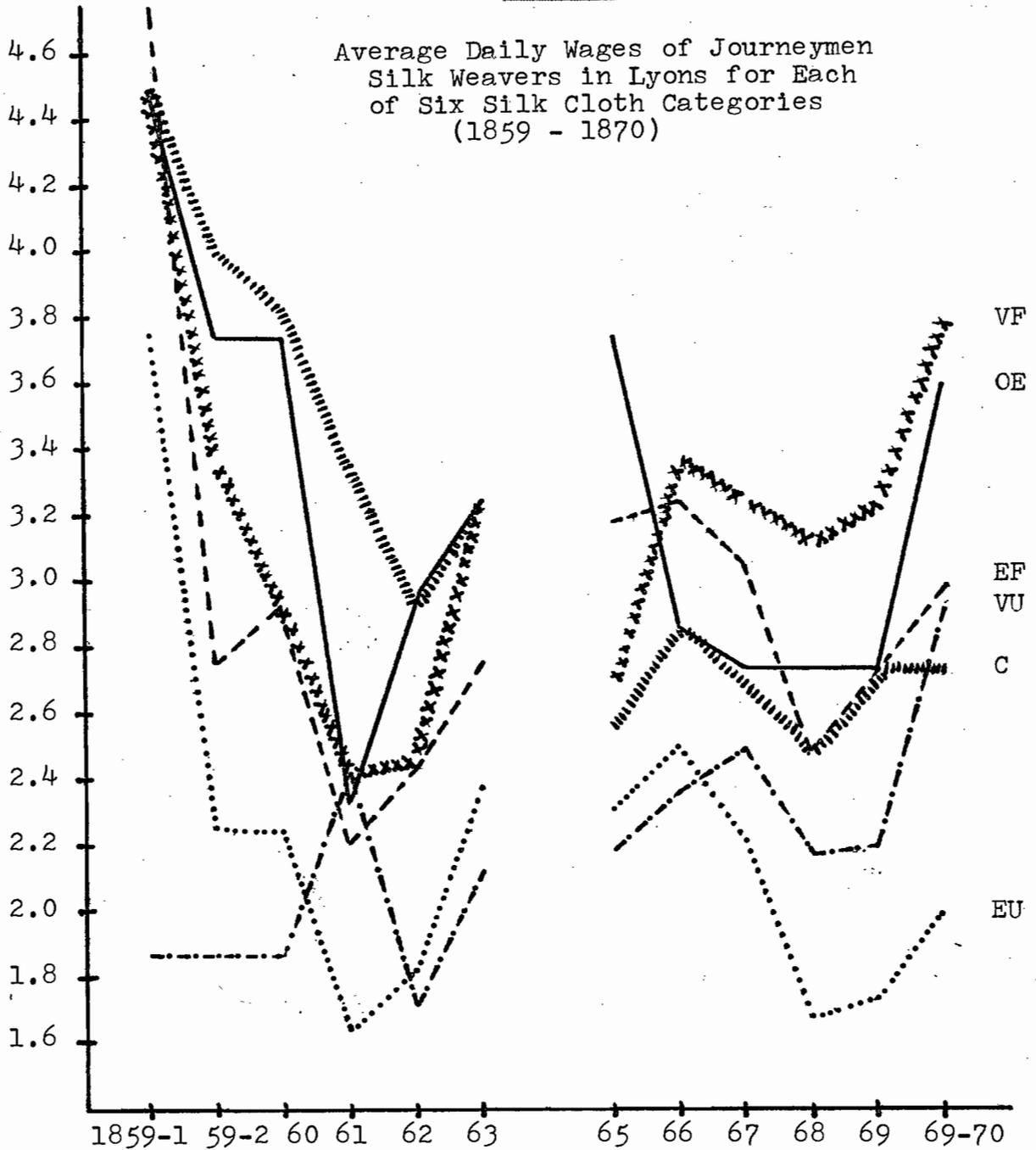
resided on high correlations between the respective minimum and maximum series of two different categories. For the sake of brevity, only two of these inter-category relations pertinent to the subsequent discussion will be mentioned. These were the associations between étoffes unies and velours unis (EU-VU), and between étoffes unies and étoffes façonnées (EU-EF). Table 19 lists all inter-category correlation coefficients and levels of significance between these two categories, differentiated by their maximum and minimum specialties as well as by their category averages. Relationships between EU and VU clearly strengthened after 1865, although the coefficient of correlation was not especially high ( $r = .27$ ) even in 1865-69. The tendency to stronger positive correlation was apparently the result of increased correlation between both the minimum wage series (EUN-VUN) and the maximum wage series (EUX-VUX). Clearly, however, the more strongly associated pair was the latter -- between movements of wages of the best-paid weavers of EU and the best-paid weavers of VU. Cross relations between specialties of the two categories (EUN-VUX, EUX-VUN) do not account in any way for the increasing association between the more general category series (EU-VU), and in fact negate any movement in that direction, EUN-VUX and EUX-VUN both becoming more negatively correlated. The same general pattern characterizes the EU wage series as compared to the EF wage series. Overall category association (EU-EF) and associations between minimum specialties (EUN-EFN) and maximum specialties (EUX-EFX) remained strong and positive, while the relationships between cross-specialties (EUN-EFX, EUX-EFN) became weaker after 1865. The only difference between the pair EU-EF and the pair EU-VU was the strong positive association between EU and EF even before 1865, an association

that remained strong after that date and, we might add, at a much higher level of correlation than the association between EU and VU after 1865. In both cases, nevertheless, the source of increasing or maintained positive association was the same law of minimum and maximum-wage series. This 'law' cemented together wage movements in the two different categories on the basis of their minimum-wage specialties, on the one hand, and their maximum-wage specialties, on the other hand. This self-same 'law', one might note again in passing, also split apart the EU and VU categories internally, between their minimum-wage poles and their maximum-wage poles, whereas the cohesion of the two poles within the EF category was not weakened by the reign of this law. Such a difference suggests that the underlying change in relative wage movements was the radical dissociation of the movements of the lowest wages in the lowest-paid categories, EU and VU, from the movements of wages in general, leaving the highest wages in EU and VU to re-define their category as more 'deferential' to movements of maximum wages, but leaving the relatively high-wage category EF intact and behaving 'as expected.' Graphs 6, 7, and 8 do indeed give the impression that the fall of minimum wages, especially in the EU category, was the major change in wage movements after 1865.

Such a change was consistent with the indications of the police observers from which this wage data was collected. According to these reports, the most striking characteristic of wages during the decade was their extremely low level for weavers of plain cloths, at least in comparison with the recent past. This low level was primarily the result of a decline in piece-rates paid to weavers of plain cloths. The decline of unis piece-rates and the persistence of low piece-rates

Graph 8:

Average Daily Wages of Journeymen  
Silk Weavers in Lyons for Each  
of Six Silk Cloth Categories  
(1859 - 1870)



- ..... : EU - Etoffes Unies (Plain Cloths)
- : EF - Etoffes Façonnées (Fancy Cloths)
- .-.-.- : VU - Velours Unis (Plain Velvets)
- xxxxx : VF - Velours Façonnés (Fancy Velvets)
- /////// : C - Châles (Shawls)
- : OE - Ornaments d'Eglise (Church Fabrics)

even in periods of high demand was the result of a premium placed by the market on low-cost production, at a time of rising or uncertain prices for raw silk, and the increasing competition of rural labor for weaving the plain cloth. The first factor, deriving from the demand for the final product, also influenced the demand for the least-paid fancy cloth weavers (especially weavers of 'common' étoffes façonnées) and presumably also the piece-rates paid to them. The same market which preferred low-cost, easily-varied étoffes unies sought out petits façonnés, as cheap ornament for unis dresses, to increase their variety of style. Through this product-market channel affecting levels of piece-rates, wage movements between plains and fancies categories, including movements between the lowest wages in each, remained highly correlated. (See Appendix IV for discussion of the relationship between 'piece-rates' and 'wages'.)

The second factor causing piece-rate declines in the plains category, the competition of rural labor, was, on the contrary, an autonomous supply factor (supply of labor) not influencing the piece-rate for any of the fancy products, even the lowest paid, because of the specialized technology, skill and surveillance required for the latter, possessed almost exclusively by urban weavers. This rural labor factor thus exerted additional downward pressure on the piece-rates of unis weavers, especially on the lowest in the category, without affecting minimum piece-rates in the fancy category. The apparently anomalous high correlation between EUN and EFN (Table 19) was -- assuming my interpretation was correct -- partially the effect of the two specialties' sharing in some of the same conditions of demand for labor, through related demand conditions in their respective product markets, but

partially also the effect of coincidence. The result of such exceptionally strong downward pressure on the piece-rates of weavers of plain cloths -- especially the least-paid weavers of étoffes unies, who were most easily replaced by unskilled rural labor -- was the observed radical dissociation of the minimum wage movements of EU and VU from the maximum wage movements of the same categories. These maximum wages were paid, for the most part, to the most skilled weavers in each plain-cloth category for manufacturing the better-quality unis, and these weavers were presumably less exposed than the minimum-wage plain cloth weavers to the competition of rural labor.<sup>78</sup>

The tendency of minimum wage movements to separate from maximum wage movements after 1865, both in the fabrique as a whole and within the separate cloth categories, was apparent in the relative levels of wages and not only in their relative movements from one trimester to the next. Graph 9 plots relative wage levels on a scale from 0 (lowest annual wage) to 1 (highest annual wage) for all twelve specialties. Except for maximum étoffes unies wages (black EU) after 1867, maximum châles wages (black C) in 1869-70, and maximum velours unis wages (black VU) in 1865, all maximum wages were higher than all minimum wages after 1865, regardless of the category for which they were maxima or minima. Before 1865, on the contrary, minimum wages of some categories were frequently higher than maximum wages of other categories, or vice-

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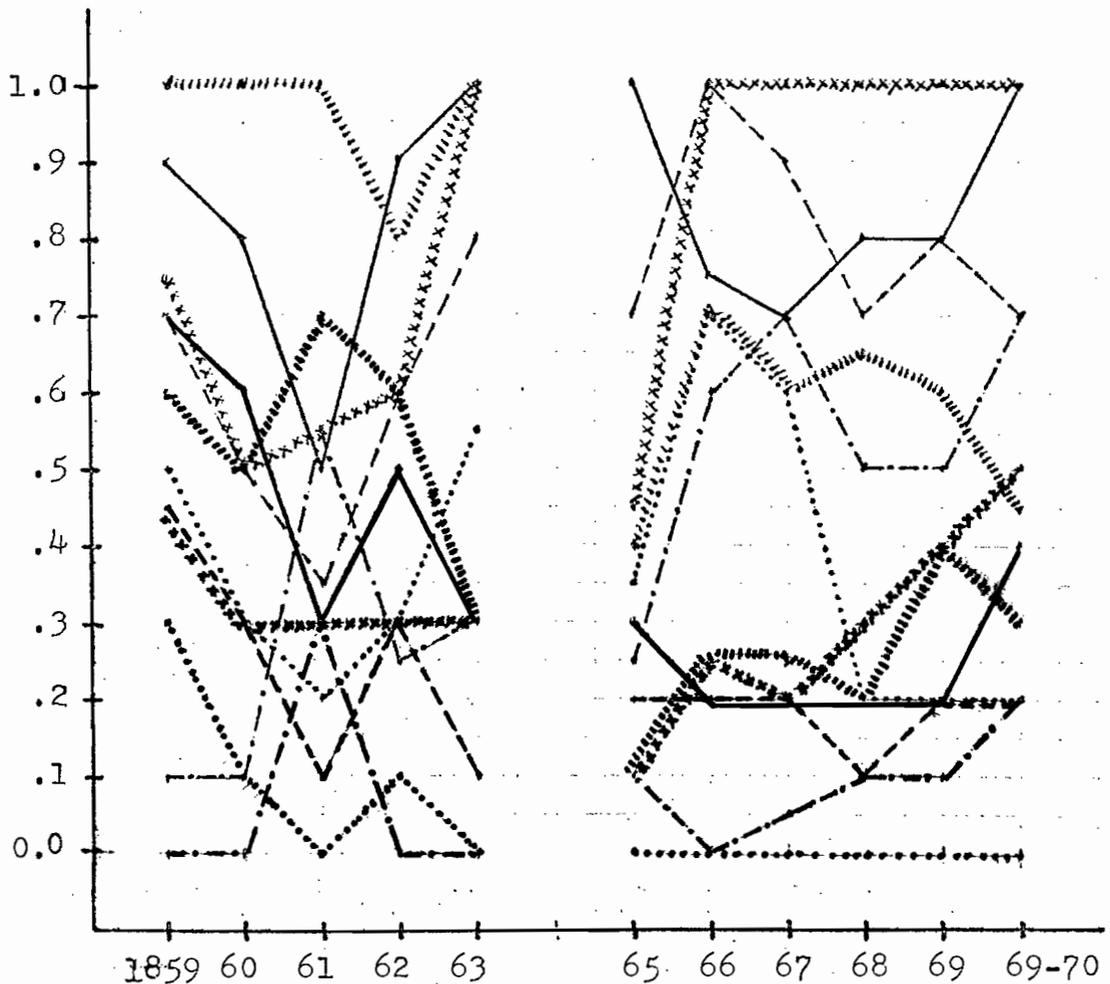
<sup>78</sup>This interpretation would require a certain modification for comparison of wage movements of plain-cloth categories -- étoffes unies and velours unis -- with wage movements of fancy-cloth categories châles, ornements d'église and velours façonnés. Not all of these were subject to the same product market as the étoffes façonnées and therefore not to the same conditions of demand for labor determining (in part) their respective wages.

versa. Thus again, as for wage movements, the more significant difference in wage levels after 1865 was the 'range' difference -- whether they were maximum wages or minimum wages in their category -- rather than the 'category' difference, the dominant distinguishing feature before 1865. Within the set of minimum wages or of maximum wages, however, the cloth category remained generally significant in determining a 'hierarchy' of wages after 1865 as well. Graphs 8 and 9 demonstrate this most effectively. Weavers of plain cloths of both categories, étoffes unies and velours unis, received more or less consistently the lowest of the minimum wages, or the lowest of the maximum wages, for their work; and weavers of the fancy cloths -- étoffes façonnées, velours façonnés, châles and ornements d'église -- nearly always received the highest wages within each range set.

The changes of wage movements and levels towards greater uniformity among the minimum wages and among the maximum wages of all categories tended to reduce the differences in compensation between plain-cloth weaving and fancy-cloth weaving in particular. Most of the fancy-cloth weavers had to weave the lower-paid 'common' fancy specialties throughout most of the decade, since these were, in general, the only fancy cloths demanded by the market. Their compensation was therefore not very different -- or at least not as different as in the past -- from that of many plain-cloth weavers in the industry. As their average wages fell to those of these plain-cloth weavers, their claim to superior status lost its 'objective' economic foundation. Such wage-based status strengthened, however, among the few, rarely-employed weavers of 'rich' fancies, whose piece-rates remained high or even increased. But theirs was not an exclusive claim, for the weavers of 'rich' plain cloths earned

Graph 9:

Average Daily Wages of Journeymen  
Silk Weavers in Lyons: Maximum  
and Minimum Wages in Each of  
Six Silk Cloth Categories  
(1859 - 1870)



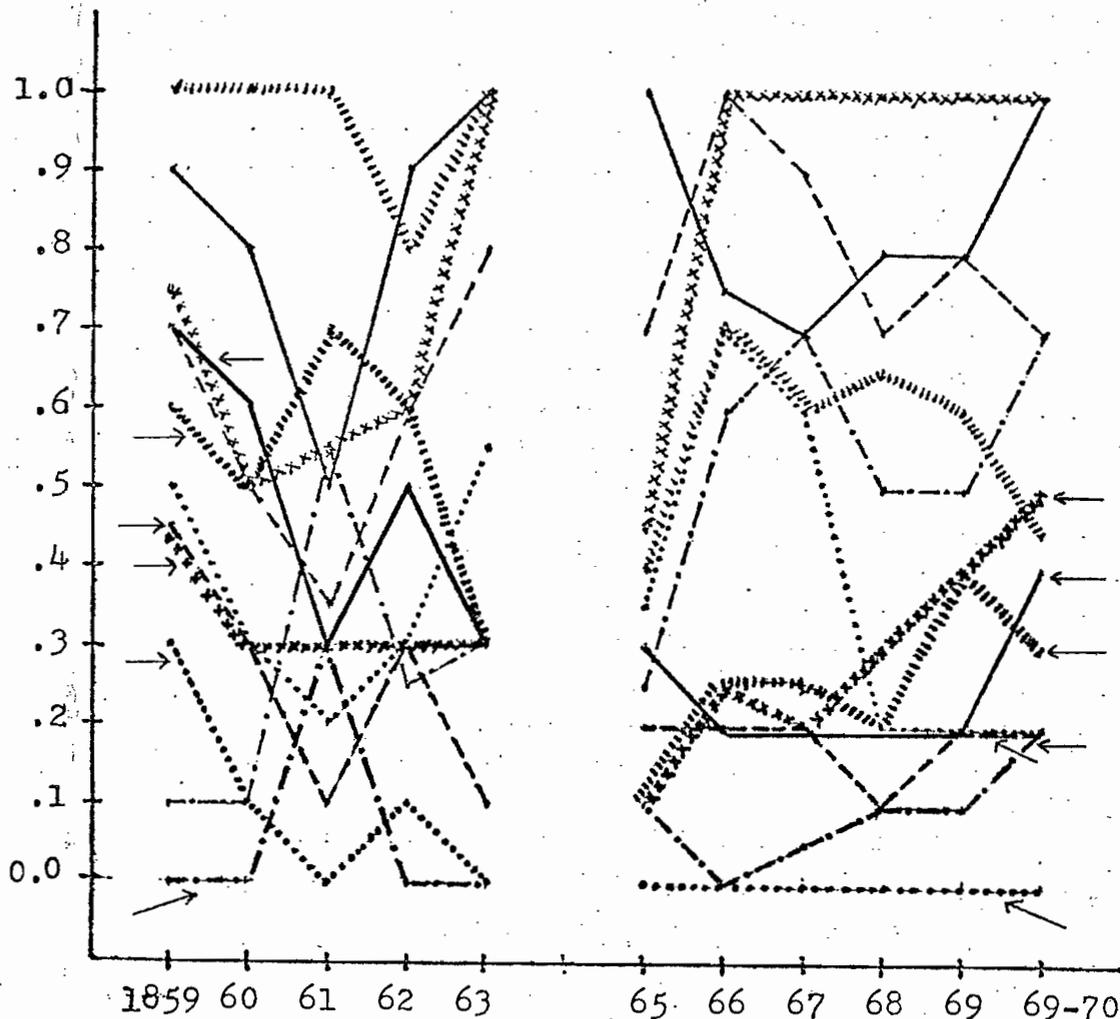
..... : EU - Etoffes Unies  
 - - - - - : EF - Etoffes Façonnées  
 - . - . - : VU - Velours Unis  
 x x x x x x : VF - Velours Façonnés  
 / / / / / / : C - Châles  
 ————— : OE - Ornements d'Eglise

Red: Minimum Wages  
 Black: Maximum Wages

Graph 9:

Average Daily Wages of Journeymen  
Silk Weavers in Lyons: Maximum  
and Minimum Wages in Each of  
Six Silk Cloth Categories  
(1859 - 1870)

Scaled Daily  
Wages



- ..... : EU - Etoffes Unies
- : EF - Etoffes Façonnées
- .-.-.- : VU - Velours Unis
- xxxxxxx : VF - Velours Façonnés
- //////// : C - Châles
- : OE - Ornements d'Eglise

Red: Minimum Wages (→)  
Black: Maximum Wages (Others)

not much less per piece than they, especially as compared with the past. In short, as wage movements and levels for the two traditionally different cloth categories, plains and fancies, converged, the solidarity of plain-cloth weavers and fancy-cloth weavers in a common craft became one based on similarity rather than on hierarchy of compensation.

C. The 'Vertical' Solidarity of Association: Ambivalent Themes and Forms

Such assimilation of wage movements and levels between plains and fancies weavers, and the equalization of their earnings because of different conditions of employment, together may explain why both experienced the crisis of the 1860's as a common trauma, despite their differing experiences of unemployment and rural competition. The effects of the crisis were the same, even if the causes were different. This community of experience may explain why the first new movement of association after 1860, the cooperative movement, was craft-wide rather than category-specific. The producers' cooperative, the Association of Weavers, especially avoided internal distinctions of weaving category. Its purpose was the preservation of the urban craft from extinction, an extinction threatening all categories alike, or at least so it seemed, viewing the crisis from its effects rather than from its causes. In this way, the cooperative movement recognized as its foundation the newer 'mechanical' form of 'vertical' craft solidarity, built upon similarity of economic situations.

Cooperation and, even moreso, industrial resistance, nevertheless continued to affirm the 'old' form of 'vertical' solidarity, based

on the traditional hierarchy of economic situations, and the distinctions among the cloth categories, based on the more recent separation of the economic conditions of the latter. Such affirmation was not entirely regressive. As the study of wage movements and levels indicated, the fancy categories étoffes façonnées and ornements d'église did not lose their category identity entirely. Wage movements within these categories were similar and conditions of employment were less different than between plains and fancies. Weavers in these two categories experienced the cycles of economic change together and in the same way, not in dislocated fashion, as within the plain velvet and plain silk categories. The status of the trained fancy-cloth weaver did not fall automatically, moreover, with the reduction of his wage. The struggle of association thus easily became a battle for the preservation of threatened status without losing touch with real economic and social conditions, when undertaken by fancy-cloth weavers or in the name of their traditional prestige within the craft. Not surprisingly, then, fancy-cloth weavers were especially prominent in the leadership of the cooperative movement, in the initiation of the resistance movement and in the major 'class struggle' undertaken by the weavers' resistance federation in 1870. Their prominence suggests that they regarded these movements as means of restoring not only the urban craft as a whole, and thus traditional 'horizontal' solidarity, but also of strengthening their status and restoring their superior compensation within the craft, reviving the traditional 'vertical' solidarity as well. In the weavers' own words (as reported by the police) "[n]othing but the return of the façonné ... would make the Croix-Rousse live as it should ..."<sup>79</sup>

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<sup>79</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies," March 8, 1868, AML, I2-47(B), No. 310.

Weavers of fancy silks, for example, were very active in the cooperative movement and dominated its leadership. Of the founders and first administrators of the consumers' cooperatives living in the Croix-Rousse in 1866, 58% had more Jacquard looms than plain-cloth looms, as compared with 34% of an unweighted sample of weavers in the eastern portion of the same section of the city, where the residences of cooperative and mutual-aid leaders were concentrated. The organizers and administrators of the Association of Weavers had the largest proportion of fancy-loom households -- 76%.<sup>80</sup> Clearly fancy-cloth weaving was a strong indicator of cooperative leadership, especially of leadership in the most 'advanced' form of cooperation -- that of production. Weavers of fancy silks became leaders because they, more than any other category of weavers in the fabrique, expected from cooperation the restoration of the dignity of their craft, and of their own distinction within the craft.

In the resistance movement, fancy-cloth weavers were prominent both as initiators and as the focus of the longest, most heavily financed strike. Furniture-cloth weavers, belonging to the category ornements d'église, negotiated the first increases in piece-rates with their employers following the economic recovery of 1869. They organized the first resistance society in August-September of that year, and even forced some of the recalcitrant fabricants in their category to accept piece-rate levels agreed upon by their colleagues. The plain-cloth weavers followed their lead, and their entry into the resistance

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<sup>80</sup>George Sheridan, "Idéologies et structures sociales dans les associations ouvrières à Lyon de 1848 à 1877," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, No. 2, 20-25, 42, 45.

struggle made it a mass movement.<sup>81</sup> Once organized into a resistance federation of several categories in the fabrique, the movement supported two major strikes -- that of the rural weavers of Isère, in March-April 1870, and that of the fancy-cloth weavers of Lyons, in June-July 1870. The latter was the most prominent, most widely-publicized action of the federation, lasting nearly two months. In this strike, the urban plain-cloth weavers of the resistance federation (SCPR) supported the traditionally 'superior' category of their craft.<sup>82</sup> The strike was hardly favored by the economic conditions of fancy-cloth weaving, which remained in the languished state that had afflicted it throughout the decade. The motivation for the fancy-weavers' defense of their tarif was therefore less the desire for a share in rising prosperity, as it had been in 1831, than the desire for the restoration of a wage consonant with their traditional status as skilled weavers. Support for their demand and for their action by the SCPR as a whole suggested the recognition of their 'superior' status by plain-cloth weavers as well. In other words, the strike recognized and affirmed implicitly the traditional solidarity of craft based on hierarchy of economic situation.

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<sup>81</sup>"Chronique locale," Le Progrès, October 24, 30; November 11, 17, 18; December 2, 1869; police reports concerning meetings of weavers of ornements de meubles, Levants and unis, August 28, 30; September 4, 23; November 8, 1869, AML, I2-47(B).

<sup>82</sup>See police reports to Special Police Commissioner and to Prefect of Rhône concerning strike and lock-out of fancy-cloth weavers, June 13 - August 2, 1870, AML, I2-47(B), Corporations: ouvriers en soie ... (1819 à 1870), Tisseurs façonnés; Ministère du Commerce, de l'Industrie, des Postes et Télégraphes, Office du Travail, Les associations professionnelles ouvrières (Paris: Imprimerie nationale, 1899 - 1904), II, 279-280.

The same recognition and affirmation of hierarchy characterized the resistance movement as a whole, which sought to restore piece-rates to the more hierarchical levels of 1859, before the crisis of the 1860's submerged wage differences among cloth categories into differences between maximum wages and minimum wages in general.<sup>83</sup>

A similar 'traditionalism' was evident in the emphasis placed by cooperative and resistance movements on the restoration of quality in cloth manufacture. Such emphasis was primarily a reaction against the subordination of qualitative norms to quantitative standards, rather than against the equalization of economic situations to which such standards were applied. Equality was accepted as long as it emerged out of an 'equal' respect for the quality of product for which Lyons was traditionally renowned. In the cooperative movement, the concern with quality was evident in the refusal of the Association of Weavers to load the silk threads put out to its weavers with foreign material during dyeing. Such loading cheapened the cloth at the expense of its durability, luster and 'genuineness' as silk fabric. For the tradition-minded weavers such a practice was harmful to the reputation of their industry and 'disloyal.' "I am told," wrote the police observer of the fabrique in June 1867, "that in the name of loyalty and in the interest of the entire fabrique, should this example be followed, the

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<sup>83</sup> Even though all negotiated piece-rates did not attain these 1859 levels, some categories managed to restore their minimum wages to levels appropriate to the quality of the cloth category. The weavers of ornements d'église, for example, secured raises in minimum wages for their specialty to a level above the maximum of weavers of étoffes unies, as one would have expected from the qualitative differences between the products of the two cloth categories. (See Graph 9, p.351, especially wages for '69-'70 on the graph.)

administrators of the Society of Weavers have committed themselves to not having this silk thread loaded in dyeing."<sup>84</sup> Since loading of silk thread also made it more susceptible to breakage during weaving -- a 'scourge' most common in the weaving of black étoffes unies -- this concern with quality defended the 'material' interests of plain-cloth weavers in the Association while affirming a traditional value dearest to the weavers of fancy silks who dominated the administration. In other words, quality of manufacture was a theme that united values and interests of plains and fancies weavers together and thus appealed at once to notions of 'vertical' craft solidarity embodying hierarchical and egalitarian elements. A similar concern for quality of manufacture joined the aspiration for equality, in this case equality of compensation, in the weavers' resistance movement. By "making all the fabricants pay the same piece-rate," the weavers hoped that "the buyer [would] thus be forced to choose only the best-made product."<sup>85</sup>

Whether hierarchical or egalitarian, the craft solidarity presumed and affirmed in these ways at least accepted the notion of the integral unity of the trade. Whether by clinging to the tradition of 'organic' solidarity or by following the new path to 'mechanical' solidarity, the silk weavers regarded their economic situation, destiny, and possibilities of responding to both as collective rather than individual. Yet, as this chapter has indicated, the economy of the silk

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<sup>84</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soie," June 8, 1867, AML, I2-47(B), Situation de l'industrie: rapports sur la soierie, No. 304.

<sup>85</sup>"Rapport à Monsieur Delcourt, ...," December 7, 1869, AML, I2-47(B), No. 315.

industry in fact separated the conditions of employment of the different cloth categories, especially those of fancies from those of plains; and, as Graph 2 (Chapter II) suggests, the economy presaged a different destiny for these two weaving categories. Demand for plain silk cloths continued to rise, while that for fancy silks continued to languish, or declined even more. This separation of conditions especially influenced patterns of collective organization in the resistance movement. In contrast to its predecessor of the early 1830's, the movement of the late Second Empire emerged out of the independent resistance and organization of the separate cloth categories and remained highly de-centralized even after the category societies united into a single resistance federation. In the late 1820's and early 1830's the Society of Mutual Duty, the first weavers' resistance organization, formed as an association of master-weavers of all categories of silk cloth and remained a highly centralized association throughout its most militant period. The resistance movement of 1869 - 1870, by contrast, began with the separate efforts of furniture-cloth weavers, weavers of Levant cloths and weavers of taffetas (unis) to negotiate wage increases with fabricants in their specialties and to organize chambres syndicales to enforce such wage increases as they were able to attain. In November 1869, the weavers of confection cloths, meeting separately for confection nouveauté and confection armures; the journeymen weaving grenandines unis; the popeliniers; and the weavers of crêpes de chine, tussah, fantaisie and grège, articles Gilet, plain velvets, and armures and fancies for dresses, each formed separate commissions and separate projects for rate increases to negotiate with fabricants putting out their particular brand of

cloth.<sup>86</sup> Several of these merged into one of the ten original 'categories' federated under the Société civile de prévoyance et de renseignements pour le travail des tisseurs de la fabrique lyonnaise (SCPR), organized in March 1870. Within this federation, each category retained much of its autonomy. Strike funds collected from membership dues remained within the séries into which the categories were divided, until the séries were taxed by the central administration to support a particular strike. The commission of the category retained its independence in negotiating piece-rates and called upon the central administration only for auxiliary support. The central committee of course made decisions concerning financial support for partial strikes by its members, but even in this capacity, the categories were represented by their delegates forming the committee. These were selected by their respective cloth categories, and each category had the same number of delegates.<sup>87</sup> The Société civile (SCPR) did not include, moreover, all cloth categories in the silk industry. The weavers of plain velvets formed their own resistance society, the Corporation des tisseurs de velours unis, ville et campagne. The Corporation des tisseurs de velours à deux pièces, originally the tenth category of the Société civile (SCPR), seceded from this

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<sup>86</sup> See police reports concerning meetings of different categories and specialties in 1869 - 1870, AML, I2-47(B), Corporations: ouvriers en soie.

<sup>87</sup> Titles II - IV, Société civile de Prévoyance et de Renseignements pour le Travail des Tisseurs de la Fabrique lyonnaise (Statutes, 1870), AML, I2-47(B), No. 953; report from Prefect of Rhône to Minister of Interior on societies and associations, April 5, 1874, ADR, IOM - 2, Associations des tisseurs. Société civile de Prévoyance et de Renseignements des Tisseurs.

federation in 1872 to form its own association.<sup>88</sup> The resistance movement of the late Second Empire was clearly much more de-centralized than its predecessors of the early July Monarchy, and much more sensitive to specific organizational identity based on particular 'category awareness.' It reflected, in short, the separation of economic conditions among the different cloth categories which was one of the most prominent features of the crisis of the 1860's in the silk industry of Lyons.

Thus, in their aspirations, policies and patterns of organization, the cooperative and resistance movements of the 1860's reflected the dual character of change in the 'vertical' solidarity of the silk weavers' craft. Such change included the dissociation of cloth categories, causing disintegration of traditional 'organic' solidarity, and the association of categories on a new basis, permitting the emergence of a new 'mechanical' solidarity. In their affirmation of craft unity, these movements appealed both to traditional sentiments in favor of hierarchy of weaving status and economic situation and to more recent notions recognizing the equality of earnings and the convergence of wage movements and levels. In their ideological and practical promotion of quality of manufacture in particular, these movements embraced hierarchical and egalitarian values together, with no apparent conflict of party or purpose. As in their joint appeal to city-centered and region-centered notions of 'horizontal' solidarity of craft, the ambivalent recognition and promotion of apparently

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<sup>88</sup>Office du Travail, Les associations professionnelles ouvrières, II, 280, 284-285.

inconsistent notions of 'vertical' craft solidarity caused no 'crisis' of ideology in these movements. Perhaps ambivalence was itself their only 'correct' or 'true' ideological stance during this period of economic and social transition.

## CHAPTER V

### The New Order of the Household

During the 1850's, the traditional order of the household dissolved. Seeing only disarray and conflict among masters, journeymen, apprentices and dévideuses, the silk weavers considered this dissolution a sign of the 'demoralization' afflicting their trade. The economic 'crisis' of the 1860's accelerated this destruction of the old 'internal order' of the household, to prune away all that could not persist in an economy of chronic unemployment, low piece-rates and standardization of cloth quality at 'inferior' levels. This pruning reduced the size, the employment of non-relatives and non-residents, the proportion of males and the entrepreneurial role of the master in the household economy. Since it affected especially the households which were traditionally large and strong in these respects -- those weaving fancy cloths -- this pruning made the social structure of the fancy-cloth households more similar to that of the plain-cloth households. What remained was a new kind of household economy and society -- small and intimate, intensely familial, feminine, 'artisanal' (as opposed to 'entrepreneurial'), and equal among the different categories of cloth manufacture. Associated with this new kind of household order was the menace of a new kind of 'demoralization' -- one that threatened not social order, based on authority and obedience, but virtue, based on the moral integrity

of the master-weaver in his relations with subordinates, especially with young female workers.

Just as the 'crisis' of the 1860's created the foundations of new forms of craft solidarity, even while it weakened or destroyed the old forms, so the 'crisis' replaced the old order of the household with a new order, while it carried even further the disintegration of the former. As in the transformation of craft solidarity, the weavers' movements of voluntary association also manifested this simultaneous destruction and creation of household solidarity, in their sense of collective purpose, in their organizational identity and in their collective action. Recognizing both the limitations and the possibilities of their new economic situation, the master weavers organized consumer cooperatives, for example, to economize by reducing household expenses rather than by maximizing household earnings. Recognizing the larger role of women in their trade, these consumers' cooperatives, some of the mutual aid societies and the resistance societies admitted female members, unlike most workers' associations in the past. Yet the same consumers' cooperatives also sought to restore to the master weaver his traditional entrepreneurial role in providing cheap food in his neighborhood, when that role was being taken away from him in the weaving of silk fabrics in his household. The moral ideology of association in the 1860's, moreover, tried to revive the traditional sense of moral integrity in household relations and thus to restore to household solidarity its traditional association with personal virtue.

This chapter will examine concretely and in detail the changes in household solidarity caused by the 'crisis' of the 1860's and the manifestation of these changes and their effects in the cooperative,

mutual aid and resistance movements of this decade. The changes themselves will be described, both statistically and verbally, as transformations of the economic and social structure of the household -- of its size (numbers of looms and persons), of the kin relations of its members, of their sexes and ages, and of the 'entrepreneurship' of its master. The statistical description uses a static comparison of household structure in 1847 --1851 with that in 1866, and the literary description includes impressions of contemporaries confirming, elaborating and explaining the statistical description. The chapter thus combines close inquiry into quantitative sources, constructing indices and using formal analytic techniques where necessary, with simple exposition of informal impressions. This combination seeks to capture the change in household order with closer precision than use of either method or source alone would allow. The chapter then examines the effects of these changes on the moral environment of the household and the manifestation of these effects in the cooperative and mutual-aid movements of the 1860's.

## I. Change in the Economic and Social Structure of the Household

### A. The General Pattern of Change

Change in the economic and social structure of the weavers' households during the 1860's had two prominent features. First, these were changes in certain economic and social characteristics of individual households. Such characteristics were the number and type of looms, the number of persons residing in the household, the kin relations of these persons to the head of the household, their sexes and ages and the level of 'entrepreneurship' of the household as indicated by the relationship of number of occupied looms to numbers of household residents of weaving

age. Second, these were changes in the degree of difference between households weaving plain silk cloths for the most part, and those weaving primarily fancy cloths, as this difference was 'measured' by the same economic and social characteristics. In other words, these were changes in 'plain-loom households' (as the first will be called throughout this chapter) as compared with 'fancy-loom households' (as the second will be called), and not only in the numbers and 'qualities' of looms and persons in the average individual household.

The most prominent observable changes of the latter sort -- those in the average individual household as indicated by the majority of households in the statistical samples -- were the following: the substitution of plain looms for fancy looms (a change discussed at length in Chapter IV), the decrease in the average number of looms and persons per household (that is, in household size), the familialization of the co-resident and working household, a greater feminization of the co-resident household (in 1866 as compared with 1847), an increase in the proportion of young children (under 14 years of age) and adults (aged 21 and over) at the expense of adolescents (aged 14 to 20 years), and a decline in the level of 'entrepreneurship' of the household. The substitution of plain looms for fancy looms made these households economically 'simpler' in terms of the quality of cloth they wove. The reduction in size and the familialization of the households made them more intimate. Feminization combined with changes in age balance made the households more malleable economically, and the decline in entrepreneurship made them more 'artisanal' in the sense described in Chapter I.<sup>1</sup>

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<sup>1</sup>Chapter I, section I - B - 1.

These various tendencies were more or less intense, and sometimes even contradictory, in some types of households as opposed to others, when such types were defined by the same traits used to describe the structure of the average individual households. In particular, changes in households weaving fancy cloths primarily (changes in the characteristics noted above) were much more intensive than changes in predominantly plain-loom households. In one instance, that of age balance, fancy-loom households changed in a different direction than plain-loom households -- a direction favoring a reduction in the proportion of children and a preservation of that of adolescents. The major consequence of these differences in changing social structure was an equalization, or 'standardization,' of structure between the two loom-types of household, very much like the 'equalizing' effect of different conditions of employment for the two categories of weavers on their respective economic situations.

Table 20 summarizes this standardization of household structure. The table shows how strongly the two loom-types of household were very different in 1847, with respect to the several social and economic characteristics discussed, and very similar in 1866. In 1847, plain-loom households had fewer looms and persons, many more relatives and females than fancy-loom households. The latter were largely populated, well-endowed with looms, and employed mainly males not related to the master-weaver, thus making these households very 'entrepreneurial.' By 1866, however, both plain-loom households and fancy-loom households were small, in terms of numbers of looms and persons, strongly familial and 'artisanal,' and comprised largely of females. Their similarity was largely the result of a major transformation of the fancy-loom households, towards the traditional plain-loom type, since the changes in plain-loom

Table 20

Changes in the Social and Economic  
Characteristics of a Typical  
Silk-Weaver's Household from  
1847-51 to 1866

	Traditional State (1847-51)	Direction of Change Relative to Tra- ditional State (1847-51 to 1866)	New State (1866)
<u>Plains Households</u>			
Number of Looms	Few		Few (But More)
Number of Persons	Few	↕ (Small)	Few
Kin Relations			
- Residents	Familial	↗ (Small)	Familial
Kin Relations			
- Workers	Familial	Same	Familial
Residency of Labor	Resident	↕ (Small)	Resident
Sex	Feminine		Feminine (Less)
Age	?	Less Adolescent	Strong Child, Weak Adoles- cent, Mild Adult
<u>Fancies Households</u>			
Number of Looms	Many	↘	Few
Number of Persons	Many	↘	Few
Kin Relations			
- Residents	Non-Familial	↘	Familial
Kin Relations			
- Workers	Non-Familial	↘	Familial
Residency of Labor	Resident	↘ (Small)	Resident (Less)
Sex	Masculine	↘	Feminine
Age	?	Less Child, More Adult	Mild Child, Mild Adoles- cent, More Adult

households were practically negligible. The only difference between the two loom-types of household in 1866 was their age balance. Plain-loom households had very few adolescents, many children and a modest though significant number of adults. Fancy-loom households, by contrast, had

more adolescents, many more adults and fewer children, than plain-loom households.

The following sections analyze separately and in greater detail the changes in household size and kin relations, in sex and age balance within the household, and in its degree of 'entrepreneurship.' In each section, the changes in plain-loom households are separated from changes in fancy-loom households and compared with the latter. The statistical analysis of these changes uses samples of silk-weavers' households for 1847, 1851 and 1866 to describe changes from the early, or 'traditional,' period (1847 - 1851) to the later, or 'novel,' period (1866). The samples are taken from fiscal and population censuses of the most concentrated weavers' district of the city, the Croix-Rousse (Fourth Arrondissement after 1852). Weavers' households of the Croix-Rousse in 1866 will be compared with weavers' households in the same area, in 1847 and 1851. The fiscal census of the Croix-Rousse will provide the data for the study of these households in 1847, and the population census of the same district will do the same for 1851 and 1866. To ease somewhat the task of data collection and analysis, stratified systematic samples of weavers' households in the same quarters of the Croix-Rousse were used for all three years. The samples were stratified according to the geographical distribution of residences of members of associations, for the examination of which this study was intended as a prelude. (See Appendix V.) The censuses permit an examination of the novelty of weavers' households in 1866, or the lack thereof, in the major economic and social characteristics of interest -- the number and type of looms, the number and 'qualities' of persons living in the household (sex, age and kin relation to head), and the extent of

possible 'entrepreneurship' on the part of the master-weaver in allocating looms among the household labor force.

The censuses of 1847 and 1866 both provide detailed information concerning the number and type of looms in each household (uni, façonné, velours, passenterie, bas and tulle), and the state of activity of these looms (occupied or unoccupied). The information is comparable, except for the types of unoccupied looms, which is specified in 1866 but not in 1847.<sup>2</sup> Both also provide comparable data on the number and sexes of persons in each household and their kin relation to the head of the household, at least given certain assumptions. Children of the head are clearly identified in both cases. Non-child relatives, such as co-resident parents or siblings of the head or his spouse, are strongly suggested in the 1866 census by the rule of listing the original surname (that is, surname before marriage, which would be the maiden name of the wife) of each person in the household. This rule permits matching of surnames of residents with those of the head and spouse to identify non-child kin. The 1847 census does not list surnames of any member of the household other than the head but does classify parents of head or spouse and sometimes other non-child kin in a separate category. Non-relatives are suggested as household members whose surnames do not match those of the head or his wife in the 1866 census, or as members not classed as kin in 1847. The major sources of error in following this method of determining kin relations are, in 1866, that of missing some distant

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<sup>2</sup>This is not a very serious deficiency, however. The proportion of households in the 1847 sample with all looms unoccupied was very small (5%), the proportion with all or most looms occupied was larger than in the 1866 sample (72% in 1847 as compared with 56% in 1866), and a negligible proportion of households in both samples gives evidence of combining loom-types in a single shop (6% in 1847, 4% in 1866), so that chances of missing significant loom-types in the unoccupied category of the 1847 sample are rather small.

relatives with an apparently alien surname, or that of identifying a merely coincidental surname match as a kin relation, and, in 1947, that of missing kin relations classed under another category, such as apprentice or journeymen. In the first case, the likelihood of error is small, because of the care of census-takers in noting exact kin relations when these were not immediately obvious. The likelihood of errors in the second case (1847) is much greater, so that in making comparisons of the two periods in matters of kinship the possibility of such error must be accounted and, where possible, alternative sources with more accurate kinship information (such as the census of 1851) must be used as a check.

The censuses of 1847 and 1866 do not provide information as broadly comparable for the ages of household members. The census of 1847 lists only the age of the head and the age group of his or her children (less than 10 years of age or greater than or equal to 10). The census of 1866, however, provides the exact age of each member. Since the official format of this census is the same as that of 1851, the sample from the latter can be used to study the change in age structure of the household, between the beginning of the Second Empire and 1866. The same 1851 census lists surnames of each member and therefore is, strictly speaking, more comparable than the 1847 census to the 1866 census for the question of kinship as well. Its utility for this more important question, as we shall see later, is much reduced, however, by the lack of any loom data in 1851. The 1847 census, moreover, also specifies the state of non-child members of the household (apprentice or journeyman), which compensates somewhat for the lack of precise age data.

The census samples of the Croix-Rousse in 1847, 1851 and 1866 thus

provide a static comparison of the loom and person characteristics of co-resident households for two separate periods -- before and at the beginning of the changes in demand and production patterns under the Second Empire (1847, 1851), and at the nadir of the crisis of the 1860's in which those changes reached a climax (1866). Because of the static quality of my sources, short and long-term effects are almost impossible to distinguish. The value of the statistical evidence which follows will be therefore more illustrative than demonstrative. Because the unit of observation is the co-resident household, moreover, most personal characteristics of non-resident workers are beyond observation. Comparison of the total active and inactive looms with the number of household residents of weaving age does permit, however, a precise statement of the minimum limits of self-sufficiency of the co-resident group for the work of the household. Such comparison provides the basis for the construction of an index of 'entrepreneurship,' which will be used for the study of that question.

#### B. The Intimate Foyer: Small and Familial

In the early 1870's, the merchant-manufacturers Faye and Thevenin of Lyons noted, in a questionnaire concerning the weavers of the city, that among "the household shops which they employ there are few where there is more than one outside worker..."<sup>3</sup> The same fabricants remarked that the average number of children per household was: "one or two,"<sup>4</sup> and

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<sup>3</sup>"[Réponses de] Mrs. Faye et Thevenin F[abric]ants de soieries à Lyon (Rhône)," Enquête Parlementaire Sur les Conditions du Travail en France (Rhône, 1872 - 1875), Troisième Questionnaire C, XXII, AN, C 3021, Enquête sur les Conditions du Travail en France (1872 à 1875), Région du Sud-Est (Rhône).

<sup>4</sup>Ibid., Troisième Questionnaire C, XIX.

the Chambre Syndicale des Soieries (a professional association of merchant-manufacturers of Lyons), responding to the same question, estimated this number at "two or three" at most and "tending to decrease."<sup>5</sup> The impression of the silk-weaver's household given by these responses was that of a small, familial foyer of life and work.

The more precise estimates of household size and kin relations derived from the census samples give the same impression in 1866 and also suggest a significant change in these respects from 1847. In 1866, the average number of members of the household other than head and spouse was 1.95 (based on a sample of 104 households). This was about 28% less than the average 2.72 household members in 1847 (based on a sample of 148 households). In other words, between 1847 and 1866, the average personal size of the household had declined. This diminution was primarily the result of a reduction in the number of non-relatives (in relation to the head of the household) from an average of 1.81 members to 1.15 members (- 36%). The number of relatives also fell but to a smaller extent -- from 2.00 members to 1.77 members (- 11%). Although the average number of relatives had been larger than the average number of non-relatives both in 1847 and in 1866, the more severe decline in the latter widened the distance between the two on the average. In other words, the reduction in household size between 1847 and 1866 was largely the effect of a familialization of resident members of the household.

Table 21 demonstrates this familialization by classifying households according to the number of non-relatives to the head (Nonrel) as

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<sup>5</sup>"Réponses de la Chambre Syndicale des Soieries de Lyon," Enquête Parlementaire, Troisième Questionnaire C, XIX, ibid.

compared with the number of relatives to the head, including children and non-child kin (Rel), and then distributing all households in the sample over the categories defined by such classification (Kin-Type of Household). Between 1847 and 1866, the proportion of households

Table 21

Distribution of Silk-Weavers' Households by  
Kin Relation of Members (Other Than  
Spouse) to Head of Household, Croix-Rousse  
Sample (1847, 1866)

Kin-Type of Household	1847		1866	
	Number of HH's	% A	Number of HH's	% A
Nonrel only	34	23.0	15	14.4
Nonrel > Rel	22	14.9	3	2.9
Nonrel = Rel	26	17.6	12	11.5
Nonrel < Rel	14	9.5	9	8.7
Rel only	<u>52</u>	<u>35.1</u>	<u>65</u>	<u>62.5</u>
Total HH's (A)	148	100.1	104	100.0
		% B		% B
Nonrel=Rel=0	<u>30</u>	<u>16.9</u>	<u>36</u>	<u>25.7</u>
Total HH's (B)	178		140	

Sources: Sample, Recensement, Croix-Rousse, 1847, AML.  
Sample, Dénombrement, 1866, Lyon, 4ème Canton,  
ADR, 6M-Dénombrement.

with one or more non-relatives declined from 65% to less than half (37%), while the proportion of households with children or other kin increased from less than half in 1847 to 62%. The number of households with no members besides the head and spouse (Nonrel=Rel=0) also increased over the same period. Co-resident households became more familial, in short. Comparison of the 1866 sample with that of 1851, for which kinship information is more certain, generally confirms this familialization of the household. Although the percentage of households in the 1851 sample

with more relatives than non-relatives (out of a total of 175 households) was nearly the same as that in 1866 (70% in 1851, as compared with 71% in 1866), the proportion of households with more non-relatives than relatives decreased (from 24% in 1851 to 17% in 1866) and the proportion of households with no. members besides head and spouse, therefore entirely familial, increased (from 17% in 1851 to 26% in 1866).

Familialization and reduction in size of the weavers' households affected both plain-cloth and fancy-cloth categories alike. There were, however, some important differences between the two categories. Table 22 summarizes the changing distribution of households classed by kin relation to the head, separately for plain-loom households (here defined as those households in which the number of plain looms was greater than the number of fancy looms) and for fancy-loom households (those in which the number of fancy looms exceeded the number of plain looms). Table 23 does the same for household size.

Table 22

Distribution of Weavers' Households,  
by Loom Type and by  
Kin Relations of Members to Head  
Croix-Rousse Samples (1847, 1866)

Kin-Type of Household	Plain-Loom Households		Fancy-Loom Households	
	1847	1866	1847	1866
a. <u>Number of Households</u>				
Nonrel only	10	10	21	4
Nonrel > Rel	3	2	17	-
Nonrel = Rel	2	5	20	6
Nonrel < Rel	2	6	11	1
Rel only	<u>23</u>	<u>40</u>	<u>23</u>	<u>22</u>
Total HH's	40	63	92	33
b. <u>Percentage of Total Households</u>				
Nonrel only	25.0	15.9	22.8	12.1
Nonrel > Rel	7.5	3.2	18.5	0.
Nonrel = Rel	5.0	7.9	21.7	18.2
Nonrel < Rel	5.0	9.5	12.0	3.0
Rel only	<u>57.5</u>	<u>63.5</u>	<u>25.0</u>	<u>66.7</u>
	100.0	100.0	100.0	100.0

Sources: Ibid.

Table 23

Average Number of Members per  
Weaver's Household (Other Than  
Head and Spouse), According to  
Loom Type of Household

	Plain-Loom Households			Fancy-Loom Households		
	1847	1866	% Change	1847	1866	% Change
Average Members	1.97	1.94	- 1.5	3.06	1.76	- 42.5
Average Rel	1.83	1.79	- 2.2	2.14	1.62	- 24.3
Average Nonrel	1.47	1.17	-20.4	1.88	1.00	- 46.8

Sources: Ibid.

Both tables indicate a clear difference between the two loom-types of household with regard to changes in kin relation and size. Although familialization and reduction in household size occurred in both types, the movement in these two directions was notably stronger and more significant in the fancy-loom households. As Table 22 shows, plain-loom households were largely familial both in 1847 and in 1866. The major change between the two dates was simply the reduction in the proportion of households with non-relatives only, or with more non-relatives than relatives. The proportion of households with relatives only increased, but not very much -- only by six percentiles. Fancy-loom households, on the other hand, were relatively non-familial in 1847. In that year, 41% of the households had more non-relatives than relatives, against 37% with more relatives than non-relatives. In 1866, however, these proportions were reversed -- 12% with more non-relatives against 70% with more relatives. More to the point, the proportion of fancy-loom households with relatives alone jumped from 25% in 1847 to 67% in 1866. Because of these shifts in the fancy-loom households, the difference between these and plain-loom households, in proportions of households with relatives alone as against households with at least one non-relative, were negligible in 1866, whereas such differences had been very large indeed in 1847. Weavers of fancy cloths, on the average, took on co-resident non-relative labor as little as weavers of plain cloths in 1866, whereas in 1847 they tended to take on significantly more non-relatives than the plain-cloth masters.

Table 23, describing changes in average personal size of households, tells the same story for the number of household residents. In

1847, the number of persons per household in all categories -- total persons (other than head and spouse), relatives and non-relatives, was significantly larger in fancy-loom households than in plain-loom households. In 1866, the average household size of the former was clearly less than in the latter. The decline for fancy-loom households was largest for the non-relative category, but in all three categories, the percentage decline was greater, and the resulting average levels smaller, in 1866 for fancies households as compared with plains households. The overall effect was, again, a rapprochement between the personal sizes of fancy-loom households and plain-loom households.

The reduction in average household size and the concentration of this change in the fancy-loom households was also evident in the 'loom-size' of the household -- its economic capacity, or scale, as measured by the number of looms. As Table 24 below illustrates, the average number of looms per household declined between 1847 and 1866.

Table 24

Number of Silk Looms per Household  
Croix-Rousse Samples  
(1847, 1866)

Number of Looms per Household	<u>All Households*</u>		<u>Plain-Loom</u> <u>Households</u>		<u>Fancy-Loom</u> <u>Households</u>	
	<u>1847</u>	<u>1866</u>	<u>1847</u>	<u>1866</u>	<u>1847</u>	<u>1866</u>
<b>a. <u>Number of Households</u></b>						
1	16	18	12	16	4	2
2	49	47	25	34	22	11
3	50	43	9	25	38	16
4	34	19	3	5	28	13
5	4	2	-	1	3	1
6	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>
Total HH's	154	129	49	81	96	43
<b>b. <u>Percentage of Total Households</u></b>						
1	10.4	14.0	24.5	19.7	4.2	4.7
2	31.8	36.4	51.0	42.0	22.9	25.6
3	32.5	33.3	18.4	30.9	39.6	37.2
4	22.1	14.7	6.1	6.2	29.2	30.2
5	2.6	1.6	0.	1.2	3.1	2.3
6	<u>.6</u>	<u>0.</u>	<u>0.</u>	<u>0.</u>	<u>1.0</u>	<u>0.</u>
	100.0	100.0	100.0	100.0	100.0	100.0
<b>c. <u>Average Number of Looms per Household</u></b>						
	2.77	2.53	2.06	2.27	3.07	3.00

Sources: Sample, Recensement, Croix-Rousse, 1847, AML.  
Sample, Denombrement, 1866, Lyon, 4eme Canton,  
ADR, 6M-Denombrement.

\* Includes households with 'varieties' -- plain looms and fancy looms together and/or with other type looms, such as velvet or shawl looms

Households with 1, 2 or 3 looms represented a larger proportion of the sample in 1866 as compared with 1847, while those with 4, 5 or 6 looms represented a much smaller proportion. This decline reflected in particular the smaller proportion of fancy-loom households in the total sample in 1866, as well as a certain decline in the number of fancy looms per household. This is seen more clearly in the respective averages for plain-loom households and for fancy-loom households. The average number of fancy looms per household declined only 2% (3.07 to 3.00 looms per household), and yet remained higher than the average number of plain looms per household. The latter increased by 10% (2.06 to 2.27 looms per household). The overall decline in households with looms of all types (9%, from 2.77 to 2.53 looms per household) -- composed largely of the plain-loom households and of the fancy-loom households -- was therefore mainly the effect of the larger proportion of plain-loom households, with fewer looms on the average than fancy-loom households, in the 1866 sample as compared with the 1847 sample. As the detailed distribution demonstrates more clearly, the most significant change in number of looms, on a household-by-household basis, was the rather large increase in the number of three-loom plain-cloth households, at the expense of the smaller two-loom and one-loom households. This reflected both the increasing opportunities for loom 'accumulation' in the weaving of plain cloths and probably also the greater wealth of a larger proportion of plain-cloth weavers than in the past, many of whom were former fancy-cloth masters who shifted to unis when the demand for their more elegant product declined. Although the data is silent on the matter, these plain-cloth weavers were perhaps among the more-skilled, better-paid of their category whose wages, as we saw earlier, tended to move at a

level and in concordance with the maximum wages in the fabrique as a whole. They were also less likely than the smaller households to depend on the cloth orders of a single merchant-manufacturer<sup>6</sup> and more likely to consider employing outside labor, as the master-weaver Weichmann had suggested in 1850.<sup>7</sup> Although the majority of plain-cloth households remained at the relatively dependent, familial, probably low-paid one or two-loom level -- and most fancy-cloth households remained at the opposite end of the spectrum, with three or more looms per household -- the development of an important 'transitional' three-loom category among plain-cloth households, the proportion of which was near that of fancy-cloth households in the same category, reduced some of the potential wealth and income differential between plain-cloth and fancy-cloth weaving (using number of looms as a proxy for both). In other words, in their numbers of looms as in their numbers and kin relations of household residents, fancy-loom households became more similar to plain-loom households by 1866, whereas twenty years earlier, the two types of households had been quite different.

The reasons for the rapprochement of the two types were quite simple. The decline in the number of fancy looms per household was the result of great unemployment and instability in the fancy-cloth category in the 1860's. Extra looms in the household beyond three or four were likely to lie idle for years and simply forced up rents and taxes for the larger shop to house them. For the same reasons, the number of persons in fancy-loom households decreased, and these households became more familial. Less labor was needed because of the reduced demand

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<sup>6</sup>Chapter I, section I - C.

<sup>7</sup>Chapter I, section I - B - 1.

for fancy cloth, and the costs of taking on nonrelative 'transitional-state' labor were so high in this period of long and frequent inactivity as to cancel the advantages of exploiting this labor in the manner described in Chapter I.<sup>8</sup> The weaver's family supplied his necessary labor at lower cost, and he hired outsiders on a short-term basis to occupy additional fancy looms when the market warranted this. Inversely, the number of plain-cloth looms increased in the households, as noted before, because the demand for plain cloths was more stable and because some plain-cloth weavers had accumulated small fortunes in fancy-cloth weaving at a previous time, with which they purchased a relatively large number of plain-cloth looms.

The small, familial household-shop thus became typical of the internal order of life and work for nearly all weavers of the fabrique, regardless of their cloth category. In an economic sense, this household type preserved for the master weaver a certain autonomy of the work process, but at the cost of reducing the size of his enterprise. It enabled him to economize in his household budget by reducing shop costs, for this, as we saw in Chapter I, was the primary contribution of family labor to net earnings;<sup>9</sup> but it limited his revenues to the smaller capacity of looms and labor that the family could provide. In a social and moral sense, this new household type restricted affective solidarity based on lodging together, to relations among blood kin, more than in the past. Instead of promoting an extension of the bonds of paternal and filial attachment to non-relatives 'adopted' as resident workers, the weaver's

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<sup>8</sup>Ibid.

<sup>9</sup>Ibid.

household strengthened the 'natural' identification of affective solidarity with blood relations and isolated the family, socially and morally, from outsiders. The household-shop became a more intimate foyer than in the past, but the bonds of intimacy were exclusive and biological rather than expansive and 'social.'

### C. The Malleable Foyer: Feminine and Young

Examination of the sex and age balance of the household residents refines this image of the exclusive, intimate foyer with that of a 'malleable' foyer, that is, a foyer capable of adapting its living standards and working conditions to changing and often adverse economic circumstances. Such malleability derived largely from the feminization of household residents and, to a lesser extent, from changes in the age balance of the household giving its younger members a more prominent position. Since females and youth were generally easier to 'exploit' than males and adults, these changes made the household more adaptable to external circumstances, favoring, as much as possible, the interests of the master weavers at the same time. Feminization affected the non-relative segment of the household as well as the relative segment and therefore made more malleable even those households that were less familial. As in the case of household size and kin relations, these changes were most notable in fancy-loom households and had the effect of making the latter more like plain-loom households in sex and age characteristics.

The feminization of the silk-weavers' households was evident in the early 1870's, as responses of contemporaries to the parliamentary enquiry on working conditions suggested. In its general observations

on the weavers of the fabrique, for example, the Chambre Syndicale des Soieries noted that "the worker called journeyman working on the loom of the master weaver is composed 2/3 of women and girls."<sup>10</sup> The census sample for 1866 made a similar case for the change in sex balance of households since 1847. Table 25 summarizes data concerning sex distributions for all households considered together and for plain-loom households and fancy-loom households considered separately.

Table 25

Distribution of Weavers' Households,  
by Loom Type and by Sex  
of Members  
Croix-Rousse Samples (1847, 1866)

Sex Balance of Household	All HH		Plains HH		Fancies HH	
	1847	1866	1847	1866	1847	1866
a. <u>Number of Households</u>						
Males only	38	25	10	13	23	8
Males > Females	22	12	1	8	17	3
Males = Females	26	15	4	9	18	6
Males < Females	27	8	10	5	17	1
Females only	<u>35</u>	<u>44</u>	<u>13</u>	<u>28</u>	<u>17</u>	<u>15</u>
Total Households	148	104	38	63	92	33
b. <u>Percentage of Total Households</u>						
Males only	25.7	24.0	26.3	20.6	25.0	24.2
Males > Females	14.9	11.5	2.6	12.7	18.5	9.1
Males = Females	17.6	14.4	10.5	14.3	19.6	18.2
Males < Females	18.2	7.7	26.3	7.9	18.5	3.0
Females only	<u>23.6</u>	<u>42.3</u>	<u>34.2</u>	<u>44.4</u>	<u>18.5</u>	<u>45.5</u>
	100.0	99.9	99.9	99.9	100.1	100.0
c. <u>Percentile Change from 1847 to 1866</u>						
Males only	- 1.7	- 5.1	- 5.7	+ 4.4	- 9.8	- 10.2
Males > Females	- 3.4	+ 10.1	+ 3.8	- 1.4	+ 11.5	+ 18.7
Males = Females	- 3.2	+ 8.2	- 18.4	- 8.2	- 15.5	+ 27.0
Males < Females	- 10.5	+ 18.7	+ 10.2	+ 27.0		
Females only	+ 18.7					

Sources: Ibid.

<sup>10</sup>"Réponses de la Chambre Syndicale des Soieries de Lyon," Enquête Parlementaire, Premier Questionnaire A, Observations, AN C 3021.

The table indicates an increase in the percentage of females residing in the weavers' households from 1847 to 1866. As section c. of the table illustrates best, the percentage of predominantly female households (categories Males < Females and Females only) increased between the two years, while the percentage of largely male households (categories Males > Females and Males only) decreased. The first set of households (predominantly female) therefore represented not only a greater percentage of total households in the 1866 sample than the second set (predominantly male households), but the proportion by which the first exceeded the second was much greater in the 1866 sample than in the 1847 sample.

Such feminization affected fancy-weavers' households more than those of plain-cloth weavers. Fancy-cloth weaving had been traditionally more strongly male than female, plain-cloth weaving more strongly female than male. In 1847, 43% of fancy-loom households were predominantly male, as compared with 37% predominantly female and 20% Males = Females. More than half of the predominantly male fancy-loom households (25 percentiles of the 43%) had no females at all. In the same year, however, only 29% of plain-loom households were predominantly male, as compared with 60% predominantly female and 10% Males = Females. By 1866, the sex balance of fancy-loom households reversed, on the average, in favor of the predominantly female households. Only 33% of fancy-loom households were predominantly male in that year, as compared with 48% predominantly female. In the plain-loom households, the traditionally strong female position weakened somewhat, so that only 52% of the plain-loom households in the sample were predominantly female, as compared with 33% predominantly male. The trend in favor of a larger proportion of predominantly-female households among weavers as a whole -- a trend here called 'feminization'--

was thus the combined effect of a significant increase in the proportion of traditionally more feminine plain-loom households in the sample and a significant shift of fancy-loom households to a more feminized state, making these more like plain-loom households in their sex balance. This latter shift consisted especially of a wholesale replacement of males by females in nearly half of the fancy-loom households in 1866, thus increasing the percentage of all-female fancy-loom households by 27 percentiles over the 1847 proportion. Nearly half of the fancy-loom households (45%) had only females (besides the master-weaver head), and nearly all of these households (89%) could rely on their resident members to occupy all active looms, as will be demonstrated in the next section. (See Table 31, pp. 409-10) These facts together suggest that women wove on the fancy-cloth looms more than in the past, and were not merely confined to auxiliary tasks, just as more men were forced to work plain-cloth looms than before 1860. This was indeed the most significant feature of the feminization of the weavers' households during the 1860's, for, as Chapter III demonstrated,<sup>11</sup> the substitution of female compagnonnes for journeymen had occurred in many plain-loom households during the 1850's and even earlier. The importance of this change in sex roles for fancy-cloth weaving should not be exaggerated, however. The fancy silks demanded by the market in the 1860's were not the richly-wrought, skillfully-executed dresses of the past, but rather the simple fancy ornaments and nouveautés. Some, if not all, of these female fancy-cloth weavers probably wove plain silks on the fancy looms as well, since the demand for plain silks was more constant and fancy looms were technically capable of weaving them.

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<sup>11</sup>Chapter III, section I - C - 1.

The feminization of fancy-cloth weaving was therefore not so much an important economic or technological (skill-related) change as a change in the status of these female weavers and of the skilled male fancy weavers, who were long accustomed to consider most females in their specialty as auxiliary workers rather than as weavers.

The change in age balance in weavers' households from the earlier to the later period is somewhat more difficult to trace. Because of the lack of precise information concerning ages in the 1847 census, the census of 1851 is used instead for the earlier period. Unfortunately, the latter census does not distinguish between plain-loom households and fancy-loom households, as does the census of 1847. Plain-loom households and fancy-loom households are therefore compared respectively with the aggregate distribution of the 1851 sample rather than with their corresponding plains and fancies households of that year. This is a much less satisfactory method of examining changes in the separate loom-types of household but is the best possible given the lack of loom data in 1851. Table 26 summarizes these data.

Table 26

Distribution of Weavers' Households by Loom Type and  
by Age of Members. Croix-Rousse (1851, 1866)

% of HH Members In This Age Group	Children (Ages 1 - 13)				Adolescents (Ages 14 - 20)				Adults (Ages 21 and Over)			
	1851		1866		1851		1866		1851		1866	
	All HH	Plains HH	Fancies HH		All HH	Plains HH	Fancies HH		All HH	Plains HH	Fancies HH	
	a) <u>Number of Households</u>											
0	53	45	16	19	59	66	36	16	74	53	23	16
1-49	19	8	3	2	33	13	3	4	25	8	4	2
50	15	11	7	2	16	9	4	4	13	9	5	2
51-99	19	8	4	3	12	3	1	1	6	6	2	0
100	31	30	16	5	17	11	2	6	19	26	12	11
TOTAL	137	102	46	31	137	102	46	31	137	102	46	31
	b) <u>Percentage of Total Households</u>											
0	38.7	44.1	34.8	61.3	43.1	64.7	78.3	51.6	54.0	52.0	50.0	51.6
1-49	13.9	7.8	6.5	6.5	24.1	12.7	6.5	12.9	18.2	7.8	8.7	6.5
50	10.9	10.8	15.2	6.5	11.7	8.8	8.7	12.9	9.5	8.8	10.9	6.5
51-99	13.9	7.8	8.7	9.7	8.8	2.9	2.2	3.2	4.4	5.9	4.3	0
100	22.6	29.4	34.8	16.1	12.4	10.8	4.3	19.4	13.9	25.5	26.1	35.5
TOTAL	100.0	99.9	100.0	100.1	100.1	99.9	100.0	100.0	100.0	100.0	100.0	100.1
	c) <u>Percentile Change from 1851 (% 1866 - % 1851)</u>											
0	+5.4	-3.9	+22.6		+21.6	+35.2	+8.5		-2.0	-4.0	-2.4	
1-49	-6.1	-7.4	-7.4		-11.4	-17.6	-11.2		-10.4	-9.5	-11.7	
50	-.1	+4.3	-4.4		-2.9	-3.0	+1.2		-.7	+1.4	-3.0	
51-99	-6.1	-5.2	-4.2		-5.9	-6.6	-5.6		+1.5	-.1	-4.4	
100	+6.8	+12.2	-6.5		-1.6	-8.1	+7.0		+11.6	+12.2	+21.6	

As the table illustrates, the proportion of households with one or more members aged 14 - 20 declined between 1851 and 1866, partly in favor of an increased proportion of households with more children aged less than 14 years than any other age group, but mostly in favor of households in which there were more persons aged 21 and over than children and adolescents. This general impression requires much modification, however, when plain-loom households are considered separately from fancy-loom households. First, the loss of adolescents was much more noticeable among the plain-loom households than among the fancy-loom households. Between 1851 and 1866, the proportion of plain-loom households with no adolescents, as compared with the 1851 aggregate, was 35.2 percentiles greater, and the proportion of plain-loom households with one or more adolescents, similarly compared, was less in each proportional category (1 - 49%, 50%, 51 - 99%, All). Over the same period, the proportion of fancy-loom households with no adolescents increased only 8.5 percentiles above the 1851 aggregate, and the proportion of households with all adolescents and half adolescents increased as well (by 1.2 and 7.0 percentiles respectively). The loss of households with no adolescents was therefore nearly compensated by the addition of households with at least as many adolescents as other age groups.<sup>12</sup> The overall increase in predominantly adult households was, on the contrary, stronger among

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<sup>12</sup>In 1847, the proportion of households in which one-half or more of the working members older than ten (including all children above ten but not including master-weaver and his wife) was an apprentice, was slightly higher for fancy-loom households (14.4%) than for plain-loom households (8.6%) -- a difference of 5.8 percentiles, or 67% of the plain-loom figure. In 1866, the proportion of households with 50% or more adolescents of all kinds was especially larger in fancy-loom households (35.5%) as compared with plain-loom households (15.2%) -- a difference of 20.3 percentiles, or 134% of the plain-loom figure. This confirms the impression of a greater

fancy-loom households than among plain-loom households, although not absent from the latter. The major difference between the two concerned the proportion of households with adults only. The increase of adults among the fancies households was exclusively the effect of a large increase in the adults-only category (21.6 percentiles over the 1851 aggregate), whereas the increase among the plains households was divided between a 12.2 percentile increase in adults-only households and a 1.4 percentile increase in households only half adult. In the child age group, fancies households lost rather than gained, relative to the 1851 aggregate, in proportion of households with children in all proportional categories, so that 22.6 percentiles more households in 1866 had no children at all. The proportion of plain-loom households with one-half children, on the other hand, increased 4.3 percentiles, and the proportion of such households with children only increased 12.2 percentiles.<sup>13</sup> The overall trade-off of adolescents for children and adults was therefore primarily the effect of the predominance of plain-loom households in the 1866 sample. These households 'lost' adolescents and 'gained' children, or even more likely, simply had more children than the fancy-loom households which dominated the 1851 aggregate sample. Among fancy-loom households, the trade-off consisted more precisely of that between children and adults, in favor of the latter. This trade-off left the

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loss of adolescents in plain-loom households than in fancy-loom households between the two years.

<sup>13</sup>This apparent increase, however, is less certain than the apparent decrease in fancy-loom households, because the basis of comparison was the 1851 aggregate, dominated proportionally by fancy-loom households. The latter tended to have fewer children than plain-loom households, in general, as examination of the 1847 census demonstrates. For example, in 1847, the proportion of plain-loom households with 50% children of the master under ten years of age was 40%, as compared with only 24% of the fancy-loom households with the same proportion of children in this age group.

position of adolescents in the households of fancy-cloth weavers in 1866 not especially different from their position in the households of weavers in general in 1851.

The decline in adolescents in plain-loom households was due largely to the severe reduction in piece-rates in this sector to near subsistence levels. This reduction left the master less leverage to exploit the economic gains of apprenticeship and made apprenticeship less attractive to young men and women. The risks of taking on apprentices -- in the form of unoccupied labor which the master was obliged to support -- were fewer in plain-cloth weaving than in fancy-cloth weaving, because of the greater stability of employment in the plain-cloth sector. But the gains of occupying additional looms with such apprentices were very small at the low piece-rate for plain silks. The marginal worker earned little or no more than his bare subsistence upkeep. The supply of apprenticeship labor for weaving plain silks was low, moreover, because of the competition of rural areas from which apprentices had been recruited traditionally, for the labor of young people, especially that of young males. Instead of migrating to the city of Lyons to enter the fabrique, many now remained in their native villages to weave plain silks, for which the rural demand was in fact usually more stable than the urban.

By 1866 plain-loom households were more numerous than fancy-loom households even in the traditionally fancy district of the Croix-Rousse. The decline of adolescents in the plains households therefore created the impression of an overall decline in apprenticeship by the 1860's. The retiring president of the Conseil des Prud'hommes, Jules Bonnet, noted the great reduction in the number of apprenticeship contracts in 1863, 1864 and 1865. A total of only 146 contracts had been registered

in those three years, as compared with 360 contracts in the preceding three-year period, 1860 - 1862.<sup>14</sup> On an annual basis, the number of contracts in the latter period was also very small, compared with the 1850's, as Table 27 demonstrates. The table probably even underestimates

Table 27

Number of Contracts of Apprenticeship  
Registered at the Conseil des  
Prud'hommes of Lyons

<u>Year</u>	<u>Number of Contracts per</u> <u>Annum</u>
1853	800
1855	412
1860, 61, 62	120 (annual average)
1863, 64, 65	49 (annual average)

Sources: Felix Bertrand, Report of President of Conseil des Prud'hommes de Lyon to Prefet of Rhône, June 29, 1854; Bertrand, Compte-rendu des travaux du Conseil des Prud'hommes de Lyon, année 1855 (Lyon: C. Bonnaviat, 1856); Jules Bonnet, Compte-rendu des Travaux du Conseil des Prud'hommes pendant la dernière période triennale (Lyon: C. Bonnaviat, 1866), ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

the extent of the decline since 1853, since many more contracts were made verbally in that year, hence not registered at the Council. Although no firm evidence of a decline in verbal contracts along with the decline in registered contracts is readily available for the 1860's, reports of contemporary observers suggest that such was indeed the case. In September 1868, for example, the police noted that "in many categories

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<sup>14</sup>Jules Bonnet, Compte-rendu des Travaux du Conseil des Prud'hommes pendant la dernière période triennale (Lyon: Imprimerie Typographique et Lithographique de C. Bonnaviat, 1866), ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

[of silk weaving] no more male or female apprentices are being trained, the manufacture of silks is even abandoned in favor of other more remunerative trades."<sup>15</sup>

Unlike most plain-loom households, fancy-loom households remained receptive to the apprentice age group, despite the chronic unemployment in their category. These households retained or even increased the proportion of adolescents among their residents. The relative strength of adolescents, however, was not equal for all of these households. It differed, in particular, with variations in their kin relations and in their sex balance. Adolescents held a strong place in fancy-loom households that were strongly non-familial and feminized, but held a weaker place in relatively familial, masculine fancy-loom households. In other words, fancy-loom households seem to have preserved a relatively high percentage of adolescents when these youth were not related to the head of the household and when they were females -- female apprentices and journeywomen (compagnonnes), in short. Tables 28 and 29 demonstrate this by differentiating households by predominant kin-type and sex balance (respectively) before tracing the change in percentage of household members in the adolescent age group from 1851 to 1866. Both tables compare changes in fancy-loom households with changes in plain-loom households.

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<sup>15</sup>"Rapport Adressé à Mr. Delcourt, Commissaire spécial," September 9, 1868, AML, 12 - 47 (B), Situation de l'industrie lyonnaise: ...rapports sur la soierie et les ouvriers en soie ... (1819 à 1870, No. 309.

Table 28

Distribution of Households by Loom Type, Kin Type and Percentage of Household Members Aged 14-20 (Adolescents). Croix-Rousse Sample (1851, 1866)

Percentage of Total Members of Household in Adolescent Age Group	<u>Fancy-Loom Households (1866)*</u>						<u>Plain-Loom Households (1866)*</u>					
	<u>Rel</u>	<u>Nonrel</u>	<u>Rel = Nonrel</u>	<u>Nonrel</u>	<u>Rel</u>	<u>Rel</u>	<u>Nonrel</u>	<u>Rel = Nonrel</u>	<u>Nonrel</u>	<u>Rel</u>		
	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>		
	a) <u>Percentage of Total Households</u>											
0 % - 49 %	70.6	72.7	42.9	40.0	62.9	50.0	70.6	85.3	42.9	75.0	62.9	87.5
50 %	9.5	4.5	42.9	60.0	11.4	0	9.5	8.8	42.9	25.0	11.4	0
51% - 100%	20.0	22.7	14.3	0	25.7	50.0	20.0	5.8	14.3	0	25.7	12.5
	b) <u>Percentile Change from 1851 (% 1866 - % 1851)</u>											
0 % - 49 %		+ 2.1		- 2.9		-12.9		+14.7		+32.1		+24.6
50 %		- 5.0		+17.1		-11.4		- .7		-17.9		-11.4
51% - 100%		+ 2.7		-14.3		+24.3		-14.2		-14.3		-13.2
	c) <u>Number of Households in Sample</u>											
	95	22	7	5	35	4	95	34	7	4	35	8

\* Loom type of household refers only to 1866 sample.

Sources: Sample, Denombrement, 1851, Croix-Rousse  
 Sample, Denombrement, 1866, Lyon, 4eme Canton

Table 29

Distribution of Households by Loom Type, Sex Balance and Percentage of Household Members Aged 14-20 (Adolescents). Croix-Rousse Sample (1851, 1866)

Percentage of Total Members of Household in Adolescent Age Group	<u>Fancy-Loom Households (1866)*</u>						<u>Plain-Loom Households (1866)*</u>					
	<u>Females</u>		<u>Males</u>		<u>Females=Males</u>		<u>Females</u>		<u>Males</u>		<u>Females=Males</u>	
	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>
	a) <u>Percentage of Total Households</u>											
0 % - 49 %	72.1	56.2	52.9	66.7	66.1	75.0	72.1	91.3	52.9	57.1	66.1	87.4
50 %	9.8	12.5	41.2	33.3	5.1	8.3	9.8	4.3	41.2	42.9	5.1	0
51% - 100%	18.0	31.2	5.9	0	29.8	16.7	18.0	4.3	5.9	0	29.8	12.4
	b) <u>Percentile Change from 1851 (% 1866 - % 1851)</u>											
0 % - 49 %		-15.9		+13.8		+ 8.9		+19.2		+ 4.2		+21.3
50 %		+ 2.7		- 7.9		+ 3.2		- 5.5		+ 1.7		- 5.1
51% - 100%		+13.2		- 5.9		-12.1		-13.7		- 5.9		-16.4
	c) <u>Number of Households in Sample</u>											
	61	16	17	3	59	12	61	23	17	7	59	16

\* Loom type of household refers only to 1866 sample.

Source: Ibid.

Table 28 indicates a slightly stronger tendency to 'accumulate' adolescents among fancy-loom households in which the number of non-relatives was greater than the number of relatives (Nonrel > Rel). This is evident in the large increase between 1851 and 1866 in the percentage of predominantly non-relative fancy-loom households with more than half of its members (51% - 100%) aged 14 - 20 (+ 24.3 percentiles), as compared with other kin groups and loom groups in the same predominantly-adolescent age class. This tendency was stronger than in the predominantly-familial fancy-loom households (Rel > Nonrel) and stronger than in both kin-types of plain-loom households -- familial (Rel > Nonrel) and non-familial (Nonrel > Rel). The percentage of households of the former class (familial fancy-loom households) with more than one-half of their members in the adolescent age group increased only 2.7 percentiles from 1851 to 1866, while the percentage of households of the latter two classes (familial and non-familial plain-loom households) with more than 50% of their members aged 14 - 20 decreased between these two years.

Table 29 suggests a strong association between feminization and retention of adolescents in fancy-loom households. The increase in the proportion of adolescents in these households tended to be stronger in more feminized households than in those with one-half or more than half males. In fact, masculinization seems to have been more strongly associated with a reduction in the proportion of adolescents in fancy-loom households than with an increase in this proportion. The proportion of fancy-loom households with more females than males, above the aggregate proportion of households in this sex category in 1851, increased 13.2 percentiles. The proportion of such households with an equal number of males and females decreased 5.9 percentiles, and those with more males than females

decreased 12.1 percentiles.

Table 29 shows, moreover, that feminization influenced the age balance of the household, in favor of adolescents, only in fancy-loom households. Among predominantly female plain-loom households, for example, the percentage of households with more than half of their members in the adolescent age group decreased between 1851 and 1866. Finally, feminization was not associated as strongly with the tendency of fancy-loom households to 'accumulate' adult members as it was with preserving or increasing the proportion of adolescents. As Table 30 (below) demonstrates, the proportion of adults in such households increased more with the addition of males relative to females than the other way around. When males were as numerous as females or more numerous than females, the proportion of predominantly-adult fancy-loom households increased dramatically. The feminization of the fancy-loom households in general thus consisted largely of the feminization of the adolescent age group.

Table 30

Distribution of Fancy-Loom Households by Sex Balance and Percentage of Household Members Aged 21 and Above (Adults). Croix-Rousse Sample (1851, 1866)

Percentage of Total Members of Household in Adult Age Group	<u>Females</u> <u>Males</u>		<u>Females = Males</u>		<u>Males</u>	<u>Females</u>
	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>	<u>1851</u>	<u>1866</u>
a) <u>Percentage of Total Households</u>						
0 % - 49 %	62.3	62.5	64.7	33.3	84.7	58.3
50 %	6.6	12.5	29.4	0	6.8	0
51 % - 100 %	31.2	25.0	5.9	66.7	8.5	41.7
b) <u>Percentile Change from 1851 (% 1866 - % 1851)</u>						
0 % - 49 %		+ .2		-31.4		-26.4
50 %		+ 5.9		-29.4		- 6.8
51 % - 100 %		- 6.2		+60.8		+33.3
c) <u>Number of Households in Sample</u>						
	61	16	17	3	59	12

Source: Ibid.

In summary, then, the feminization of the fancy-loom households during the 1860's resulted in part from the departure of males from fancy-cloth weaving, leaving behind only the daughters and female kin of the master to perform the work in smaller, more familial households, and in part from the addition of female non-relatives, especially apprentices and young journeywomen, to perform work abandoned by the males or work for which male labor was simply scarce. The males who abandoned the household to the females were probably both children of the master and journeymen weavers who found more lucrative and stable employment in other industries. In March 1868, the police reported that "if a worker is able to do other work and manages to find work for himself in this occupation, he will leave the loom without regret."<sup>16</sup> Even skilled journeymen and children of the master seem to have abandoned the weaving profession at an amazing rate. In March 1869, "all those who manage to work at a more or less regular job, no matter what kind of job, earning 2 francs or 2 francs 50 per day, abandon weaving rather than resign themselves to making one, two or three pieces and then finding themselves with nothing to do after that ... master-weavers are even having their children learn other trades."<sup>17</sup> Some of these journeymen and masters' children began working as employees of the merchant-manufacturers, as the latter increased their house staffs to service more widely diffused production in the countryside. In the early 1870's the fabricants Faye and Thevenin reported that there existed "in many establishments, employees on fixed salaries who are former workers

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<sup>16</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies," March 8, 1868, AML, 12 - 47(B), No. 310.

<sup>17</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique," March 6, 1869, AML, 12 - 47(B), No. 312.

and sons of workers."<sup>18</sup> Feminization and youth were intimately related, in other words, in those households where both tendencies were most notable -- those with more fancy-cloth looms than plain-cloth looms.

The second cause of feminization of fancy-loom households -- the addition of young female non-relatives -- illustrated the intimate relationship between feminization and youth during this period. This relationship received widespread attention by contemporary publicists and politicians who concerned themselves with the position of women and children in industry. Their comments suggested a strong tendency towards feminization of apprenticeship in silk-weavers' households and, along with such feminization, a levelling of the status of apprentice weavers to that of auxiliary workers, especially to that of dévideuses. One of the contemporary observers, the republican deputy Jules Simon, noted a strong association between feminization and apprenticeship in the mid-1860's, in an article entitled "Apprenticeship." The article was first published in the Revue des deux mondes and shortly thereafter in the radical republican daily of Lyons, Le Progrès.<sup>19</sup> In a reply to Simon's article, César Maire, a master weaver of silk cloths, suggested that the status of female apprentice weavers had been reduced to that of the apprentice dévideuse.<sup>20</sup> Both Simon and Maire probably referred primarily to conditions in the fancy-loom households, since these were the ones in which female apprentices were most likely to be present during this period.

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<sup>18</sup>"[Réponses de] Mrs. Faye et Thevenin F[abric]ants de soieries à Lyon (Rhône)," Enquête Parlementaire, Troisième Questionnaire C, IX, AN, C 3021.

<sup>19</sup>Jules Simon, "L'Apprentissage," Le Progrès (Lyon), February 13, 1865.

<sup>20</sup>Letter from César Maire to Le Progrès, February 25, 1865, "A Propos d'apprentissage," Le Progrès, February 26, 1865.

In his article on apprenticeship, Simon claimed that "the female weavers, especially have the pivotal role in the industry of Lyons,' because they earn as much as the men and spend less, and also because their position contrasts with that of the moulineuses and dévideuses."<sup>21</sup> He then contrasted the position of dévideuse apprentices and weaver apprentices, demonstrating the advantages of the latter over the former. Simon's almost exclusive attention to female apprenticeship suggested that most of the apprentices whom he observed, and whom he regarded as typical of the 'state,' were females. Simon claimed, moreover, that such apprentices were exploited beyond the norms of justice. "It is indeed time to establish a just proportion between the advantages of the trade and the sacrifices demanded of the apprentice," namely, four years of 'free' labor, longer than was actually necessary to learn the trade. But for weavers these conditions were not nearly so bad as for the dévideuses:

They [the dévideuses] work long hard days for this modest sum, and are assigned nearly always, besides their work, all the heavy tasks of the household. . . . Yet it is necessary to complete a four-year apprenticeship to become a dévideuse, and during these four years these unfortunate souls, fed and lodged, earn only a meager income of 20 or 30 francs [per month] to support themselves.<sup>22</sup>

In his reply to Simon published February 26, 1865, in Le Progrès, the master-weaver César Maire objected that the conditions of the apprentice weavers were not at all harsh or unfair, nor was the three- to four year contract unnecessarily long as Simon had claimed. The

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<sup>21</sup>Simon, Le Progrès, February 13, 1865

<sup>22</sup>Ibid.

position of the dévideuse, added Maire, was also not as terrible as Simon had described. Yet Maire did not deny that it was a hard lot. The dévideuse à gage, according to this master-weaver, earned only 100 to 160 francs per year, rather than the 200 to 300 francs indicated by Simon. Maire even claimed that "their conditions of existence contrast less with those of the female weavers than M. Jules Simon would like to say."

The dévideuse is fed, lodged and provided laundering at the expense of the master-weaver; her tasks bear much relation to those of a real servant, but with this difference, that she is considered almost a member of the family, and her moral position has nothing which might offend the most delicate sensibility.

. . . although [the female weaver] seems at first glance to earn more, once she has satisfied all her obligations, all the tasks weighing so heavily on her, once she [must] endure the unemployment at the end of the season, the apparent advantage she has over the dévideuse soon disappears, and her condition, apparently so different, is found in the end to be exactly the same.<sup>23</sup>

Although intended to elevate, in the eyes of the public, the condition of the dévideuse relative to that of the female weaver, Maire's letter was testimony rather to the lowering of the condition of the female weaver to that of the dévideuse, a mere servant. In short, the superior status of apprentice weavers for fancy silks especially, as compared with the inferior status of auxiliary workers, depended largely on the predominance of males in that state. As

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<sup>23</sup>Letter from César Maire, *Le Progrès*, February 26, 1865.

apprenticeship became feminized in the 1860's, its status fell, and such a fall left more 'social space' for exploitation by master-weavers. Apprentices became little more than workers, even in fancy-cloth weaving, as they became more female. In 1861, Jules Simon remarked that working-class families of Lyons preferred apprenticing their daughters as seamstresses or as milliners, despite the inferior pay in these trades, because of the terrible conditions of the apprentice weaver. Even peasants from the surrounding countryside -- the normal area of recruitment of new apprentices -- began to "form scruples" about sending their daughters into the silk-weaving workshops of Lyons. Instead, they apprenticed their daughters to benevolent, paternalistic merchant-manufacturers, such as C.J. Bonnet, who set up factory-dormitories for female weavers in the countryside.<sup>24</sup>

From the point of view of the master-weaver, females, especially young females, were preferred to males in this period, not only because of their docility but especially because of the much lower wage they could be made to accept. "The situation of the men can still hold up despite the decline of wages," wrote the police observer in September 1868, "but that of the women is intolerable because their average wage hardly goes above 1.20 [francs] per day in some privileged categories and certainly does not exceed .75 [francs] for the largest number of those employed for ordinary tasks."<sup>25</sup> The supply of female labor for such impoverished work was, moreover, apparently not scarce. Most of

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<sup>24</sup>Jules Simon, *L'ouvrière* (Paris: L. Hachette, 1861), p. 52.

<sup>25</sup>"Rapport à Mr. Delcourt," September 9, 1868, AML, 12 - 47(B), No. 309.

the new jobs in public works, machine and chemical industries employed men. The wives of those who were married were thus available for work in the fabrique. But the largest percentage of females seems to have emigrated independently from surrounding rural areas to which the manufacture of silk cloths was itself migrating. Between 1871 and 1876, for example, 9 of 34 weavers (26%) born in the rural village of Avenières (Terres Froides, Isère) and having died in that period were females who died in Lyons. Between 1852 and 1857, by contrast, no native of the village having died in that period was in Lyons at the time of death.<sup>26</sup> The migration of silk weaving from Lyons tended to induce a high rate of natural increase of population in the rural areas like Avenières where weaving provided the most important industrial activity. In order to relieve the growing population pressure in these areas, especially during periods of inactivity in the silk industry, unmarried females were forced to seek work in the towns. They left their parents and brothers behind in the villages to continue working the loom on available orders -- work in which they engaged now as a primary activity and not, as in the past, as a mere auxiliary employment to farming. As these females became permanent employees of the fabrique lyonnaise, as subordinate workers in the master-weavers' households, they enabled the latter to become more malleable economically, because of the greater facility with which women could be exploited -- that is, forced to accept lower standards of living -- than their male predecessors.

Ease of exploitation and greater malleability of the household economy were not, however, the only consequences of feminization.

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<sup>26</sup>ADI, Q - Tables des mutations après décès, Bureau de Morestel, 1852 à 1857, 1871 à 1876.

Besides substituting for males within the weavers' households, females working outside the household on specialized tasks replaced work once done in the household with independent enterprise outside. In the dévidage of silk thread especially, female mistresses directed such enterprise in their own household shops and employed dévideuses to work in these shops instead of in the master-weavers' households. The dévideuse à gage, residing and working in the latter, as a 'transitional-state' subordinate, therefore became less common than she had been in the past. The major evidence for this is the strong familialization of the weavers' households. Such familialization suggests that most dévideuses who worked in the households did not reside there. But there is also evidence that such day-laboring dévideuses working in the weavers' households had become fewer, even exceptional, by the mid-1860's. Instead, the specialized dévidage shops, owned by mistress dévideuses, prepared most of the thread. These female chefs d'ateliers of dévidage employed female workers to prepare the threads of several master-weavers at once. Some of the mistress's workers were lodged and fed at her expense -- taken on à gage, in other words. Just like the dévideuses à gage and apprentices in the master-weavers' households, these dévideuses living and working in specialized shops "were more especially at the disposal of their mistress for all kinds of work of her household..."<sup>27</sup>

Contemporary critics of conditions of child and female labor especially deplored the situation of these female laborers, cited as typical of that of dévideuses in general. For example, E. Pariset,

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<sup>27</sup>'Dévideuses,' "Rapport à Monsieur Delcourt, Commissaire spécial, Sur la situation de la fabrique des étoffes de soies au 4e Trimestre Xbre 1866," December 8, 1866, AML, 12 - 47(B), No. 301.

reporting to the Chamber of Commerce of Lyons on the conditions of the dévideuse described them as the worst in the trade. He referred primarily to the dévideuses in specialized shops of dévidage, who represented presumably the large majority of females in this occupation.

. . . there is a category of shops where frequently all abuses can be found, and for which we must, Gentlemen, secure a prompt and strict surveillance, such are the shops of dévidage. One might estimate their number to be nine hundred, if one grants that there are thirty thousand looms in Lyons, and that a dévidoir serves eight looms, since each shop, on the average, has four dévidoirs.<sup>28</sup>

The important fact was the exploitation of such young females by female mistresses rather than by male masters alone. Women were no longer only the exploited ones, but some were also the exploiters, once they had acquired property and the direction of their own shops.

In the report on the situation of the fabrique in the third trimester of 1869, the police observer suggested that an important part of the dévidage of these shops depended on orders directly from the fabricant. "The dévideuse, who usually earns much less than the weaver, is especially hurt by the use of these bad silk threads because the négociant does not pay more for the dévidage than if the threads were good. For the weavers as for the dévideuses, it is a take or leave [proposition]."<sup>29</sup> Thus, not only had dévidage become a more specialized

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<sup>28</sup>E. Pariset, Report to Chamber of Commerce of Lyons concerning children in industry, June 15, 1867, annexed to deliberations of Chamber of Commerce of June 20, 1867, Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1865, 1866, 1867, 1868, p. 148. (BCCL)

<sup>29</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique," September 7, 1869, AML, I2 - 47(B), No. 314.

task, separated from the household of the master-weaver, but the mistress dévideuse was herself coming under more direct control of the merchant-manufacturer, just like the master-weaver. The fabricant paid her a piece-rate, as he paid the master-weaver, for dévidage of his silk thread consigned to her. The putting-out of weaving orders to the countryside by the same merchant-manufacturers of Lyons favored this specialization of dévidage and the enforcement of direct contact between dévideuse and merchant. Dévideuses of Lyons prepared the silk thread put out to the rural areas, and their work increased with the spread of rural weaving. In September 1867 the police thus remarked that "the number of these latter [workers] is considerable in spite of the fact that few young workers have been trained for several years."<sup>30</sup>

D. The Artisanal Household: Decline in Entrepreneurship Among Master Silk Weavers

The separation of dévidage from the household of the master-weaver, the strong familialization of household residents and the decrease in the number of looms and persons in the household all suggest that the extent of 'entrepreneurship' among master-weavers in managing the internal order of their households fell very noticeably in the 1860's. Instead of shops including several different types of workers, specialized by task and hired for a wage, supervised by the master and working alongside him, his family, apprentices and dévideuses, weavers' households seem to have become exclusive family units fostering little daily contact with non-relatives and with

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<sup>30</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies," September 9, 1867, AML, I.2 - 47(B), No. 305.

outsiders in work relations. These households apparently became more 'artisanal,' in short, concentrating the (largely auxiliary) labor of the family around that of the master's own weaving labor, rather than dispersing family auxiliary labor and the master's own supervision over additional looms worked by non-relative residents or by non-residents, as 'entrepreneurial' masters were wont to do.

In order to test the statistical validity of this impression of a decline in 'entrepreneurship' and to determine more precisely its nature and causes, an 'entrepreneurial index' (Ie) was constructed to measure, as best as possible, the level of entrepreneurship in each household. The index measures entrepreneurship by comparing the number of occupied looms in the household with the total number of persons of weaving age (14 and over in 1866, 10 and over in 1847<sup>31</sup>) or otherwise indicated as weavers, such as apprentices and journeymen in 1847. This total includes the head of the household and spouse, if any. Ie takes a value ranging from - 1, indicating total possible dependence of the household on co-resident kin labor for all the weaving in the household, to + 1, indicating total necessary dependence on wage labor living outside the household. Each household has only one value of Ie associated with it, indicating its position on this spectrum of entrepreneurship. When Ie = - 1, there is no co-resident non-relative labor aged 14 or over and no outside labor in the household. Kin labor alone is present and suffices to occupy

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<sup>31</sup>The proper age group for weaving was 14 and over for both years. Because the census for 1847 distinguishes only between children under 10 and children 10 and over, the age group '10 and over' must be used for this year. The 'improper' addition of the ages 10 - 13 to the weaving group for this year ('improper' because weaving was generally not done by those under 14) concerns only children of the master weaver, however, since non-relative weavers were classified separately as 'apprentices' or as 'journeymen' in the 1847 census. The following sources were used to determine the 14 year

all looms -- assuming one person per loom. The value  $I_e$  increases, first, as the proportion of non-relative co-resident labor of weaving age increases and second, as the proportion of labor living outside the household (Livout) increases. The minimum presence of outside labor is given by a positive difference between the number of occupied looms and the number of household residents of weaving age. Above the value of  $-1$ , the index arbitrarily applies labor in the order 1.) resident labor -- a.) non-relative co-resident labor and b.) relative co-resident labor -- and 2.) non-resident labor. Thus  $I_e$  takes a value between  $-1$  and  $0$  when no outside labor is present, increases in this range with the ratio of non-relative co-resident labor to the number of occupied looms, and reaches  $0$  when the number of non-relative residents exactly equals the number of occupied looms. Then  $I_e$  takes a value between  $0$  and  $1$  to indicate the presence of outside labor in the household and increases with the ratio of outside labor to the number of occupied looms. A value of  $I_e$  greater than zero thus indicates the necessary presence of outside labor to occupy the active looms. A value of  $I_e$  less than zero, however, indicates only that such labor was not absolutely necessary for weaving, even though the master weaver might in fact have hired outside labor in order to allocate inside and outside labor more efficiently among weaving and auxiliary tasks. (Appendix VI discusses in greater detail the construction of  $I_e$ , the meaning of each category of values, and the validity of this index for the study of entrepreneurship.)

Table 31 summarizes the distribution of silk-weavers' households in

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minimum weaving age: Maurice Garden, Lyon et les lyonnais au XVIIIe siècle (Paris: les Belles lettres, 1970), pp. 47-51, 57-61; A. Beauquis, Histoire économique de la soie (Grenoble: Grands établissements de l'Imprimerie générale, 1910), p. 360; Simon, L'ouvrière, p. 47.

the census samples of 1847 and 1866 over these various levels of entrepreneurship (values of  $I_e$ ). Besides summarizing the distribution for all households in the sample considered together, the table considers plain-loom households separately from fancy-loom households, in order to trace the differences, if any, in changing entrepreneurship between these two types of household.

Table 31

Distribution of Weavers' Households,  
by Loom Type and Degree  
of Sufficient Non-Relative  
and Necessary Non-Resident Labor Used for  
Weaving, Croix-Rousse Samples (1847, 1866)

Value of $I_e$	Meaning*	All HH's		Plains HH's		Fancies HH's		
		1847	1866	1847	1866	1847	1866	
a. <u>Number of Households</u>								
$I_e = -1$	Rel labor only	72	80	38	54	31	22	
$-1 < I_e < 0$	Rel and Nonrel labor	59	21	9	11	45	7	
$I_e = 0$	Nonrel labor sufficient	<u>31</u>	<u>12</u>	<u>4</u>	<u>8</u>	<u>23</u>	<u>2</u>	
$-1 \leq I_e \leq 0$	Livin labor only	162	113	51	73	99	31	
$0 < I_e < .5$	Livin > Livout	4	3	1	1	2	1	
$I_e = .5$	Livin = Livout	1	2	-	1	1	1	
$.5 < I_e < 1$	Livin < Livout	-	2	-	-	-	2	
$0 < I_e < 1$	Livout labor present		5	7	1	2	3	4
Total Households		167	120	52	75	102	35	
b. <u>Percentage of Total Households</u>								
$I_e = -1$	Rel labor only	43.1	66.7	73.1	72.0	30.4	62.9	
$-1 < I_e < 0$	Rel and Nonrel labor	35.4	17.5	17.3	14.6	44.1	20.0	
$I_e = 0$	Nonrel labor sufficient	<u>18.6</u>	<u>10.0</u>	<u>7.7</u>	<u>10.7</u>	<u>22.5</u>	<u>5.7</u>	
$-1 \leq I_e \leq 0$	Livin labor only	97.1	94.2	98.1	97.3	97.0	88.6	
$0 < I_e < .5$	Livin > Livout	2.4	2.5	1.9	1.3	2.0	2.9	
$I_e = .5$	Livin = Livout	.6	1.7	-	1.3	1.0	2.9	
$.5 < I_e < 1$	Livin < Livout	-	1.7	-	-	-	5.7	
$0 < I_e < 1$	Livout labor present		3.0	5.9	1.9	2.6	3.0	11.5
Total		100.1	99.9	100.0	99.9	100.0	100.1	

Value of Ie	Meaning*	All HH		Plains HH		Fancies HH	
		1847	1866	1847	1866	1847	1866
c. Percentile Change From 1847 to 1866							
Ie = -1	Rel labor only	+ 23.6		- 1.1		+ 32.5	
-1 < Ie < 0	Rel and Nonrel labor	- 17.9		- 2.7		- 24.1	
Ie = 0	Nonrel labor sufficient	- 8.6		+ 3.0		- 16.8	
-1 < Ie < 0	Livin labor only	- 2.9		- .8		- 8.4	
0 < Ie < .5	Livin > Livout	+ .1		- .6		+ .9	
Ie = .5	Livin = Livout	+ 1.1		+ 1.3		+ 1.9	
.5 < Ie < 1	Livin < Livout	+ 1.7		0.		+ 5.7	
0 < Ie < 1	Livout labor present	+ 2.9		+ .7		+ 8.5	

Sources: Ibid.

\*See Appendix VI for explanation of each category.

As section c. of the table makes especially clear, the most significant changes in entrepreneurship between 1847 and 1866 for all households was the increase in fully artisanal households (Ie = -1) and the decrease in partly entrepreneurial households with resident non-relatives and family members in sufficient numbers to work all occupied looms. Such a result is consistent with the earlier impression of familialization of the household between the two years, eliminating or reducing the proportion of non-relatives among the household residents. The adequacy of residents for weaving in some households -- in a larger proportion of total households, in fact, in 1866 than in 1847 -- was not not evident, however, from the study of familialization. This latter conclusion is demonstrated by the increase in the proportion of households in all categories of entrepreneurship which indicate the necessary presence of some non-residents to work some of the occupied looms (that is, those levels of entrepreneurship where Ie is

greater than 0). Such increase (by +2.9 percentiles) in percentage of households with outside labor present (Livout), in fact compensates exactly the net decline (by -2.9 percentiles) in percentage of households able to rely entirely on their resident labor (Livin) for working its active looms. The two most important changes in entrepreneurship between 1847 and 1866, therefore, were a strong familialization of sufficient weaving labor in general and a mild increase in the proportion of household weaving undertaken necessarily by hired non-residents.

Separating movements in entrepreneurship in plain-loom households from movements in fancy-loom households enables us to locate the sources of these changes more precisely. The changes were clearly concentrated in fancy-loom households rather than in plain-loom households. In the cases of both familialization of sufficient weaving labor and increase in the extent of necessary non-resident labor, the positive tendencies were stronger in fancy-loom households than in all households considered together and especially stronger than in plain-loom households. The latter, which were traditionally (i.e. in 1847) more familial, did not, on the average, familialize their weaving labor (in the manner defined by the index  $I_e$ ) much more in 1866 than in 1847. These households in fact increased slightly both their tendency to accept non-relative labor as resident workers and, less strongly, their tendency to employ outside labor. Fancy-loom households, traditionally less familial, tended to rely, in much greater proportions than in 1847, on the exclusive labor of the master-weaver's children and kin, just like the majority of plain-loom households. A few more in 1847 also employed non-residents to weave on their looms. In other words, while plain-loom households remained strongly familial, with a mild tendency to accept non-relatives into the home and

shop, fancy-loom households either closed in upon the family group more exclusively than in the past or tended to employ labor whose relation with the master had no other basis than the wage contract. In either case, affective solidarity was confined to kin within the household rather than extended to non-relatives. For the latter, the household was no longer a home but merely a shop.

The reasons for this combined familialization and contractualization of work relations derived largely from the economic conditions of fancy-cloth weaving during the 1860's. Among these were the frequent variation of fancy-cloth styles, the substitution of simpler fancy cloths for the more elegant fabrics, the reduction in the scale of household enterprise, and frequent and severe unemployment. The first three conditions explained the familialization of most household weaving of fancy cloths, while the fourth condition explained the tendency of some fancy-loom households to employ more non-resident labor than in the past. Short 'style-lives' for orders of façonnés during the 1860's, forcing frequent changes of design on the loom, created the strongest incentive for substitution of family labor for hired labor in weaving. From an economic point of view, such substitution was most profitable in fancy-loom households, because of high skill rents for weaving fancy cloths and because of the high risks of loss due to frequent mountings which hired labor did not share.<sup>32</sup> This explained the masters' demand for familial labor. The shift of product demand in favor of simpler fancy cloths and the reduction of the scale of household enterprise as a result of chronic unemployment made untrained family labor at least as efficient as skilled hired labor

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<sup>32</sup>Chapter I, section I - B - 1.

in weaving and mounting fancy silks and therefore made family labor more 'available' for these tasks without loss of efficiency. The simpler fancy dress ornaments and nouveautés favored by the market in this period required less skill to mount and to weave, so that less-trained or relatively unspecialized family members could perform these tasks as well as specialized workers. The smaller number of looms, in comparison with the past, permitted the application of more family labor to these for auxiliary tasks with little loss of efficiency.<sup>33</sup> In these ways, the 'supply' of labor suitable for weaving and auxiliary tasks of the household could be increased by the addition of family labor to the general pool of familial and non-familial workers. In the choice between the former and the latter, family labor was usually preferred, especially in extremely variable conditions of product demand. However, for the few occasional orders for highly-wrought fancy silks, requiring special weaving or mounting skills, masters employed journeyworkers who were not members of the family. They did not receive these journeyworkers as household residents, as much as they had done in the past, because of the short duration of these orders, discouraging any commitment to provide bed and board for these subordinate workers over a long period of time. Consequently, the proportion of statistically-observable outsiders hired to execute individual orders increased somewhat, even while the proportion of non-relatives residing in the households decreased.

These reasons for changing entrepreneurship in fancy-loom households are based largely on the general theory of the household economy developed

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<sup>33</sup>Ibid.

in Chapter I and applied to the specific economic conditions of the 1860's.<sup>34</sup> The census data permit us to take this explanation of changing entrepreneurship one step further for silk-weavers' households in general, to the association between entrepreneurship, as measured by the index  $I_e$ , and other economic and social characteristics discussed in the present chapter -- loom type, kinship, sex and age balance of household residents other than the head and spouse -- and one additional characteristic -- the age of the head of the household. Measuring such association by means of multivariate regression analysis permits a rather precise determination of the nature and extent of the relationship between entrepreneurship and these other characteristics. Careful examination of this relationship will also suggest (though not prove) some of the effects of these characteristics on entrepreneurship.

In order to determine the relative strength of association between the different characteristics and the index  $I_e$ , six economic and social 'type' variables were constructed and regressed separately and together, in various combinations, against the entrepreneurial index  $I_e$ . Five of these variables refer to characteristics discussed previously -- loom-type, plain or fancy (PrOU for 1847; PrTU for 1866); kinship relations of residents other than the spouse to the head of the household (PrREL); sex balance of these household residents other than head and spouse (PrSXF); and their age balance between the apprentice-adolescent age group (PrAPP for 1847; PrTAG14 for 1866) and the journeyworker-adult age group (PrOUV for 1847; PrTAG21 for 1866). One variable is new -- that of the age of the head of the household (AGE), a proxy for 'life-stage' (the time factor in a function of savings, or accumulation of wealth). Table 32 summarizes

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<sup>34</sup>Ibid.

the results of the general regression (that is, the regression for all households considered together) for the 1847 and 1866 census samples of the Croix-Rousse, and the table and its key provide an exact definition and description of each of the variables entering the regression equation.

Table 32

Regression Study of Type-Variable Determinents of Entrepreneurial Index Ie.  
Croix-Rousse (1847, 1866)

1847

<u>Dependent Variable Ie Regressed With</u>					<u>Independent Variable Standardized Coefficients and F.Values</u>						
<u>Name</u>	<u>Description</u>	<u>R<sup>2</sup></u>	<u>F</u>	<u>d-f</u>	<u>Critical F</u>	<u>PrOU</u>	<u>PrREL</u>	<u>PrSXF</u>	<u>PrAPP</u>	<u>PrOUV</u>	<u>AGE</u>
1. PrOU	OU/OTOTUF	.11	15.29	128	3.92	-.33					
				1		(15.29)					
2. PrREL	REL/HH	.35	68.85	128	3.92		-.59				
				1			(68.85)				
3. PrSXF	SXF/HH	0	.36	128	3.92			.05			
				1				(.36)			
4. PrAPP	APP/WOR	.04	4.74	104	3.94				.21		
				1					(4.74)		
5. PrOUV	OUV/WOR	.34	53.50	104	3.94					.58	
				1						(53.50)	
6. AGE	AGE	0	.05	128	3.92						.02
				4							(.05)
1,2,3,6		.42	22.49	125	2.45	-.24	-.56	.10			.12
				5		(11.19)	(64.63)	(2.09)			(2.96)
1,2,3,4,6		.53	22.29	100	2.32	-.19	-.74	.12	-.11		.15
				5		(7.06)	(93.93)	(3.02)	(2.00)		(4.27)
1,2,3,5,6		.57	26.07	100	2.32	-.19	-.53	.13		.28	.14
				6		(7.41)	(38.93)	(3.95)		(11.10)	(4.28)
1,2,3,4,5,6		.58	22.87	99	2.20	-.17	-.32	.11	.22	.48	.13
						(6.41)	(5.09)	(2.66)	(3.55)	(12.70)	(3.74)

1866

Dependent Variable Is Regressed With

Independent Variable Standardized Coefficients and F Values

Name	Description	R <sup>2</sup>	F	Critical		PrTU	PrREL	PrSXF	PrTAG14	PrTAG21	AGE	
				d-f	F							
1.PrTU	TU/TOTUF	0	.36	1	80	3.97	-.07 (.36)					
2.PrREL	REL/HH	.43	61.40	1	80	3.97	-.66 (61.40)					
3.PrSXF	SXF/HH	.02	1.60	1	80	3.97		.14 (1.60)				
4.PrTAG14	TAG14/HH	0	.02	1	80	3.97			-.02 (.02)			
5.PrTAG21	TAG21/HH	.07	5.94	1	80	3.97				.26 (5.94)		
6.AGE	AGE	0	.01	1	80	3.97					-.01 (.01)	
1,2,3,6		.46	16.50	4	77	2.51	-.07 (.65)	-.66 (62.39)	.15 (3.29)		-.03 (.14)	
1,2,3,4,6		.47	13.75	5	76	2.35	-10 (1.24)	-.68 (64.99)	.14 (2.94)	-.12 (1.93)	-.03 (.17)	
1,2,3,5,6		.47	13.33	5	76	2.35	-.08 (.85)	-.63 (51.29)	.14 (2.50)		.09 (.81)	
1,2,3,4,5,6		.47	11.31	6	75	2.23	-110 (1.23)	-.67 (42.23)	.14 (2.73)	-.12 (1.10)	.01 (0)	-.04 (.14)

Key to Symbols

- Ie: Entrepreneurial index
- PrOU: Proportion of occupied plain looms (unis) to total occupied plain (unis) and fancy (façonne) looms  
 OU: Number of occupied unis looms  
 OTOTUF: Total number of occupied unis and façonnées looms
- PrREL: Proportion of relatives of the head of household living in the household (other than spouse) to total number of persons living in the household (other than head and spouse)  
 REL: Number of relatives of the head of household, by blood or by marriage, living in the household (other than spouse of head)  
 HH: Total number of persons living in the household other than head and spouse
- PrSXF: Proportion of females living in the household (other than head and spouse) to total number of persons living in the household (other than head and spouse)  
 SXF: Number of females living in the household, other than head and spouse  
 HH: Total number of persons living in the household other than head and spouse
- PrAPP: Proportion of apprentices living in the household to total number of silk workers living in the household other than head and spouse (apprentices + journeyworkers + children of head aged 10 or above)  
 APP: Number of apprentices living in the household  
 WOR: Number of apprentices + journeyworkers (OUV) + children of head aged 10 or above (i.e. weaving age group; including children of weaving age)
- PrOUV: Proportion of journeyworkers living in the household to total number of silk workers living in the household other than head and spouse  
 OUV: Number of journeyworkers living in the household  
 WOR: Number of apprentices + journeyworkers (OUV) + children of head aged 10 or above
- AGE: Age of head of the household
- PrTU: Proportion of total (occupied and unoccupied) plain looms (unis) to total (occupied and unoccupied) plain (unis) and fancy (façonne) looms  
 TU: Total occupied and unoccupied plain looms  
 TOTUF: Total occupied and unoccupied plain and fancy looms

- PrTAG14: Proportion of persons living in the household, other than head and spouse, aged 14 - 20, to total number of persons living in the household, other than head and spouse  
 TAG14: Number of persons living in the household, other than head and spouse, aged 14 - 20  
 HH: Total number of persons living in the household other than head and spouse
- PrTAG21: Proportion of persons living in the household, other than head and spouse, aged 21 and above, to total number of persons living in the household, other than head and spouse  
 TAG21: Number of persons living in the household, other than head and spouse, aged 21 and above  
 HH: Total number of persons living in the household other than head and spouse
- $R^2$ : Correlation coefficient (the proportion of the variation in  $I_e$  explained by the variables against which it is regressed to the total variation in  $I_e$ )
- F: The computed F-statistic for the entire regression equation =  $(R^2/k)/((1-R^2)/(N-k-1))$ . The statistic measures the ratio of the proportional 'explained' variation of  $I_e$  ( $R^2$ ), to the proportional unexplained variation of  $I_e$  ( $1-R^2$ ), correcting for sample size (N) and number of independent variables in the regression equation (k).
- d-f: Degrees of freedom in the regression equation. The top figure gives the degrees of freedom in the numerator of the F-statistic (=k) and the bottom figure gives the degrees of freedom in the denominator of F (=N-k)
- Critical F: The F-statistic computed for a normally distributed random sample of size N in a regression against k independent variables, at 95% level of confidence
- F-Value for Each Independent Variable (in parentheses below each standardized coefficient for that variable):

The computed F-statistic for the partial correlation of that independent variable with the dependent variable  $I_e$ , controlling for variation in the other independent variables. This F-statistic measures the ratio of the proportional explained variation of  $I_e$  for this partial regression ( $r_{ki}^2$ ) to the proportional unexplained variation of  $I_e$  for the entire regression ( $1-R^2$ ), correcting for sample size (N) and number of independent variables (k)

The statistical test using the F-statistic consists of rejecting the null hypothesis that  $R^2$  (or  $r_{ki}^2$ ) is zero only when the computed F-statistic is equal to or larger than the critical F-statistic for the given degrees of freedom. In this case, the variation in  $I_e$  explained by the independent variable (s) in the regression equation is due to actual correlation, between  $I_e$  and the variable (s), rather than to mere random error, in 95 out of 100 cases (95% level of confidence).

The symbol  $\beta$  is used in the text to indicate a standardized coefficient of an independent variable.

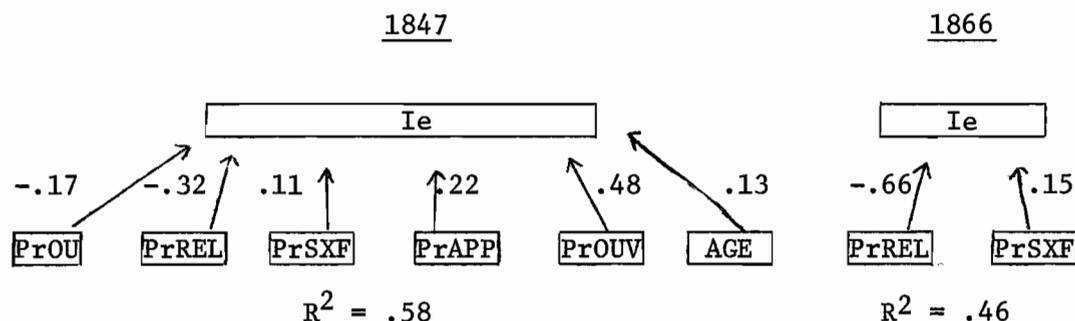
The one major similarity between the relationship of  $I_e$  to the type variables in 1847 and their relationship in 1866 was the inverse variation of level of entrepreneurship ( $I_e$ ) with the familialization of household residents (PrREL). Entrepreneurship was stronger in less familial households, weaker in more familial households. This negative association was indeed the one constant in both periods, remaining unchanged even when other type variables were controlled, as in the numbered regression sets with four or more independent variables in Table 32. From a simple statistical point of view, this is hardly surprising. The value of  $I_e$  changed in the same direction as the proportion of resident nonrelatives to the number of occupied looms, hence in the opposite direction to the remaining proportion of relatives, for values of  $I_e$  between  $-1$  and  $0$ . The negative correlation between  $I_e$  and PrREL simply confirms the conclusion that the proportion of insufficient resident nonrelative labor and unnecessary non-resident labor moved in the same direction as the extent of familialization of household residents.

The main difference in the type-variable 'determinants' of entrepreneurship between the two years was the reduction in the number of significant type-variables in 1866, as compared with 1847, when these combined in a 'structural' relation of association with entrepreneurship. By 'structural relation' I mean the combination of type variables explaining the largest percentage of variation in the entrepreneurial index  $I_e$  for the least loss (i.e. reduction to statistical insignificance) of type variables in a multivariate ordinary least-squares regression equation. Table 32 suggests the relevant structural relations for each of the two years in regression set (1,2,3,4,5,6). These relations

combine respectively all six variables in 1847 and only two variables (PrREL and PrSXF) in 1866. I tested several other alternative combinations and found these two 'structures' the best (highest  $R^2$ ) for each year respectively. Diagram 1 below summaries the two structures in their 'pure' form; that is, according to regressions including only the statistically significant type variables. Correlation coefficients, representing the strength and direction of association with Ie, are indicated beside the arrow for each type variable, and the proportion of variation in Ie explained by the combination of type variables ( $R^2$ ) is indicated below each structural diagram.

Diagram 1

Structures of Determination of  
Entrepreneurship (Ie) by  
Type Variables of Weavers'  
Households, Croix-Rousse  
Samples (1847, 1866)



As the diagram makes clear, the major changes in the structure of determination of entrepreneurship between 1847 and 1866 were the elimination of loom type and the addition of feminization as significant 'determinants' of Ie. Appendix VII analyzes in detail the specific nature of these changes and the reasons for them, noting differences between plain-loom households and fancy-loom households. For the present, a summary of some

of the most salient conclusions of this analysis, especially those concerning the relationship of feminization to entrepreneurship, will suffice. Feminization was associated positively with entrepreneurship in both years, but it had an especially strong effect on entrepreneurship in fancy-loom households, for a given degree of familialization of those households. Since familialization varied inversely with entrepreneurship, the latter was strongest in the least familial, most feminized fancy-loom households in 1866. In 1847, on the contrary, it was highest in the least-familial fancy-loom households, regardless of the sex balance of the members of these households.

The two years differed also in the relationship of entrepreneurship to apprenticeship-adolescence. In 1847, those households with apprentices, especially female apprentices, tended to have more entrepreneurial masters. In 1866, however, apprenticeship -- more precisely, adolescence -- had little effect on entrepreneurship, largely because of the decline of apprenticeship in most weavers' households. In fancy-loom households, where apprenticeship was preserved more strongly, adolescence had a positive effect in the same regression equation. Contrary to expectations based on earlier analysis of the distribution tables, the preservation or increase of female apprenticeship in 1866 as compared with 1847 - 1851 was therefore not, on the average, associated with high levels of entrepreneurship in fancy-loom households. Instead, entrepreneurship rose in such households with feminization in general, regardless of the age group (adolescent or adult) of female residents and regardless of their kin relation (relative or non-relative) to the head of the household.

The proportion of resident journeymen in 1847 and of resident adults

in 1866, had a positive influence on degree of entrepreneurship in both years. In the first year, this influence was strong both in plain-loom households and in fancy-loom households. In the second year, it was strong only in plain-loom households. These households tended to be more feminine, less familial and headed by older master-weavers than the average. Very likely these 'entrepreneurial' plain-loom households were those employing large numbers of plain-weaving compagnones whom Audiganne and Reybaud observed in the 1850's, along with older daughters and other female kin of the master-weaver. In the early 1870's, the Chambre Syndicale des Soieries of Lyons claimed that the group of journeymen was two-thirds "women and girls," most of whom necessarily worked in the plain-cloth sector, which largely dominated the work of the fabrique by that time.<sup>35</sup> Thus, in plain-loom households as in fancy-loom households, the use of female labor was a rather strong indication of a highly entrepreneurial attitude towards the household economy by the master-weaver.

The foundation of entrepreneurship on more docile resident female labor, along with the familialization of labor in most weavers' households, strongly influenced the economic behavior of the master-weaver in this period of secular unemployment aggravated by reductions in piece-rates. Anticipated profits on additional looms which the master might occupy with family and non-family labor were low, because of the low piece-rate, and uncertain, because of unstable employment. To prevent further decline of his economic position, the master-weaver therefore had to focus on reduction of costs of maintaining his household rather than on increase

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<sup>35</sup>"Réponses de la Chambre Syndicale des Soieries," Enquête Parlementaire, Premier Questionnaire A, Observations, AN, C 3021.

of earnings.<sup>36</sup> Familialization and feminization of household labor offered one means of reducing household costs; namely, reduction in the standards of living which consumed earnings. Familialization and feminization both placed at the disposal of the master a labor force more amenable to this control. This was partly the result of a heightened paternal authority between master and members of the household and partly the effect of a relative scarcity of alternative work for the daughters of master-weavers and for the female migrants from the surrounding rural areas. As the prospect of reviving employment in the silk industry dimmed with each passing semester, the master thus focused increasingly on reducing the consumption of his household, or at least the expense of that consumption. The sudden rise of food prices in 1867, combined with another decline in export sales of silk fabrics in that same year<sup>37</sup> fixed his attention on consumption even more intensively. This increasing concern with the consuming household economy was a major reason for the appeal of consumers' cooperation in the neighborhoods of the silk weavers.

E. The Household Order in Movements of Association: Old Ideals and New Realities

Besides addressing these needs of household consumption, consumers' cooperative movements appealed also to the master-weavers' concern with declining entrepreneurship. At the same time, the movement recognized the enlarged role of women in the silk industry. For these reasons, consumers' cooperation was especially 'meaningful' to the master silk weavers, for it reflected the new realities in their household order and provided a means of responding opportunely to these new realities. Consumers' cooperation

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<sup>36</sup>Chapter I, section I - B - 1.

<sup>37</sup>Graph 5, Chapter III.

was therefore the most successful form of voluntary association among the silk weavers of Lyons and the most popular form as well, in practice if not always in theory, throughout most of the 1860's. Moreover, the organization of consumers' cooperatives was almost exclusively the work of master silk weavers -- those weavers among whom the concern with household consumption and with declining entrepreneurship was strongest, and those most 'interested' in the position of women in their trade.

Consumers' cooperation appealed to the master weavers both as a means of restoring traditional roles and values and as a means of adapting to present conditions in their household economies in a new way. Its main appeal to tradition was its revival of the entrepreneurial role of the master. Consumers' cooperation sought to restore to the masters an entrepreneurial role in directing the affairs of cooperative groceries in their neighborhoods, as a substitute for their declining entrepreneurial role in household silk weaving. Cooperative entrepreneurship differed, of course, from the traditional entrepreneurship of the household by its collective character and by its application to a neighborhood retail enterprise, rather than to a household manufacturing enterprise. The focus on retail trade, to serve the needs of consumption, rather than on manufacturing, to serve those of production, was, of course, coincident with the master-weavers' greater attention to expenditures for consumption than to revenues from production in their own households.

The main evidence for this entrepreneurial appeal of consumers' cooperation is circumstantial. This was the excessive concern with small-group autonomy, focused around the neighborhood organization, among the cooperative groceries in Lyons. These groceries defended this autonomy even when the benefits of sacrificing some of it for wholesale purchase of food, for example, were very large. As a result,

consumers' cooperation remained a highly de-centralized movement, unlike producers' cooperation, which was highly centralized from the start. The few attempts made to organize the cooperative groceries into larger associations quickly failed. In 1865 a few prominent cooperative leaders tried to organize a centralized wholesale enterprise to lower food-purchasing costs for member societies and individuals and to help new consumers' societies form in neighborhoods without them.<sup>38</sup> This Vie à Bon Marché intended no interference with the internal affairs of its member organizations, but it failed to rally enough support even to register its statutes. Another attempt by several independent consumers' societies to form a similar "central commercial store" later in the same year also lost the interest of mosts of its initiators very quickly. Although the proposal stressed that the "central store must be created by the associations themselves, in order not to become for them a threat" and that these associations "must not however unite themselves so much to it, that they become no more than its branches and subsidiaries,"<sup>39</sup> only six of about twenty societies in Lyons agreed to make a few grocery purchases in common, in April 1867.<sup>40</sup> Most consumer cooperatives in Lyons were in fact so jealous of their autonomy that they prohibited their members from belonging to any other society with similar purpose.<sup>41</sup> One plausible explanation for this strong attachment to neighborhood

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<sup>38</sup>La Vie à Bon Marché, Appel aux souscripteurs, Statuts (Lyon: Pinier, 1865), AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870), No. 257.

<sup>39</sup>'Project de l'établissement d'un magasin central de commerce' in Eugène Flotard, "Bulletin Coopératif," Le Progrès, December 18, 1865.

<sup>40</sup>Flotard, "Bulletin Coopératif," Le Progrès, April 15, 1867.

<sup>41</sup>See, for example, Article 4-1 of Espérance Ouvrière, Statuts, 1866, ADR, 9U - Sociétés: Constitutions et modifications, August 23, 1866.

autonomy was the desire of the leaders and members of the individual cooperative societies to preserve the latter as instruments for their entrepreneurial ambitions.

These ambitions were originally limited to directing an enterprise for the purpose of reducing costs of food and other primary necessities consumed in the household. As indicated earlier, such an ambition addressed the present needs of the individual households with a collective solution to the problem of reducing household expenditures. Consumers' cooperation also provided members of the societies an instrument for extending their entrepreneurial ambitions even further, to the increase of earnings and not only to the reduction of costs. Their ambitions moved in this direction, however, only by sacrificing service to the community to individual profit-making. Such a sacrifice was a high moral price to pay in terms of the social ideology of cooperation, which theoretically substituted the promotion of social welfare for the pursuit of private profit. The attitude of cooperative groceries in Lyons towards profit-making was therefore fraught with ambiguity. Not all societies abandoned the original purpose of providing their members and their neighborhoods good food at relatively low prices, and not all of those which adopted profit-making policies followed the capitalist model entirely. But some cooperatives did become small capitalist enterprises and even justified their profit-making policies in their statutes as a means of "improving the position of the Members by having them participate directly in the profits [of grocery commerce]."<sup>42</sup> Among these was the Société Alimentaire du Quartier des

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<sup>42</sup>Article 1, Société commerciale alimentaire du Quartier des Tapis, Statuts, 1864, ADR, 4M - Police administrative - Associations, coops 9, Société alimentaire du Quartier des Tapis.

Tapis, from the statutes of which this quotation was taken. This society sold to outsiders but distributed profits from such sales only among its members. A few societies even went beyond profit-making to investment in government bonds, even foreign government bonds. In 1876, for example, the consumers' cooperative La Ruche of the First Arrondissement of Lyons had an investment portfolio valued at 35,900 francs, or 239% of the share capital of the enterprise.<sup>43</sup> Not only had the weavers in these societies re-discovered a field for their entrepreneurial ambitions, but this field was also apparently more lucrative, or its possibilities more grandiose, than its traditional field of entrepreneurship in silk weaving ever had been for any but the very fortunate few.

Consumers' cooperation thus revived traditional entrepreneurial aspirations in managing the entire budget of an economy, revenues as well as costs. While appealing to tradition in this manner, however, it also recognized present realities and provided a means of adapting to the latter in a new way. As noted earlier, the movement itself was originally a new kind of response to the present conditions of the consumption-oriented economy of the household. Another important response to present conditions concerned the sex balance of the household, favoring females over males in weaving and in other tasks. The response of consumers' cooperation to the enlarged feminization of the silk industry was the admission of females as member shareholders into the societies. Such female admissions were very rare in small workers' associations in Lyons before the 1860's. Women were almost never received as members in the small mutual aid societies and only rarely admitted into

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<sup>43</sup>La Ruche, "Situation," June 25, 1876, ADR, ibid., coops 10, la Ruche.

other voluntary associations. In 1850, the Chamber of Commerce of Lyons organized the large, city-wide Silk Workers' Society for Mutual Aid in part to make mutual benefits available to females in the fabrique. In contrast to the exclusively male traditions of most of the smaller associations, many consumers' cooperatives of the 1860's had female members, including both females in subordinate positions in the silk-weaving households, such as compagnonnes, and females directing their own household-shops, such as mistress dévideuses. Some female coopérateurs were among the wealthiest shareholders of the consumers' societies, at least according to the initial deposits on their shares. At least 6 of 103 shareholders of the Francs Coopérateurs in 1866 were female, and among these six, two were weavers and two were mistress dévideuses.<sup>44</sup> Four of the 152 shareholders of the Prévoyante in 1865 were weavers, and two of these deposited the exceptional sums of 334 francs and 298 francs respectively on their shares at the time of incorporation of the society.<sup>45</sup> Although the number of females in these associations was not large, neither absolutely nor relatively, the mere acceptance of females as member stockholders was a significant change from past practice in weavers' voluntary associations.

Other movements of association also reflected the feminization of the silk industry, especially the resistance movement. Women were involved actively with men in the organization of resistance societies in 1869 - 1870. Announcements of meetings for approving piece-rates and for deciding negotiating tactics often explicitly addressed male and female workers.

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<sup>44</sup>Francs Coopérateurs, Statutes and list of shareholders, 1866, registered at the Tribunal du Commerce de Lyon, ADR, 9U - Sociétés: Constitutions et modifications, September 29, 1865.

<sup>45</sup>La Prévoyante, Statutes and list of shareholders, 1865, registered at the Tribunal du Commerce de Lyon, ibid., September 29, 1865.

On November 26, 1869, for example, a note inserted in the local republican newspaper of Lyons, Le Progrès, called for a meeting of "male and female weaver workers" of plain cloths.<sup>46</sup> One meeting of journey fancy weavers during the strike of July included 100 women among 700-800 persons attending.<sup>47</sup> Strike associations in some of the trades auxiliary to weaving even elected women as officers. The male and female lissage workers, for example, elected a female president in June 1870.<sup>48</sup> Some auxiliary trades composed exclusively of females, such as the remetteuses, tried to form their own resistance organizations even in defiance of their employers, who were master-weavers for the most part.<sup>49</sup> Such full participation of women in industrial resistance and strike activity was clearly a departure from tradition. This acceptance of female activism was perhaps inherited from the cooperative movement, to which women, as we saw earlier, were admitted as independent shareholders. Such acceptance was also a recognition of the daily contribution and predominant role of female labor in nearly all the activities of the fabrique, from the least skilled task work to the most proficient and prestigious weaving.

In these ways, the movements of association among the silk weavers during the 1860's, especially consumers' cooperation, manifested the double character of change in their household economy and society. This change

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<sup>46</sup>"Chronique locale," Le Progrès, November 26, 1869.

<sup>47</sup>Police report concerning meeting of weavers of armures - façonnées at the Rotunde, July 10, 1870, AML, 12 - 47(B), Corporations: Ouvriers en Soie ... (1819 à 1870).

<sup>48</sup>Maurice Moissonnier, La première internationale et la commune à Lyon (Paris: Editions sociales, 1972), p. 184.

<sup>49</sup>Police reports 1086, 1089 and 1089bis concerning meetings of remetteuses and tordeuses in April 1870, especially meeting of April 10, 1879, AML, 12 - 47(B).

reduced the revenue-making function of the household economy and reduced or eliminated the entrepreneurial role of the master weaver in the weaving of silk cloths. At the same time, the home and shop of the master weaver became more familial and feminine, and this change provided the masters a means of preserving some household autonomy in the manufacture of silk cloths by facilitating its reduction of expenditures. Consumers' cooperation began as a means of achieving the latter more efficiently and more 'humanely' than mere exploitation of family and female labor achieved. Very quickly, however, some consumers' societies became exploitative in another way -- of those in their communities using their stores but not belonging to their societies. They became such as they extended the entrepreneurial ambitions aroused by cooperative grocery commerce from merely reducing costs of household consumption to increasing earnings of cooperative shareholders by making profits in a 'capitalist' fashion. From the perspective of the more egalitarian ideals of cooperative ideology, the only consolation to this revival of entrepreneurship by making profits was the societies' recognition that women too could make profits along with men through voluntary association. Resistance societies and consumers' societies which remained 'cooperative' (as opposed to 'capitalist') in their profit-sharing policies, also recognized a more egalitarian place for women in their movements, and thus acknowledged women's importance in the weaving of silk cloths and in the direction of dévidage in their industry.

## II. Moral Effects of the Changing Household

The emergence of a new kind of household order during the 1860's that was both more familial and more feminine than in the past did not

eliminate the concern about 'demoralization' expressed during the 1850's, when the old order of the household was dissolving. In particular, the 'demoralization' associated with the new household order, in the minds of the master-weavers, was as 'personal' and 'individual' as that associated with the disordered household of the 1850's. The former differed from the latter not so much in its nature as in its source. During the 1850's, personal 'demoralization,' especially that of the subordinate workers, was presumed to derive from sources external to the household itself. Such were the bad habits of journeymen and child workers acquired outside the household, in the inns and on the streets, and the external economic forces eroding the traditional authority of the master and the traditional sense of responsibility for work among subordinates. The household itself, and its head, the master weaver, in particular, were considered to have morally propitious influence on the members of the household. Because of this presumed good influence, one of the major aims of voluntary association during the 1850's, especially of mutual aid societies, was the preservation of the household order and of the master's presence at home even during illness, to 'moralize' the other members of the household.

During the 1860's, however, the household became itself a source of 'demoralization,' and the master weaver, not his subordinates, became the agent of moral disorder. 'Demoralization' seemed to derive as much from the exploitation of dependent and resident labor by the master-weaver as from the master's failure to protect his subordinates from the dissipation of the streets. This larger view of 'moralization' was evident in the attention given the conditions of female and child labor by publicists, political and business leaders and private benefactors. In 1852, Audiganne

had complained of the demoralization of subordinate female workers for whom the master showed no paternal concern. "The master-weavers act most of the time as if they were freed of all responsibility" of protecting these females from abuse as they passed from shop to shop.<sup>50</sup> In 1861, Jules Simon was more impressed by the master-weavers' exploitation of the labor of dependent female apprentices and journeyworkers within the household.

When one walks in the evening through the tortuous streets of the Croix-Rousse, and sees on the upper floor these illuminated windows behind which resounds the hollow noise of the barre, one's heart is grieved by the thought of these poor girls who have been there since six in the morning, poorly clothed, hardly fed, throwing and re-throwing the shuttle without rest or intermission. . . .<sup>51</sup>

In his article in the Revue des deux mondes in 1865, Simon described the sad lot of the dévideuses in similar terms. In June 1867, Ernest Pariset of the Chamber of Commerce of Lyons elaborated on the conditions of dévideuses living and working in the specialized shops of the mistress dévideuse:

It is of public notoriety that, in a large number of dévidage shops lodging is unsanitary. The female workers are squeezed into alcoves or lofts where air does not circulate and remains constantly sour; they usually sleep two in the same bed, on a straw mattress; they receive no attention for personal cleanliness and even lack the possibility of satisfying basic hygienic needs. . . .

The inadequacy of their food is attested by the numerous complaints brought each year before the Conseil des Prud'hommes. . . Sometimes poverty, sometimes a sordid greed makes the mistress dévideuse provide deplorable food. . .

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<sup>50</sup>A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon en 1852," Revue des deux mondes, 22ème année -- nouvelle période, XV (August 1, 1852), 513.

<sup>51</sup>Simon, L'ouvrière, p. 51.

Badly lodged, hardly fed, mistreated, our little girl ends by wearing out her health with excessive work. Whatever her age, she works regularly from five in the morning until nine o'clock at night, and this fourteen-hour day of work is followed, when there are many orders, by night work lasting until eleven o'clock and midnight.<sup>52</sup>

The female ovalistes in the silk throwing shops of the city lived in similar conditions.<sup>53</sup>

The result of such conditions and poor treatment within the household-shop was physical and moral dissipation. In 1875, the Chamber of Commerce claimed that "the excess work imposed on young girls placed in apprenticeship . . . produced numerous consumptives in Lyons,"<sup>54</sup> In the same year, the merchant-manufacturers Faye and Thevenin declared that the "conditions of child labor in apprenticeship are not bad in principle;" but "if the child suffers physically and morally it is rather because of bad treatment and immorality," presumably on the part of the master or mistress of the household shop.<sup>55</sup> In response to a question concerning "measures to protect the morality of women and young girls," the same fabricants observed that "if there are several (workers) of the two sexes, they are always under the eyes of the master or mistress of the shop who works alongside them; all depends on the morality of the masters."<sup>56</sup>

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<sup>52</sup>Pariset, Compte-rendu des travaux de la Chambre de Commerce de Lyon..., 1868, pp. 148-49.

<sup>53</sup>Moissonnier, La première internationale à Lyon, pp. 80-82.

<sup>54</sup>"Réponses de la Chambre de Commerce de Lyon," Enquête Parlementaire (Rhône, 1872 - 1875), Première Questionnaire A, I, AN, C 3021.

<sup>55</sup>[Réponses de] Mrs. Faye et Thevenin F[abric]ants de soieries à Lyon (Rhône," ibid., Troisième Questionnaire C XXVIII.

<sup>56</sup>Ibid., XXII

The major moralizing or demoralizing influence, in short, was the master or mistress chef d'atelier.

One prominent example of this influence was the case of a master weaver of Lyons accused of murdering the mother of his female apprentice with whom he had had an affair. The trial of this master received complete coverage in the daily paper "very much read" by the master weavers, Le Progrès,<sup>57</sup> and "was followed with growing curiosity by an audience ... in which the Croix-Rousse [the most concentrated silk-weavers' district in the city] provided the largest contingent."<sup>58</sup> The case dramatized to all masters immorality within the household associated with the feminization of weaving labor and with the exploitation of females and apprentices.

On March 12, 1865, between eight and ten in the evening, Claude, a "laborious, thrifty master-weaver" of the Saint-Georges quarter pushed over the banks of the river Rhône Marie, the concierge of his apartment building, with whom he had had "adulterous relations" for the past three years. The motive for murder was the pregnancy of her sixteen-year-old daughter Peronne. Marie had placed Peronne in apprenticeship with Claude in April 1864. "A few months later, the young female worker, seduced by her master, became pregnant. Her mother did not fail to notice her pregnancy shortly thereafter and to discover the author. Her anger burst forth against [Claude]." After a few unsuccessful attempts to abort the child, Peronne was sent away to Grenoble or Chambéry to give birth, but

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<sup>57</sup>Jean Gaumont, Le mouvement ouvrier d'association et de coopération à Lyon (Lyon: Avenir regional, n.d.), pp. 39-44. During the resistance movement of 1869 - 1870, Le Progrès announced meetings of societies as a forum for the 'airing of views' by resistance organizers in these societies. This is the best evidence of the importance of this newspaper among the silk-weavers.

<sup>58</sup>Le Progrès, May 30, 1865.

tension and anxiety reigned strong among Claude, the master-weaver, Peronne, the young apprentice weaving each day at his loom, and Marie her mother, the concierge of the building.

#### Peronne's pregnancy

created a situation full of trouble and violence for her mother and for their common lover. Passionate, jealous, the woman [Marie] pursued [Claude] with her outbursts and threats; she told him that she would reveal everything to his wife. Yet more sensitive perhaps to the loss of her lover than to the dishonor of her daughter, who had now become her rival, she nagged her incessantly, announced to her that she would get her revenge and seemed always ready to take a drastic step.

The fear of a revelation to his wife upset [Claude] terribly, the scenes made in front of the young Peronne, the tears he saw her shed agitated him even more. Several times he had made the woman [Marie] understand that if she did not calm down, he would kill her or poison her. On Thursday, March 9, 1865, on the occasion of the arrival home of one of the children [of the concierge], there was a family dinner in the house. Suddenly, at the sight of Peronne, the mother threw herself into a tumult of jealous fury, wept and tried to hurl herself onto her daughter, who was forced to leave. [Claude] appeared in the evening, had a discussion with the woman [Marie]. A rendez-vous was planned. Seeing the tears of Peronne, he told her: "Don't cry, it will end, I will put a stop to her for good."

It did end, indeed, in the murder in the Brotteaux. The case was tried by the Cours d'Assizes of the department of the Rhone on May 27. The jury found Claude guilty of murder but not guilty of pre-meditation. The judge sentences him to perpetual forced labor.<sup>59</sup>

Recognizing the possibility of the moral degeneration of the household, as in the case of Claude, and recognizing the importance of the personal behavior of the master in determining its moral climate weavers' voluntary associations during the 1860's continued to stress

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<sup>59</sup>Ibid.

moralization, in the personal sense, as one of their aims. They focused in particular on the 'moralization' of the master in order to restore to the household its salutary moral influence. The theme of 'moralization' remained ever strong in the mutual aid societies, which continued to demand (at least officially) guarantees of good behavior for new members and to exclude present members for scandalous conduct.<sup>60</sup> One of the most active small mutual aid societies of weavers, Society Number 114 of "Old Friends," recalled the moralizing intention of the organization in terms directed especially at behavior within the household, on its membership list for 1868:

The aim of our organization is to preserve ourselves from poverty, by joining our savings.

To achieve this end, we must correct ourselves of all vice, be industrious, good masters, good fathers and good husbands, keep peace within the household, remember that if we have children, we must offer them and also those who are entrusted to our care, examples of morality.<sup>61</sup>

Cooperation also stressed moralization, in this personal, individual sense, as one of its goals. In 1867, Eugene Flotard wrote that "the cooperative society is founded especially on personal qualities: they are, in a way, one might say, mutual schools of moral perfection; their credit rests on moral value, on the good conduct, of

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<sup>60</sup> See, for example, articles 4 and 39, Statuts, 8e Société de secours mutuels dite des Maîtres Tisseurs de la ville de Lyon (1866), ADR, 5X - 1954 - Sociétés de secours mutuels, No. 1 à 10, No. 8.

<sup>61</sup> Société des Vieux Amis (Tableau), 1868, ACCL, Petites sociétés de secours mutuels Carton 4 - Subventions accordées, Demandes de subventions, Allocations au 3e, 20e, 86e, 114e, 133e (1869).

the members who compose them,"<sup>62</sup> In 1864, Flotard, Beauvoir and Stephan Maynard, bookkeeper for several cooperative societies in Lyons, had made the distinction between the 'good' worker for whom cooperation was intended, and the 'bad' worker excluded from it, even sharper:

association is, for the good workers, the entry into a new era of contentment, of independence and of dignity. For the good worker, we say, because without perseverance, without respect for the rights of others and without a spirit of fraternity, there is no association which can endure. The lazy, the querulous and the drunkard are slaves of their vices. Liberty is not made for them, they are not worthy of it, they are incapable of it. However long their life may be, never will they enter the new world, for the city of the future belongs only to the just.<sup>63</sup>

Several consumers' societies manifested the same attitude by eliminating from consideration for membership any person who "does not enjoy a good reputation of morality."<sup>64</sup>

The cooperative movement extended this aim of 'moralization,' concerned with private life and household affairs, to 'moralization' concerned with social life and communal matters. Besides promoting private virtue, cooperation fostered social virtue as well, by advocating self-control, self-reliance, self-confidence and a sense of purpose. All of these were qualities necessary to organize effectively and to 'hold one's own' in the marketplace. All were required to enable the

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<sup>62</sup>Testimony of Eugène Flotard, "Enquête sur les Sociétés de Coopération," January 12, 1866, in Eugène Flotard, Le mouvement coopératif à Lyon et dans le Midi de la France (Lyon, 1867), pp. 394-395.

<sup>63</sup>E. Flotard, Beauvoir, Maynard, "Le Credit au Travail," Le Progrès, December 13, 1864.

<sup>64</sup>Article 4-1, Espérance Ouvrière, Statuts, 1866.

weavers to confront another radical change in their world of work deriving from the economic 'crisis' of the 1860's -- the change in their relations of class. Through its own interpretation of the older aim of 'moralization,' therefore, cooperative ideology united the masters' concerns for the transformed internal order of their households to their concern about the changing external order of their relations with the merchant-manufacturer. So different was this latter change from the experience of class in the past that it may be said to have caused a 'crisis' of class relations. The nature and origins of this 'crisis' form the subject of the next chapter.

## CHAPTER VI

### The Crisis in Relations of Class

In 1863, 1864 and 1865, almost half of the cases heard by the Conseil des Prud'hommes of Lyons were conflicts between master-weavers and merchant-manufacturers. Not since the coup d'état of December 1851 had this proportion been so high. In 1853 only 29% of the cases concerned masters and fabricants.<sup>1</sup> Apparently tension between the two classes had increased. Another sign of tension appeared in mid-October 1866. Rumors circulated around the city concerning a large demonstration by the weavers of the Croix-Rousse in front of the prefecture. "I receive contradictory reports" about the demonstration, telegraphed the Prefect of the Rhône, on October 15, to his superior in Paris, "but what is certain, is the irritation against the fabricants. It is against them that I fear demonstrations."<sup>2</sup> The prominent silk merchant Arlès-Dufour, writing the Opinion nationale a few days later, did not see "any feeling of hatred ... stirring up the workers against the fabricants, as was unfortunately the case in 1831 and 1834."<sup>3</sup> But even if the weavers

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<sup>1</sup>Jules Bonnet, Compte-rendu des Travaux du Conseil des Prud'hommes pendant la dernière période triennale (Lyon: Imprimerie Typographique et Lithographique de C. Bonnaviat, 1866) and Felix Bertrand, Report of President of Conseil des Prud'Hommes de Lyon to Prefect of Rhône, June 29, 1854, ADR, U - Prud'hommes de Lyon, Correspondance relative aux élections (1806 à 1870).

<sup>2</sup>Dépêche télégraphique, Prefect of Rhône to Minister of Interior, October 15, 1866, 1:30 A.M., AN, Fic III Rhône 10, Correspondance et Divers (1816-1870), dossier 'Ouvriers de Lyon', October 1866.

<sup>3</sup>Arlès-Dufour to Charles Sauvestre, Opinion nationale, October 18, 1866, as quoted in Le Progrès (Lyon), October 22, 1866.

had not reached the point of hatred and insurrection, their resentment against their employers was increasing.

This resentment had many sources, among them the remains of a perennial antagonism noted by nearly all contemporary observers. The economic conditions of their industry in the 1860's explained largely why such resentment became especially acute by 1866. These conditions, and the reactions of fabricants to them, made individual master-weavers more dependent economically on individual fabricants precisely at a time when the latter were encouraged to exploit this dependence by semi-legal trade practices or forced to abandon the interests of urban weaving to those of rural weaving. Such dependence and exploitation made the weavers 'conscious' of their traditionally subordinate class position in their industry and of their often hostile relationship with the fabricants--the 'other' class. The weavers' resentment against their employers was confused, however, by the competition between large fabricants and small fabricants in their struggle for survival or control in rapidly changing, very uncertain product and raw materials markets. The weavers had different objections against each type of fabricant and experienced their dependence upon each in a different way. Because of these differences, their conception of the 'other' class, against which the weavers defined their own class solidarity, was divided between their traditional notion, presuming subordination to the fabricants and confrontation with them, and a newer conception, presuming abandonment by the fabricants and the dissolution of any regular relationship between the two classes. The nature of class relations, and the weavers' consciousness of the identity of the 'other' class, were therefore transformed.

This transformation offered the weavers new opportunities and new reasons to organize voluntary associations, especially cooperative societies of production.

The weavers of Lyons became more dependent in the sense defined in Chapter I. They relied more intensively, or in greater proportions, on the orders of one or two fabricants at a time and thus became less like contractors, allocating their looms among several merchant-manufacturers, and more like laborers, employed by one or two alone. The statistical reason for this increasing dependence was the substitution of plain-cloth weaving for fancy-cloth weaving in the households of weavers. As we saw earlier, the number of plain-cloth looms per household tended to be smaller than the number of fancy-cloth looms, leaving fewer looms to allocate among several fabricants. The number of looms in fancy-cloth households also declined because of the large degree of unemployment in this category.

The actual extent of dependence in 1866 was in fact more severe than our data in Table 24, Chapter V suggest. Although plain-loom households had an average 2.27 looms per household and fancy-loom households had an average 3.00 looms per household, not all of the looms in most households were occupied at one time during the 'unemployment decade' of the 1860's. The number of occupied looms per household, indicating the actual degree of independence (or possible independence) of one fabricant, was therefore less than the total loom data suggest. This was especially true in fancy-loom households, on which the incidence of unemployment was strongest. As Table 33 below demonstrates, the proportion of fancy-loom households with only one occupied loom, exclusively at the service

Table 33:

Distribution of Silk Weavers' Households,  
by Loom Type, and by Number of Occupied  
Looms, Croix-Rousse Samples (1847, 1866)

Number of Occupied Looms per Household	<u>All HH</u>		<u>Plains HH</u>		<u>Fancies HH</u>	
	<u>1847</u>	<u>1866</u>	<u>1847</u>	<u>1866</u>	<u>1847</u>	<u>1866</u>
a. <u>Number of Households</u>						
1	48	45	26	32	18	9
2	71	57	18	33	48	20
3	34	12	7	7	26	5
4	12	5	1	2	10	1
5	<u>2</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>
Total HH's	167	120	52	75	102	35
b. <u>Percentage of Total Households</u>						
1	28.7	37.5	50.0	42.7	17.6	25.7
2	42.5	47.5	34.6	44.0	47.1	57.1
3	20.4	10.0	13.5	9.3	25.5	14.3
4	7.2	4.2	1.9	2.7	9.8	2.9
5	<u>1.2</u>	<u>.8</u>	<u>0.0</u>	<u>1.3</u>	<u>0.0</u>	<u>0.0</u>
	100.0	100.0	100.0	100.0	100.0	100.0
1 or 2	71.2	85.0	84.6	86.7	64.7	82.8
3,4 or 5	28.8	15.0	15.4	13.3	35.3	17.2
c. <u>Average Number of Occupied Looms per Household</u>						
	2.10	1.83	1.67	1.76	2.27	1.94

Sources: Sample, Recensement, Croix-Rousse, 1847, AML.  
Sample, Dénombrement, 1866, Lyon, 4ème Canton, ADR, 6M-  
Dénombrement

of one fabricant, rose from 18% in 1847 to 26% in 1866. The proportion of fancy households with only two occupied looms, in the service of two fabricants at most but probably only one in most cases, also rose between the two dates, from 47% to 57%. But the proportion of households with three or more occupied looms--those most likely, or most capable, of diversifying their orders among several different fabricants--declined from 35% to 17%. In sum, 83% of the fancy-loom households in the 1866 sample of the Croix-Rousse were relatively dependent on the orders of one or two fabricants at once, as compared with 65% in 1847.

Change in the extent of probable dependence on one or two fabricants was less evident in plain-loom households of the samples of the Croix-Rousse. In fact, the proportion of these households with only one occupied loom (dependent on one fabricant at a time) decreased from 50% in 1847 to 43% in 1866. This decrease was compensated, however, by an increase in the proportion of households with two occupied looms (35% to 44%). Households with three or more occupied looms represented about the same share of the sample for each year (15% in 1847, 13% in 1866). Thus the share of relatively dependent households with one or two occupied looms changed very little (84.6% in 1847, 86.7% in 1866). The major differences, for the sample of all households between the two dates, were the greater percentage of highly dependent plain-loom households and the equalization of proportional 'rates of dependence' between the traditionally different plain-loom households and fancy-loom households. Although the proportion of fancy-loom households with only one occupied loom (26%) remained less than the proportion of plain-loom households (43%), this difference was much weaker in 1866 (-17 percent-

tiles) than in 1847 (-32 percentiles). The proportion of relatively dependent fancy-loom households with only one or two occupied looms (83%), moreover, was hardly different from the proportion of plain-loom households in this group in 1866 (87%), whereas the difference between the two was clearly marked in 1847 (65% for fancies households, 85% for plains households). As fancy weavers' households had become more similar to plains weavers' households in their internal order of managing subordinate workers, so the two approached the same 'household type' in their external order of dependence on one or two merchant-manufacturers. Together, master-weavers of plain cloths and masters of fancy cloths became more like laborers in their actual relations with merchant-manufacturers and less like independent contractors.

This dependence on employment by one or two fabricants at the same time did not mean, however, that weavers relied on the same merchant-manufacturer for successive orders. Direct and indirect evidence suggests that many changed fabricants frequently. In their response to the Parliamentary Enquiry on the Conditions of Labor in France, in the early 1870's, the fabricants Faye and Thevenin explained the instability of the weavers in the 'houses' of each merchant-manufacturer as a regular condition of the industry of Lyons, related to different states of demand for the various types of silk cloth:

Our industry is subject to many phases, which do not permit us to have workers attached to our houses. It often happens that one kind of cloth sells, while another stops, and inversely, hence workers leave one employer, who has no work, to attach themselves to another who gives them work.

We do not know, when we give employment to a worker,  
how much time we can keep him.<sup>4</sup>

In answering another query in the same questionnaire, the Chamber of Commerce spoke of the "instability of workers who constantly change employers ..."<sup>5</sup> In February 1866 there were 450 merchant-manufacturers in Lyons,<sup>6</sup> nearly all of whom put out at least some of their orders among urban weavers. With this large number of employers and with the unstable conditions of employment, varying among the different categories and specialties of silk, such changes of fabricant must have been at least as great, if not greater, in 1866 as in the early 1870's, when the enquête was made. Such changes were probably not much less frequent among fancy-cloth weavers than among plain-cloth weavers. As noted in Chapter I, the advantages of remaining with a single fabricant, both for the master and for the merchant-manufacturer, derived largely from the skills, the knowledge and the investment required for weaving quality fancy fabrics.<sup>7</sup> Most of the fancy orders during the 1860's, however, were of the inferior sort--ornaments and nouveautés--demanding less skill and investment than the abandoned fancy dress cloths. Much of the demand for fancy fabrics, moreover, was for samples, most of which did not have a long

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<sup>4</sup>"[Réponses de] M[onsieu]rs Raye et Thevenin F[abric]ants de soieries à Lyon (Rhône)," Enquête Parlementaire Sur Les Conditions du Travail en France (Rhône, 1872-1875), Premier Questionnaire A, X, AN, C 3021, Enquête sur les Conditions du Travail en France (1872 à 1875), Région du Sud-Est (Rhône).

<sup>5</sup>"Réponses de la Chambre de Commerce de Lyon," Enquête Parlementaire, Premier Questionnaire A, XX, ibid..

<sup>6</sup>"Soieries (Fabricants et M[archan]ds de)," February 15, 1866, AML 12-47(B), Corporations: ouvriers en soie (1819 à 1870), No. 148.

<sup>7</sup>Chapter I, section I - C.

'style life' and therefore did not attract subsequent orders. There was consequently less reason for master and fabricant to remain together than in those cases, more frequent in the past, when several orders of a particular style followed its mounting.

Even though most weavers were not 'attached' to particular fabricants and probably changed fabricants often, their immediate contact was not equally frequent with all of the merchant-manufacturers for whom they wove. According to a survey of 125 fabricants in February 1866,<sup>8</sup> a few very large-scale fabricants dominated an inordinately large part of the market for weaving labor in Lyons at that time. The rest of the market was divided among a large number of smaller establishments, or rather establishments with a smaller number of occupied looms in the city. Because of the exceptionally strong presence of the few grands fabricants, weavers were likely to weave more often for one of them than for any single petit fabricant, even when they changed employers frequently. The relatively privileged access of the former to silk merchants probably also enabled them to offer more regular work than the petits fabricants. The only exceptions to this were the small-scale fancy-cloth and furniture-church-cloth establishments and those fabricants occupying few looms in Lyons but many in the countryside in 1866. Neither of these was deprived necessarily of easy sources of raw silk. The first offered little employment because of low demand for fancy silks. The second were probably not numerous. Putting out in the countryside usually required a large initial capital, as well as an established position in Lyons.

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<sup>8</sup>"Soieries (Fabricants et Mds de)," February 15, 1866, AML, 12-47 (B), No. 148.

Except in the plain-velvets category, the progress of rural weaving had not yet gone so far as to eclipse urban weaving entirely. The result, in any case, was the strengthening of chances of regular, hence more frequent, employment among the merchant-manufacturers with a larger number of occupied looms in the city. Tables 34 and 35 present evidence for this skewed distribution of the urban labor market between grands fabricants and petits fabricants in 1866. Table 34 shows more than half of the 125 fabricants surveyed (out of a total of 450 fabricants in the city) in the petit category, occupying thirty or fewer looms in the city (or an estimated fifteen or fewer workers). More than a fourth of the fabricants occupied fewer than twenty urban looms each (fewer than ten workers each). No more than an eighth had 200 looms or more (100 or more workers), but the average scale of this group was high; namely, 687 looms (345 workers). Three fabricants in the sample had 1000 looms or more each (500 or more workers). A large majority of fabricants therefore seems to have put out on a very small scale in Lyons, but the few fabricants who occupied many looms operated at a very large scale indeed.

Table 35 analyzes the extent of the labor market in the sample employed by fabricants in different scales of manufacture. Nearly a third of all sample weavers and looms worked for the three exceptionally large-scale establishments employing an estimated 550 to 800 workers each. That is to say, 2.4% of the 125 fabricants occupied 32.8% of all workers and looms in the sample. About 42% worked for large establishments employing 250 or more master-weavers each, and a majority (61%) worked for large and medium-sized establishments--those with 100 workers or more. Although the remaining 30% of weavers of small-scale establish-

Table 34:

Distribution of Sample of Fabricants According to the  
Number of Looms Occupied by Each, February 15, 1866

Estimated Number of Workers per Fabricant <sup>9</sup>	Actual Number of Looms per Fabri- cant (from source below)	Number of Fabricants	% of Total Fabricants in Sample
100 or more	200 or more	14	11.2
20 - 75	40 - 150	44	35.2
10 - 15	20 - 30	32	25.6
1 - 9	1 - 19	<u>35</u>	28.0
	Total Fabricants	125	} 53.6
	Mean Number of Looms	102.4	
	Median Number of Looms	30	

Source: "Soieries (Fabricants et M[archan]ds de)," February 15, 1866, AML, I2-47, No. 148.

<sup>9</sup>The numbers of workers were estimated from the number of looms by using the distribution of looms per household occupied by the maison Bellon in 1860 as a standard. According to this distribution the following percentages of looms were represented for each number of looms occupied per household:

(a) Number of looms per HH occupied by Bellon	(b) Number of looms in this category	(c) % of total looms occu- pied by Bellon
1	71	18.8
2	152	40.2
3	87	23.0
4	48	12.7
5	<u>20</u>	5.3
Total looms occupied by Bellon	378	

Source: Bellon Frères et Conty, Response of fabricants to request for accounts of balances with chefs d'ateliers c. 1860, ACCL, Soieries Carton 41-I Législation-Usages (an 8 à 1936), 13. - Pétition remise à l'Empereur, à son passage à Lyon, par les ouvriers en soie.

Each limiting value in each size category of the 1866 distribution of fabricants was multiplied by the five Bellon percentages of looms (column c) to compute the estimated number of looms in each household category (1 loom, 2 looms, etc.) for that limiting value. Dividing each of these five estimated numbers by the corresponding household size value (1,2,3,4 or 5) gave the estimated number of workers per household category. The sum of these estimated workers over all five categories provided a fair estimate of the total number of workers associated with each limiting value.

In general, the number of workers was computed to be one-half the number of looms, that is, an average of two looms per household of each worker was occupied by each fabricant. To simplify the computations, I used this value of one-half to estimate size categories for workers, in Tables 34 and 35.

Table 35:

Distribution of Looms and Workers in Sample  
of 125 Fabricants of Lyons in February 1866,  
According to Size of Establishment

<u>Size of Establishment</u>						<u>% of Total Looms in Sample = % of Total Workers in Sample</u>	
	<u>Estimated Number of Workers per Fabricant</u>	<u>Actual Number of Looms per Fabricant</u>	<u>Number of Fabricants</u>	<u>Estimated Total Number of Workers per Size Category</u>	<u>Total Number of Looms per Size Category</u>		
large	550 - 800	1100 - 1600	3	2100	4200	32.8	42.2
	250 - 350	500 - 700	2	600	1200	9.4	
medium	100 - 190	200 - 360	9	1185	2370	18.5	18.5
small	20 - 75	40 - 150	44	1917	3835	30.0	39.3
	10 - 15	20 - 30	32	407	814	6.4	
	1 - 9	1 - 19	<u>35</u>	<u>188</u>	<u>377</u>	<u>2.9</u>	
		Totals	125	6397	12,796	100.0	

Source: "Soieries (Fabricants et M[archan]ds de)," February 15, 1866, AML, 12-47, No. 148.

ments is not a negligible percentage, this percentage presumes the arbitrary definition of a small establishment as one with 150 looms or less. If 'small' is defined instead as equal or smaller than the median-size establishment in the sample, that is, 30 looms or less, only 9% of all workers and looms were in this category. They were employed by more than half of the fabricants in the sample. The larger establishments clearly dominated the urban labor market.

This domination by large-scale manufacture combined with frequent changes of employers suggests that weavers on the whole had a highly-developed 'class consciousness' in 1866, but of a very special kind. Since the most frequent, or most repeated, contacts were those with a single grand fabricant or with a few grands fabricants, their consciousness was not unlike that of peasants of a manor confronting the lord of the domain. They regarded their employer as a distant yet individual personality upon whom their livelihood depended, rather than as a mere agent of another class. They regarded themselves as a large mass collectively dependent on this single fabricant and therefore sharing a common class identity. This personalization of the fabricant and collectivization of themselves in relation to him increased to the extent that the weavers became attached to the house of the grand fabricant, weaving for it more or less regularly.

As we have just seen, however, such attachment to a single house was broken more or less frequently during the 1860's by employment by one of the many other fabricants, especially by the petits fabricants. Except in the fancy-cloth category and in the furniture-church-cloth category, their contacts with each individual petit fabricant were rare

and ephemeral. Another kind of class consciousness, that of the fabricants as a collective group merely represented by individual employers, emerged out of these contacts with petits fabricants. Their awareness of the fabricants as a class increased by such encounters because of the greater ability to discriminate among individuals fostered by frequent changes of employers. Such changes made the weavers' awareness of their own class character more complex, however, than their awareness fostered by relations with the grands fabricants. They encountered fewer weavers like themselves in the cages of the petits fabricants, but these fewer weavers had, like themselves, a wider range of experience of different fabricants than the weavers attached to a single large enterprise. In these cases, therefore, awareness of the mass character of the weavers' dependence emerged indirectly, through the sharing of personal experience, rather than directly, through immediate contact with a mass enterprise.

The complex character of class relations between weavers and fabricants in the 1860's was thus the result of the dual image of the fabricant--as an authoritarian individual personality (embodied in the grand fabricant) and as a mere agent of another class (embodied in the petit fabricant). This complexity was also the result of the dual notion of the weavers' own class character--as a mass laborer absorbed in a common work force (based on experience of one or few large-scale enterprises) and as an independent artisan facing conditions of employment similar to those of other independent artisans (based on frequent changes of enterprise, whether large or small). These dualities persisted throughout the decade as the uncertainties concerning product demand,

raw silk prices and regularity of employment and wage levels discouraged the grands fabricants and their weavers from establishing permanent relations and encouraged the petits fabricants to avail themselves of short-term opportunities opened by the general uncertainty of the economy.

These dualities were most acute in the manufacture of plain silks. Plain-cloth weaving provided the livelihood of the great majority of weavers in the 1860's. Even more important, the differences in scale of manufacture in this category were generally more severe than in other categories, as we saw in Chapter I. The largest establishment in the sample of 125 fabricants was the maison Bellon (1600 looms), a specialist in plain silks, and yet the median size of the fifteen plain-cloth establishments in the sample was among the smallest of all categories; namely, 30 looms.<sup>10</sup> The highly competitive product market for plain silks in the 1860's favored large-scale manufacture, primarily because of economies of scale and privileged access in obtaining raw silk. But such competition also made large-scale manufacture difficult to emulate by smaller manufacturers, because of low profit margins on each unit of cloth put out. Survival for small producers was therefore especially rude in the economic environment of the decade, as they competed among themselves and against the large producers for a share of old markets or for a portion of new ones. Because of these harsh conditions, they were not likely to heed to sentiment or even to justice in their relations with the master-weavers. Their employment of each individual weaver was ephemeral and not likely to be repeated in the near future. So there

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<sup>10</sup>Ibid.; Table 1, Chapter 1.

was no ostensible reason, beyond a praiseworthy moral scrupulosity, to feel any responsibility towards them. For these fabricants especially the weaver was primarily labor cost, which it was in their interest not only for gain but also for economic survival to reduce as much as possible.

One way to reduce this cost, at a time when the piece-rate for common plain silks was already near the level of subsistence, was by measuring the woven cloth in such a way as to 'discount' a portion of the wage owed for finished work. The use of sliding canes of arbitrary length--baffling measures to the (now) metric-minded weavers--and the refusal by some houses to admit the weaver to the measuring room facilitated such fraudulent 'snatching' for a few francs or centimes of justly-earned wage. A less fraudulent custom of 'forgetting' the last few centimeters of a newly-woven cloth, when these were less than 25 centimeters, was no less, in the view of the weavers, "an illegal means of competition used habitually to the detriment of those who are unaware of it ..."<sup>11</sup>

The métrage issue was not new, but rarely did it cause so much antagonism, individual and collective, between master-weavers and fabricants as in the 1860's. Between 1863 and 1865, it was the single most important cause of conflict brought before the Conseil des Prud'hommes.<sup>12</sup> In 1860, 1862 and 1865, different groups of master-weavers petitioned in turn the Emperor, the Minister of Agriculture and Commerce and the Prefect of the Rhône respectively to impose the meter as the exclusive unit for measuring silk cloths and to force fabricants to allow their weavers to observe the

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<sup>11</sup> Response of master-weaver prud'hommes to report on métrage issue by Jules Bonnet, president of the Conseil des Prud'hommes, Le Progrès, April 30, 1866.

<sup>12</sup> Bonnet, Compte-rendu des Travaux, p. 6.

measurement of their cloths.<sup>13</sup> In 1866, the newly-elected weaver prud'hommes took their case to the public, rebutting arguments of the president of the Council, the fabricant Jules Bonnet, in favor of the old measures. Apparently the fraudulent practices associated with métrage had become more frequent since 1860, as less secure or less conscientious fabricants tried to compensate their reductions in profits from lower fabric prices or from dearer raw silk, with reductions of the weavers' piece-rate 'on the sly.' The impoverished wage of the weavers, in the common articles where such practices probably occurred more frequently, made them more sensitive to even the smallest 'picking' at their wage.

But there was another reason for the acute preoccupation with the issue at this time. Changing fabricants frequently and finding themselves totally, or almost totally, dependent on each one during the period of their employment, the weavers were more vexed than in the past by the arbitrary employment and wage policies of each merchant-manufacturer. Every time the worker was employed by a new house, he was faced with a new method of measurement, for example, against which he could not protest. And if he demanded to have his fabric measured in his presence, as the law allowed, he was threatened with dismissal.

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<sup>13</sup> Petition of Tray, Desparros et al. to Emperor Napoleon III, August 1860, ACCL, Soieries Carton 41-I-Législation-Usages (an 8 à 1936), 13.- Pétition remise à l'Empereur, à son passage à Lyon par les ouvriers en soie; Petition of sixty-two master weavers to Minister of Agriculture, Commerce and Public Works, April 16, 1862, and petition of "chefs d'ateliers et ouvriers tisseurs de la ville de Lyon" to Prefect of Rhône, 1865, ACCL, Soieries Carton 22-II-Mesurage des soieries (an 13 à 1899), 1. - 2.

The exercise of this right becomes abnormal for those who frequent the service, and it is notorious that, out of fear of setting a precedent, they quickly settle accounts with a defiant worker by taking away his work, since he had the nerve to try to create an anomaly by going beyond the order established in the house.<sup>14</sup>

The main demand of the weavers was therefore the standardization of such policies among all the houses of the fabrique, so that unscrupulous fabricants could not obscure their theft behind arbitrarily-defined house policies, unfamiliar to the new worker.

In sum, we believe that exactness consists in the observance of the unit determined by the law. That this unit should be for all uniform, invariable and controlled.

Uniform, so that the worker employed by several fabricants no longer be forced to return to 100, 115 and 120 centimes at once, as happens.

Invariable and controlled, to prevent fraud or possible error which the sliding system facilitates.<sup>15</sup>

The standard towards which such house policies should conform did not emerge from merely abstract reflection. It was, in all probability, formed by the policies currently adopted in some of the more respected and established merchant-manufacturing houses of Lyons, especially those of the few grands fabricants with whom the plain-cloth weavers had more repeated contact than with any individual petits fabricants. In their response to the president of the Chamber of Commerce on the métrage question, in 1866, the weaver prud'hommes made it clear that not all fabri-

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<sup>14</sup>Response of master-weaver prud'hommes, Le Progrés, April 30, 1866.

<sup>15</sup>Ibid.

cants used fraudulent measuring to cheat the weaver of his wage. For example, they demanded measuring in the presence of the master-weaver, "as practiced in several houses."<sup>16</sup> Three years later a police agent reported weavers' hopes for the end of "the petit fabricant who merely speculates on low piece-rates." And the report continued: "they cite many strong ones who have made colossal fortunes in the last 15 years by reducing the piece-rates."<sup>17</sup> The small fabricant, in short, was a 'speculator' by trade and should "die."<sup>18</sup> Many large fabricants were not exempt from the same reproach, but this was an individual blight, not that of the group as a whole. These grands fabricants were in fact preferred to the group of petits fabricants. Some, if not all, of the 'honorable' houses in 1866, which admitted weavers to measuring, were probably those of grands fabricants. In the minds of the weavers, they were preferred largely because of the frequent and regular employment they could offer a large number of weavers of Lyons, and also because of their relatively favorable wages and employment policies which their superior position in labor, product and raw materials markets enabled them to extend.

Although the weavers may have preferred the few grands fabricants whom they knew to the many petits fabricants with whom their relations

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<sup>16</sup>Ibid..

<sup>17</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique de soieries," December 7, 1869, AML, I2-47(B), Situation de l'industrie lyonnaise: ... rapports sur la soierie et les ouvriers en soie ... (1819 à 1870), No. 315.

<sup>18</sup>Ibid..

were ephemeral, they were not without grievance against the former. The weavers resented the large profits made by "many strong ones" during the decade of unemployment and low wages for themselves. They resented the cheapening of thread by loading it with foreign matter in black dyes. Francois Gillet, the blacks dyer supported by C.-J. Bonnet, fabricant of silk cloths, developed some black dyes for Bonnet's Jujurieux products which did not require loading, but he hardly abandoned loading after this discovery.<sup>19</sup> Such practices made the weavers' own work more difficult and time-consuming and, according to the weavers themselves, ruined the high reputation of the fabrique of Lyons.<sup>20</sup> The weavers also regarded the increasing involvement of fabricants in other activities--dyeing, throwing, spinning and commerce in silk thread--as 'speculation' harmful to the smooth operation of the industry and therefore to the livelihood of the workers. "What is killing the fabrique," said the weavers in 1866, "is the loading of the thread during dyeing and speculation, since raw silk does not reach the state of manufacture before having passed through the hands of five or six speculators. The fabricant becomes more and more a merchant while ceasing to be a fabricant." The weavers cited the fabricant Croizat of Lyons, for example, who "earned 150,000 francs last year by speculating on raw silk."<sup>21</sup> In 1869, such 'speculation' by

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<sup>19</sup>Michel Laferrère, Lyon: ville industrielle (Paris: Presses universitaires de France, 1960), pp. 147-152.

<sup>20</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, Sur la situation de la fabrique des étoffes de soies au 4e Trimestre Xbre 1866," December 8, 1866; "Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soie," June 8, 1867, AML, I2-47(B), Nos. 301, 304.

<sup>21</sup>"Rapport à Monsieur Delcourt," December 8, 1866, AML, I2-47(B), No. 301.

the fabricants and to the detriment of the weavers of Lyons."<sup>26</sup> The weavers of Lyons felt their position of disadvantage most acutely in periods of unemployment.

In moments of unemployment the worker of the city is completely inactive and cannot live except by his savings, while in the countryside he can work in the fields... It is these considerations and the cheaper life outside the city which explain the progressive decline of workers in Lyons and, on the contrary, a very large increase in the countryside.<sup>27</sup>

What made countryside weaving especially painful to the weavers, and what directed so much of the weavers' resentment against the grands fabricants themselves, was the apparent lack of concern on the part of the latter for the plight of the urban weavers. These fabricants gave greater attention to the rural sector and left the urban weavers to their own resources. The latter were employed when conditions of demand permitted, to increase profits at the margin, but immediately released when the market threatened to turn around, so that rural weaving could continue without interruption. Before 1850 the countryside was a mere adjunct to the city. By 1860 these roles were reversed, the latter becoming the vassal of the former. Not even the most 'honorable' fabricants, so it seemed, felt as responsible for the welfare of the urban weavers, or of the economy of the city, as they had once been. They directed most of their attention to their rural weavers. The weavers of Lyons, in short, felt increasingly abandoned.

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<sup>26</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique," June 7, 1869, AML, 12-47(B), No. 313.

<sup>27</sup>"Réponses de la Chambre Syndicale des Soieries de Lyon," Enquête Parlementaire, Premier Questionnaire A, Observations, AN, C 3021.

fabricants delayed the return of prosperity following a large harvest of raw silk.

The harvest of raw silks being good this year, very good even, there is lots of silk, the likes of it have not been seen since 1849. As a result the silks fell in price by 25, 30 and 35 francs per kilo but then rose again by 10 to 15 francs shortly thereafter. It is the result of speculation. It causes a kind of torpor in the fabrique which hurts manufacture as it is prolonged.<sup>22</sup>

The weavers regarded as 'speculative' even certain practices of inventory management to minimize losses due to reductions in the market price of woven cloth. They considered such practices dependent on the reduction of their piece-rates, thus saving the fabricants a loss at their expense. In December 1866, they accused the very reputable maison Bellon of engaging in these practices and thus becoming a 'speculator':

Two years ago, Mr. Belon sold 10 to 15,000 francs of fabric at 5 francs per meter. At this price he lost 25 centimes per meter, but he was able to have as much woven at 25 centimes less per meter, and he replaced his merchandise that was getting old in his storerooms and that could have caused him a considerable loss in a short time. Such are real evidence that the fabricant is becoming more and more a speculator.<sup>23</sup>

Becoming a 'speculator' was no tribute. In fact, it was unworthy of the status and renown of the merchant-manufacturer of Lyons, compromising his honor in the world of industry and commerce, but especially in the eyes of his many weavers. "Because of this speculation on raw silks," wrote

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<sup>22</sup>"Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique," September 7, 1869, AML, I2-47(B), No. 314.

<sup>23</sup>"Rapport à Monsieur Delcourt," December 8, 1866, AML, I2-47(B), No. 301.

the police agent during the period of 'delayed prosperity' in 1869 and echoing the sentiments of the weavers he observed, "many fabricants are losing their old renown of fabricant to become commerçants."<sup>24</sup>

The strongest grievance against the large fabricants, however, was putting out silks in the countryside. Many weavers regarded this as the worst example of their new 'speculative' attitude. Not only were they ruining agriculture for their own personal profit, but they were also killing industry in the city, thus threatening to reduce the city itself to insignificance.

It has often been repeated that Lyons was the second city of the Empire, by its commerce and its population, but if the fabrique of silk cloths had disappeared in large proportions, Lyons would have become insignificant. That is what the experts say; and they added, when the fabrique began to migrate to the countryside: All the better. Louis Philippe said that the weavers were revolutionaries.<sup>25</sup>

The weavers knew, moreover, that their own wages for common plain and velvet cloths would not be so low nor their employment so uncertain, in a period of high demand for plain silks, were rural labor not competing against their own on more advantageous terms both for the rural weaver and for the fabricant of Lyons. In 1869 they complained that "these people of the countryside have an easy lot, paying less for rent and food and nearly all possessing a small piece of land. It is said that luxury is taking over among them and this is to their advantage and to that of

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<sup>24</sup>"Rapport à Monsieur Delcourt," September 7, 1869, AML, 12-47(B), No. 314.

<sup>25</sup>"Rapport à Monsieur Delcourt," December 8, 1866, AML, 12-47(B), No. 301.

Two 'innovations' in the organization of silk weaving in the countryside re-enforced this sense of abandonment, especially in times of crisis. These were the counter and the factory. The Chambre Syndicale des Soieries explained the counter in its response to the enquête of the early 1870's:

The fabricant has in a small city or village a counter for the service of workers whom he employs in the surrounding area. He furnishes the worker with the loom and all the implements needed for weaving, he gives him the warp and weft silk all ready to be woven, unlike what takes place in Lyons... These advantages offered the worker of the countryside allow the fabricant to pay a lower piece-rate, all the accessory costs being at the expense of the fabricant; the worker, when he has finished his piece, brings it to this counter, which sends it immediately to the house in Lyons.<sup>28</sup>

In the city, on the contrary, the "master-weaver must furnish at his expense rent, heat, lighting, depreciation of the loom and gears, dévidage and cannetage of the weft; in sum, all the expense of preparatory work necessary for weaving."<sup>29</sup> Thus the fabricant had much less personal investment in fixed capital and preparatory operations in the city than in the country. As a result, he had much less interest in keeping the master-weaver active. The weaving factory represented an even larger investment of the fabricant's own resources, an investment which increased with the mechanization of weaving in many such factories of the Lyons region after 1870. To these factories, nearly all of which were in the countryside as well, the fabricant gave priority in allocating production among the three sectors--urban domestic, rural domestic, and rural factory.

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<sup>28</sup>Ibid...

<sup>29</sup>Ibid...

The fabricants of the Chambre Syndicale des Soieries made no secret of the low priority they accorded the first sector in periods of economic crisis:

When these moments of unemployment arrive, they strike the workers of the city more directly. Since the fabricant has no commitment to them, he begins to make them wait for work several weeks before interrupting what he has manufactured in factories or on looms installed in the surrounding departments, because he has every interest in maintaining these organizations of work.<sup>30</sup>

The personal interest of the fabricants of Lyons in their rural weaving enterprises was best illustrated, however, by the paternalism towards factory weavers on the part of some of the most renowned merchant-manufacturers. This paternalism was unlike any ever known in the city. The fabricants C.-J. Bonnet at Jujurieux (Ain), J.-B. Martin at Tarare (Rhône), Montessuy-Chomer at Renage (Isère) and the Durand brothers at Vizille (Isère), for example, all set up factory dormitories offering not only long-term employment but also food, health care, recreation, education, religious training and savings facilities to their female workers. The Bonnet factory at Jujurieux provided the most striking example of this kind of paternalism. It included, along with its shops for cocoon spinning, for silk throwing and for cloth weaving, dormitories and refectories, reading and recreation rooms, a garden and a chapel. Bonnet accepted only single women as workers, either young girls or widows without children.<sup>31</sup> Girls aged 13-15 years contracted for three years as apprentices, and older women were employed for an eighteen-month period.

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<sup>30</sup>Ibid., Deuxième Questionnaire B, IX.

<sup>31</sup>Louis Reybaud, Etudes sur le régime des manufactures. Condition des ouvriers en soie (Paris, 1859), p. 200.

They lived a strictly regulated life under the watchful eye of nuns, who never let their charges out of their sight. Their daily schedule included time for prayer and recreation besides work at the loom or elsewhere in the shops. Sundays were devoted entirely to religious services, catechism lessons and organized leisure-time activities. The latter included promenades with the nuns when weather permitted, or group readings inside when weather was bad. Reading and writing exercises also formed part of these activities.<sup>32</sup>

The young apprentices were kept in strict isolation from the outside world during most of their three years, even from the small-town world of Jujurieux. They could leave to visit home only every six months, and outsiders could attend services in the chapel only on special occasions, such as marriages. Other employees of the establishment, especially males with whom the apprentices had contact, were chosen "with great care." Life in the Bonnet factory was, in short, the life of a convent rather than that of a simple shop, and the religious and moral fervor of the apprentices was carefully nurtured and protected from distracting outside influence. The products of this regime were known to be ideal wives for "cultivators and men of crafts living nearby." Besides the dowry accumulated in annual stipends and occasional premiums for good work, "there is an assurance of aptitude and virtue... which is for their domestic tranquility a guarantee rarely deceived."<sup>33</sup> The marriage of one of the Bonnet workers was an occasion of great celebration for the entire factory

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<sup>32</sup>Jules Simon, L'ouvrière (Paris: L. Hachette, 1861), pp. 52-55.

<sup>33</sup>Reybaud, Etudes ... Condition des ouvriers en soie, p. 203.

community. No "other festival moves their hearts so deeply." Bonnet himself attended the ceremony, sometimes presiding over the taking of vows beside the priest, and was even known to seek out a suitable marriage partner for a worker in his establishment.<sup>34</sup> The person of Bonnet hovered over this community as its paternal benefactor. The "name of this good man is on all tongues," wrote Reybaud.<sup>35</sup>

Other fabricants set up similar 'moralizing' factories in the countryside. J.-B. Martin of Tarare, manufacturer of peluches, provided the 400-800 apprentices whom he employed in his shops with meals, organized recreation, and even lessons in reading, writing and arithmetic.<sup>36</sup> The Durand brothers of Vizille and the Montessuy-Chomer firm of Renage, both in Isère, built dormitories and refectories for their female workers, provided medical facilities, including the services of doctor and pharmacist, provided a school for young girls and set up pension funds, loan facilities and even interest-bearing savings accounts.<sup>37</sup> The Durand brothers also built lodgings for married workers.<sup>38</sup> Both establishments employed nuns to staff the dormitories, medical facilities and girls' schools, and chapel and chaplain were central to these institutions. The

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<sup>34</sup>Ibid., p. 204.

<sup>35</sup>Ibid., pp. 201-202.

<sup>36</sup>Ibid., p. 204.

<sup>37</sup>ADI, 162. M. Organisation du Travail, 3. Correspondance générale, statistique; travail des adultes, livrets d'ouvriers, divers. 1853-1855; "Réponses de Montessuy-Chomer," Enquête Parlementaire Sur les Conditions du Travail en France (Isère), Premier Questionnaire A, Observations, AN, C 3021, Enquête sur les Conditions du Travail en France (1872 à 1875), Région du Sud-Est (Isère).

<sup>38</sup>ADI, ibid..

Durand brothers and the Perrigaux firm in Bourgoin (Isère) set up food, bread and clothing shops where workers could make purchases at low prices.<sup>39</sup> Such factory-dormitories thus combined the practical economic advantages of savings banks, mutual aid societies and consumers' cooperative societies, for which the weavers of Lyons depended exclusively on their own initiative and efforts.

This fabricant paternalism sometimes originated in strong religious devotion, both Catholic (Bonnet) and Protestant (Perrigaux), and in a sense of moral responsibility to the workers employed in these factories. But the desire to insure a docile, stable labor force for high-risk factory weaving of silk fabrics, as well as the need to allay fears of local populations about the moral effects of this new factory regime were not absent from the calculations of even the most genuinely devout merchant-manufacturers. The Bonnet establishment, for example, recruited its workers carefully from the mountains of Auvergne and Forez rather than from the plains of Bresse because the "worker of the mountain is in general more resigned, more docile, less demanding than the worker of the plain."<sup>40</sup> The Martin enterprise at Tarare had to belie the fears provoked by local artisans and peasants who tried to discourage mountain families from sending their daughters into the factory as apprentices.<sup>41</sup> Whatever their motives, these fabricants took great pride in their enter-

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<sup>39</sup> Ibid.; "Réponses de Montessuy-Chomer" and "Réponses de Perrigaux (Bourgoin)," Enquête Parlementaire (Isère), Premier Questionnaire A, Observations, AN, C 3021.

<sup>40</sup> Reybaud, Etudes ... Condition des ouvriers en soie, p. 202.

<sup>41</sup> Ibid., pp. 207-208.

prises and objected strongly to any criticism of them, especially criticism from within the city of Lyons. Their acute sensitivity on this matter in fact embraced the rural sector in general, which they considered their private domain, to be shielded against interference from the city.

This sensitivity was apparent in the reaction of several fabricants of Lyons putting out silks in the countryside to an article by an anonymous 'Y' published in the April 15, 1870 issue of Le Progrès de Lyon. The article listed several abuses by such fabricants in their relations with rural weavers, both domestic and factory weavers, and cited the demands of the latter for reform of these abuses presented in recent strikes in Isère. The article referred especially to the strike of the workers of the Lyons fabricant Gourd in Faverge, many of whom were female employees of his factory there. The anonymous author accused fabricants like Gourd of exploiting and deceiving their weavers:

Facing the rapacity of the fabricants, the weavers of the countryside saw that it was necessary either to obtain guarantees and an increase of wages or return to the fields. Such is what they did, while waiting for the fabricants to decide to renounce their facility of exploiting them and deceiving them.<sup>42</sup>

Several weeks later, a notice appeared in the same Lyons daily that "nineteen fabricants considering themselves defamed" had sued the paper for 10,000 francs. Among these fabricants were Gourd, Croizat fils and Dubost, Bonnet and Piot, and Alexandre Giraud, all of whom had factories in the countryside. The court awarded the plaintiffs 1000 francs for damages and decreed publication of its decision in Le Progrès plus nine

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<sup>42</sup>Le Progrès, April 15, 1870.

other newspapers.<sup>43</sup> This reaction to criticism was much stronger than that to similar accusations in the past concerning the policies of fabricants within the city of Lyons. The fabricants involved regarded such criticism as an affront to their honor. "We believe ourselves known well enough," replied Gourd, "to several thousand master-weavers whom we have employed successively in Lyons and who know that we are incapable of deceiving them to have to discuss such allegations."<sup>44</sup>

The fabricants were especially resentful of the interference by people of the city in their activities in the countryside. In an article of the Salut public, a Lyons daily favorable to the fabricants, an anonymous writer 'Z' expressed the hostility of many fabricants to such interference. "In any situation, no one has the right to intervene between the worker and the employer who are in agreement and satisfied with one another, and worthy of blame is every pressure, every attempt to create misunderstanding between them."<sup>45</sup> The main motive for putting out in the countryside, claimed this writer, was the desire for freedom from such interference--from agitation by striking workers, in other words.

If the countryside is today competing against the city, it is precisely because of previous strikes and because of the enrichment of the city. The fabricant who could produce or sell no longer, had to seek more reliable workers and cheaper labor... Industry needs tranquility. Not having it in the city any more, it goes seeking it in the calm of the fields or in the discipline of factories; and

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<sup>43</sup>Ibid., July 8, 1870.

<sup>44</sup>Response of Gourd et al. to article by 'Y', ibid., April 17, 1870.

<sup>45</sup>"Z", "Les Grèves ... Les Interdits," Le Salut Public (Lyon), March 22, 1870.

if it cannot find these essential elements, it emigrates or disappears entirely.<sup>46</sup>

The fabricants thus abandoned the weavers of Lyons in part because they were 'unruly.' Rural labor was more compliant, besides being less costly. The weavers' own attitude towards this abandonment was complex. It deprived them of their livelihood, especially in times of economic crisis and this alone made them hostile. They resented the material benefits extended rural weavers while they languished without work or were forced to beg from public and private charities for their next meal. But they wanted no part of the controlled regime of the factory nor even the various services of the counter, despite their often repeated complaints about their own professional expenses. For the weavers of Lyons, the master-weavers especially, were too independent-minded and wanted, above all, control over their own means of livelihood. "Defiance vis-à-vis the Industrialist who employs them, such is the rule of conduct of the workers; they want to remain independent."<sup>47</sup> The grand fabricant C.-J. Bonnet extended the policy of distributing premiums for good work from his Jujurieux factory to his domestic weavers in Lyons. By the early 1870's, he was not "encouraged to continue this practice in Lyons, receiving no recognition from the workers and not even succeeding to instill in them the desire for greater production."<sup>48</sup> The ambivalent reaction of the urban weavers to their abandonment by the fabricants reflected the

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<sup>46</sup> Ibid., April 4, 1870.

<sup>47</sup> "Réponses de la Chambre de Commerce," Enquête Parlementaire, Premier Questionnaire A, XX, AN C 3021.

<sup>48</sup> Ibid., Deuxième Questionnaire B, III.

contrast between their objective dependence on the merchant-manufacturer and their self-image of the independent artisan.

It was this contrast which aroused their enthusiasm for the cooperative movement, especially for producers' cooperation promising to restore the urban craft to their own proprietorship. The central message of cooperation was self-help. This message 'made sense' to weavers who felt increasingly abandoned by the fabricants to their own resources and who wished to free themselves from dependence on the latter for their livelihood and welfare. The leaders of the cooperative societies of Lyons advocated self-help by proclaiming their intention of "achieving emancipation" by having "recourse only to themselves, to their own resources, acting on their own responsibility."<sup>49</sup> Such self-achieved "emancipation" meant in particular the attainment of autonomy for their class in the pursuit of their work. The priority given to producers' cooperation, at least in theory, demonstrated this concern for autonomy. Charles Beauvoir, for example, a cooperative activist in the Croix-Rousse weaving neighborhood, expressed the primacy of cooperative production in his assertion that "the association of production is the foundation of all others."<sup>50</sup> The silk weavers manifested the same priority by the special attention they initially gave to their producers' cooperative, the Association of Weavers. The commitment of the weavers to their Association was evident in

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<sup>49</sup> Mémoire adressé par les associations coopératives de la ville de Lyon, à MM. les membres de la Chambre de Commerce,' in Eugène Flotard, "Bulletin Coopératif," Le Progrès (Lyon), December 25-26, 1865.

<sup>50</sup> Beauvoir, "Les divers modes et les moyens les plus directs d'arriver à la consommation," Le Progrès, September 5, 1864.

their reproach of their own elected prud'hommes in 1865 for not having taken active part in its formation and the subsequent election of the list of masters most strongly committed to it, including some of its administrators.<sup>51</sup>

The 'moral' ideology of cooperation--its advocacy of what has been called 'moralization'--also stressed the virtue of self-sufficiency at this time when such emphasis was especially 'relevant' to the weavers' actual class situation. Cooperative morality referred not only to the private virtues associated with home life and personal relations, nurtured by the mutual aid movement, but also to the 'public' virtues of self-reliance and self-discipline associated with effective organization and with success in business. In 1865, representatives of the cooperative societies of Lyons spoke of the day when "thousands of workers, all probe, laborious, thrifty, perseverant, will have succeeded, by dint of their hardship and privation, to amass a capital and to create a society on the success, the conservation of which will depend their future and that of their family."<sup>52</sup> Cooperative leaders sought to instill such virtues in the workers by organizing educational programs for their intellectual advancement. Jean Monet, organizer and director of the parent society of the Association of Weavers, was a leading member of the Professional Society for Education of the Rhône, the aim of which

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<sup>51</sup>Report of police commissioner to Monsieur le Sénateur (Prefect of Rhône) and to Monsieur le Procureur Impérial concerning elections to Conseil des Prud'hommes of Lyons, December 6 and 10, 1865, AML, F-Prud'hommes - Elections (1806 à 1871).

<sup>52</sup>Mémoire adressé par les associations coopératives, ' Le Progrès, December 25-26, 1865.

was the diffusion of instruction among workers.<sup>53</sup> Cooperative militants in Lyons also organized clubs for educational as well as recreational activities for workers during their leisure hours. Some of these, like the Beehive Club (Cercle la Ruche) were attached to established cooperative grocery stores--in this case to the Beehive store (la Ruche). Nearly all clubs set up a library and reading room with newspapers, journals and books on subjects ranging from classical literature to contemporary economics. Most clubs organized lectures, readings and discussions, and sometimes classes in basic arithmetic and grammar, in addition to their lighter singing and poetry gatherings.<sup>54</sup> At least one of these clubs, the Workers' Club of the Brotteaux, included training in administrative responsibilities in their program of activities, in order to prepare their members for the work of labor organization as well. The Workers' Club gave each of its members the opportunity to serve as an administrator on one of its several specialized committees such as the finance, instruction or library committee.<sup>55</sup> In this way it prepared the members for leadership positions in the cooperative movement and in the resistance movement later in the decade.

The revival of industrial resistance ironically presumed a different kind of class relationship between the weavers and the merchant-manufac-

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<sup>53</sup>"La Société professionnelle d'enseignement," Le Progrès, November 29 and 30, 1864.

<sup>54</sup>See the separate dossiers of les Cercles (la Ruche, Travailleurs des Brotteaux, Chefs d'atelier de Lyon, Solidarité coopérative) in AML, I2-45, Sociétés coopératives de production et de consommation (1849 à 1870) and Flotard, "Bulletin Coopératif," Le Progrès, February 3, March 23, 1868.

<sup>55</sup>Flotard, "Bulletin Coopératif," Le Progrès, February 3, 1868.

facturers than that which explained the appeal of cooperation and its moral ideology. This was the 'older' relationship based upon the need of each class for the other in the work of producing silk cloths and implying class confrontation aroused by the recognition of such mutual need. Instead of forcing the weavers to rely upon themselves for their work and livelihood and thus encouraging autonomy in the pursuit of their trade, this 'older' class relationship maintained the subordinate place of the weavers in the process of production, while recognizing that place as essential to the production process. The revival of traditional class relations was a sign, in short, of the end of abandonment of urban weaving to rural weaving, or at least of the weavers' sense of such abandonment, following the revival of prosperity in the silk industry in 1869. The weavers organized resistance societies to capture a greater share of the fruits of such prosperity within the traditional class structure of their industry. Trade unionism thus persuaded them to accept class dependence within their industry, rather than class autonomy in cooperative industry, by promising them a 'fair' share in the earnings of silk manufacture. Such persuasion was possible only when the economic crisis of the 1860's seemed to have passed.

The appeal of both movements to class solidarity--of cooperation to the solidarity of a class more dependent and more abandoned than in the past, and of resistance to the solidarity of a class restored to its traditional position of importance in the structure of industrial relations--implicitly presumed the unity of experience of dependence, abandonment, or importance among all the silk weavers of the urban fabrique. Because of this presumption of common experience, the 'class' ideology of

both movements ignored the divisions among the weavers in their practice of cooperation and in their organization of resistance. Some of these divisions, as we saw in Chapter IV, derived from differences in experience of social and economic change among the different categories and specialties of the silk-weaving craft. Other divisions were rooted in differences of neighborhood experience, creating conflicts among different silkweavers' neighborhoods that rended their unity of class in the city as a whole. Such conflicts intensified as the social movements of voluntary association, which dominated the collective life of the silk weavers throughout most of the Second Empire, receded in favor of the political movement at the end of the Empire and during the first years of the Third Republic. The story of this penetration of unified class solidarity by divisive neighborhood solidarity, and of the social and economic sources of the latter, is pursued in the next chapter.

## CHAPTER VII

### The Change in Neighborhoods of Silk Weaving

Change in the neighborhoods of silk weaving was the result of industrial expansion, population growth and urban renewal. This change separated these neighborhoods from one another by their different experience of each of these three trends. As a result of this separation, neighborhood solidarity no longer re-enforced class solidarity, as it had done in the early 1830's, but instead caused division within the class of silk weavers.

Neighborhood change occurred most rapidly under the Second Empire. This was a time of rapid growth for the city of Lyons, because of the mutually enforcing character of expanding industry, population and urban space. In industry, the newer chemical and machine manufactures increased their output and employment, even while silk weaving declined in favor of rural industry. Auxiliary sectors of silk manufacture, such as dyeing, silk throwing and finishing, grew as well, as the industry of Lyons concentrated on the preparation of thread put out for weaving in the rural households and factories. This industrial expansion encouraged a rapid growth in urban population, largely by stimulating immigration from the surrounding rural villages and towns. The demand for semi-skilled and unskilled labor in the newer manufactures and in the auxiliary trades of the silk industry, along with the demand for artisanal labor to service

urban growth, attracted labor from the countryside for permanent settlement and employment.

Growth of industry and population stimulated in turn the demand for urban renewal and also helped provide the supply of economic resources to undertake such renewal. The demand for renewal derived from the pressure of growing industry and population on the physical capacities of urban housing, factory and warehouse space and on traffic capacity. The supply of resources for renewal resulted from the capital attracted to the city by industrialization and from the expanding tax and municipal credit base provided by new industry and by a rising income-earning population, to finance the transformation of urban equipment. The public works program of the Second Empire undertook such transformation on a large scale and further stimulated migration of labor from the Lyons region into the city in search of regular employment. The annexation of three suburban towns during the same period -- the Croix-Rousse, the Guillotière and Vaise -- into the administrative orbit of the city underscored this transformation of urban space and extended its effects into some of the most concentrated silk-weaving neighborhoods.

The differential impact of industrial expansion, population growth and urban renewal on the various silk-weaving neighborhoods in the city became apparent in the different ideological preferences of their voluntary associations and in the differing susceptibility of movements of association in each silk-weaving neighborhood to political influence. Neighborhood thus influenced the aims and activities of voluntary association as a source of division rather than unity within the weavers' social movements in the city.

This division usually reflected the different social meanings of association to weavers with varying degrees of contact with workers in other trades or in other conditions of employment than their own, with whom they shared, most immediately, residential space.

## I. The Sources of Changing Neighborhood Environment

### A. Industrialization

Industrial expansion was the primary source of expansion and transformation of Lyons under the Second Empire. Some of the industries which grew at that time had been established earlier. Among the first of these was the locomotive construction industry. In 1829, Marc Séguin, one of the founders of the Compagnie du Chemin de Fer de Saint-Etienne à Lyon and builder of the first railroad line in France, set up the first plant for locomotive manufacture. Financial difficulties forced Séguin's company to abandon locomotives in the 1840's, and it sold its engine manufacture and repair facilities to two local machine-builders, Jean Claude Verpilleux and Alphonse Clément-Desormes. In 1844, Clément-Desormes founded the Ateliers de Construction et Forges d'Oullins. The Ateliers d'Oullins rapidly became one of the largest railroad locomotive and car maintenance shops in France.

Another industry established in Lyons before 1852 was boat construction. Along the Saône and Rhône rivers which meet in Lyons, carpenter-mechanics, forgers, boiler-makers and engine makers made various parts for boats in their small artisanal shops. Navigation companies, such as the Compagnie de navigation à vapeur sur la Saône, founded in 1827, organized the assemblage of these parts along the

same rivers, using labor hired specially for this purpose, in hulls imported from abroad. Boat construction thus provided work for several specialized artisan trades in the city as well as for assemblers working on the docks.

The chemical industry was a third major manufacturing activity which had received an early start in Lyons. The firms of Perret-Olivier and Coignet first took the initiative in the discovery and production of industrial chemicals. In 1836, Perret and Olivier together discovered the industrial application of the principle of extracting sulfuric acid from pyrites. In the acid-manufacturing plant of Claude Perret, they applied the new process on a large scale. In 1840, Perret purchased the rich pyrite mine at Saint-Bel, giving him exclusive control over the raw material for the manufacture of vitriol (concentrated sulfuric acid). The Perret-Olivier firm rapidly became the most important acid manufacturer in southern France. Coignet was another early leader in applying recent chemical discoveries to industrial processes. In 1818, Alphonse Dupasquier, an early partner of Coignet, used hydrochloric acid instead of boiling to extract gelatin from animal bones. This gelatin was especially useful for the finishing of cloths such as silks. In 1821 and 1822, Dupasquier and Coignet found another method of extracting gelatins for strong glues by means of vapor pressure. The Coignet-Dupasquier firm soon became a national leader in the manufacture of finishing gelatins and glues. Later the firm extended its range of products to black dyes, ammonia salts, Prussiate potassium and phosphoric acid -- the last a derivative of degelinated bones.

The expansion of these industries into new markets, new products and services and larger scales and concentrations of manufacture during the Second Empire was primarily the result of demand derived from the new railroad network penetrating Lyons and the rest of France in this period and from the expansion of the auxiliary sector of the silk industry. The same demand encouraged the formation of new industries as well. The railroad demand for locomotives and tooling-repair services stimulated the development of steam-engine manufacture. The latter in turn provided the basis for a new boat construction industry using the engines and the labor skills developed in engine manufacture as inputs for the manufacture of steamboats. The expansion of auxiliary silk trades, especially dyeing and finishing, benefited from the economic and technical improvements in the chemical industry and provided this industry with a large and regular local market for its products. Exchange of knowledge and expertise between the dyeing and chemical sectors helped make Lyons a major center of research in the field of industrial chemicals. The demand for labor in the newly-expanding industries of Lyons thus derived largely from two sources of industrial growth 'dominating' the economic environment of the city during the Second Empire -- the railroad and auxiliary silk trades. The mutually reinforcing character of the product demand and of the supply of skills and techniques derived from each sector enhanced the growth stimulated by each. Immigration of labor and capital and the rebuilding of the city promoted by these sectors and by the public works sector together enhanced even more the aggregate economic growth of the city.

The impact of the railroad on industrial growth in the city was most immediately evident. The construction of the major north-south trunk line, the Paris-Lyons-Mediterranean, and the building of the southeastern arteries connecting this trunk with the surrounding region, created more business for the engine re-tooling and maintenance shop of the Ateliers d' Oullins and created the market for the newly-established railroad car construction firm of the Chantiers de la Buire, founded in 1847 by J. Frossard de Saugy, one of the promoters of the Paris-Lyons-Mediterranean company. In 1854, the Compagnie du Chemin de Fer Grand Central de France purchased the Oullins shops from Clément-Desormes and undertook "the complete overhaul of the three first railroads of France."<sup>1</sup> The Paris-Lyons-Mediterranean company acquired these shops in 1861 and installed powerful hydraulic presses and equipment for casting iron and bronze locomotive parts. In January 1866, these shops together employed more than a thousand workers.<sup>2</sup> The Ateliers de la Buire also benefited from the railroad expansion of the Second Empire, concentrating on the manufacture of cars. Between 1857 and 1867, the Ateliers produced 700 cars per year.<sup>3</sup> In late 1866, during the peak of the unemployment crisis in the urban silk industry, these shops were so busy that they hired 130 new workers. On December 15, the single firm of La Buire had 950 workers in its shops.<sup>4</sup>

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<sup>1</sup>Michel Laferrère, Lyon: ville industrielle (Paris: Presses universitaires de France, 1960), p. 277.

<sup>2</sup>'Construction de machines à vapeur,' "Situation de l'industrie à Lyon au 15 Décembre 1866," AML, 12 - 47(B), Situation de l'industrie lyonnaise: ... rapports sur la soierie et les ouvriers en soie ... (1819 à 1870), No. 193.

<sup>3</sup>Laferrère, Lyon: ville industrielle, p. 278.

<sup>4</sup>'Ateliers de la Buire,' "Situation de l'industrie au 15 Décembre 1866," AML, 12 - 47(B), No. 193.

In March 1869, two smaller shops, one on the Perrache peninsula and one at La Mouche near the former town of La Guillotière, hired an additional 500 workers to service the P-L-M trunk line trains.<sup>5</sup> Railroad construction and service clearly had a strong favorable effect on the demand for labor in the city.

The railroad also favored the development of a new machinery manufacture in Lyons, that of steam engines. This was partly the result of the demand for steam locomotives and for engines to operate the heavy mechanical equipment of the railroad shops. The encouragement to steam-engine manufacture was also indirect, for the railroad also 'released' a supply of skilled labor suitable for employment in the high-quality steam-engine sector which developed. By building its major trunk line to the North along the Saône River, the P-L-M competed stiffly with water carriage there and weakened critically the boat construction trade on the docks of the Saône. Many of the nearby artisans employed fully or largely by this trade quickly lost their main source of employment. These artisans abandoned the quais of the Saône for Vaise farther north or for Guillotière and the Brotteaux, on the left bank of the Rhône, to seek work in the rapidly growing industries in these areas. These carpenters, boiler-makers and mechanics joined the forgers, founders and casters already settled in the Brotteaux-Guillotière region to form a pool of skilled labor admirably suited for the small-scale, high-quality steam-engine industry developing in the same region. After 1860, on the basis of

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<sup>5</sup>'Ateliers des chemins de fer, à Perrache et à la Mouche,' "Situation industrielle au Mars 1869," AML, I2 - 47(B), No. 207.

this steam-engine manufacture, a more sophisticated construction of river vehicles and equipment developed in turn -- steamboats, barges, river-dredging machines and canal construction boats, used in the piercing of the Suez Canal, for example.<sup>6</sup>

The steam-engine shops combined the talents of metallurgical workers, who produced top-grade steel and iron parts for small-engine precision and durability, and the skills of mechanics, boiler-makers and carpenters, who designed and assembled these parts into the finished product. Although smaller in scale than the railroad equipment and service shops and using artisanal labor for the most part, the steam-engine industry employed as many as four hundred workers in March 1869.<sup>7</sup> The industry prospered throughout most of the 1860's, and in late 1866 even offered employment to some of the workers recently laid off at the railroad shop of Oullins.<sup>8</sup>

The chemical industry of Lyons benefited from the expansion of the auxiliary trades in the silk industry, notably dyeing and finishing. These latter required large quantities of acids, gelatins and artificial coloring material and thus provided a growing market for the product of the local chemical industry. The chemical firm of Perret-Olivier, for example, probably supplied acids for many dyers of silk thread. The search for new colors in dyes after 1850 especially encouraged the development and production of artificial, chemically-based dyes. Prosper Monnet and Duruy, for example, produced the

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<sup>6</sup>Laferrère, Lyon: ville industrielle, pp. 290-291.

<sup>7</sup>'Constructeurs de machines à vapeur,' "Situation industrielle au Mars 1869," AML, 12 - 47(B), No. 207

<sup>8</sup>'Construction de machines à vapeur,' "Situation de l'industrie au 15 Décembre 1866," AML, 12 - 47(B), No. 193.

newly-discovered violet dye harmaline in great quantities after 1858 for the dyers of Lyons.<sup>9</sup>

Perhaps the most immediately fruitful interchange between the chemical and dyeing industries of Lyons was in the area of research. The best example of such interchange involved the discovery and exploitation of the prolific red fuchsine dye, generator of a wide range of other colors as well. Emmanuel Verguin, inventor of the fuchsine, was a student of Alphonse Dupasquier, inventor of the hydrochloric acid process of extracting gelatin from bones and partner in the reputable gelatin-manufacturing firm Coignet-Dupasquier. Claude Perret, the manufacturer of acids and probably a major supplier of the Coignet-Dupasquier firm, had introduced Verguin to Dupasquier. Verguin's discovery yielded another interchange with chemical manufacture equally fruitful. The fuchsine firm employed Prosper Monnet as its chief chemist. Monnet had been involved in the manufacture of the violet dye harmaline and after three years with the fuchsine firm set up his own colored-dye manufactory in 1868. After several transformations in the following decades, the Monnet enterprise developed into the internationally reputable chemical firm Rhône-Poulenc.<sup>10</sup>

#### B. Urban Renewal

The growth of the railroad and railroad works, of machinery manufacture, and of chemical and dyeing industries created a large demand for skilled and unskilled labor. A vast public works program undertaken simultaneously with the growth of these industries augmented even more this demand for labor, especially for unskilled labor. The program was the

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<sup>9</sup>Laferrère, Lyons: ville industrielle, p. 155.

<sup>10</sup>Ibid., p. 160.

special contribution on the Prefect Vaisse, the 'Hausmann of Lyons,' to the unprecedented expansion of the city during his joint tenure as mayor of Lyons and prefect of the department of the Rhône. In 1852, Vaisse commissioned the Poncet building company to construct the Rue Impériale (present-day Rue de la République) through the center of downtown Lyons. Just before the completion of this main artery, in 1858, he contracted with another company to construct the parallel Rue Impératrice (present-day Rue du Président Edouard Herriot). Vaisse added several smaller streets nearby as well, such as the Rues Grenette, Buisson, de la Bourse, and Childerbert. Such street building required the demolition of old structures as well as the construction of new buildings and thus involved a wide-ranging program of urban renewal. Such renewal included in addition the re-modeling of city hall, the construction and beautification of public squares and gardens in the downtown presqu'île district, and the construction of the Palais du Commerce, the largest architectural monument of Vaisse's program. Vaisse also engaged the Compagnie Générale des Eaux to construct a large water and sewerage system on the presqu'île. Renewal was not limited to the downtown district. Vaisse built several new quays along the Saône and the Rhône, the two rivers meeting in Lyons, and raised the height of existing quays to protect against floods. After the devastating flood of the Rhône in 1856, he had re-enforcing dikes built there to prevent such calamities in the future. Finally, he began the construction of the magnificent Parc de la Tête d'Or on the left bank of the Rhône, the best testimonial to taste in public building in Second-Empire Lyons. Nearly all of these projects were begun during the first decade of the Empire, and work continued on some of them throughout the 1860's as well.<sup>11</sup>

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<sup>11</sup>For a thorough description of the various public works in Lyons,

### C. Population Growth

The large numbers of laborers required for industrial expansion and urban renewal came primarily from the countryside and surrounding departments. The city of Lyons was long accustomed to immigration from these areas to provide the extra labor needs of the silk industry. Until the 1860's at least, the silk industry continued to attract rural migrants during its periods of prosperity. Yet the immigration induced by silk manufacture remained largely seasonal and did not encourage permanent settlement in the city. The new labor demand associated with industrial and urban development, however, promoted more permanent residence in the city than the silk industry had done in its recent past at least. Not only was the demand ever-increasing but it was seasonally stable. Occasional slowdowns in one industry were nearly always compensated by additional labor needs in other industries; and in the worst situations of industry, the public works easily absorbed labor temporarily unemployed by a more general slowdown. Industrial growth and urban renewal thus created the basis for a permanent increase in the population of the city, and not merely temporary increases associated with the 'floating populations' of the past.

Table 36 summarizes this increase in population during the Second Empire as compared with periods immediately preceding and immediately following. The increase was most notable in the first decade of the Second Empire. Between 1851 and 1861, the population rose by nearly double the increase of the previous decade. The rise was concentrated in the years 1856-1861. During these years, all the major public works of

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including the history of their construction and of methods of financing this construction, see Charlene-Marie Leonard, Lyon Transformed: Public Works of the Second Empire (Berkeley: University of California Press, 1961).

Table 36:

Population of Lyons, 1841-1876  
(for Lyons intra muros, as  
defined in 1852)

<u>Year</u>	<u>Total, Lyons</u>	<u>Quinquennial Change</u>		<u>Decennial Change</u>	
		<u>Numbers</u>	<u>%</u>	<u>Numbers</u>	<u>%</u>
1841	200,459 *				
1846	231,763 *	+ 31,304	+ 15.6		
1851	234,531	+ 2,768	+ 1.2	+ 34,072	+ 17.0
1856	255,960	+ 21,429	+ 9.1		
1861	297,251	+ 41,291	+ 16.1	+ 62,720	+ 26.7
1866	300,761	+ 3,510	+ 1.2		
1872	301,307	+ 546	+ .2	+ 4,056	+ 1.3
1876	321,596	+ 20,289	+ 6.7		

Sources: Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), IV, La Progression de la Population Lyonnaise (1851-1906). Tableaux 1-7 for 1851, 1856, 1861, 1866, 1872, 1876.

Statistique de la France, Population, 2ème Série, tome XIII, I. Résultats Généraux du Dénombrement de 1861 comparé aux Cinq Dénombrements Antérieurs, . Tableau No. 3, for 1841, 1846.

\* Population of Lyons, Croix-Rousse and Guillotière

Vaisse's renewal program were under construction, the central railroad station of Perrache was built (1856) and the P-L-M line merged into a single network (1857), steam-engine manufacture and river-boat construction began on the left bank of the Rhône, and the fuchsine firm was established (1857). These activities together required an enormous supply of labor. The silk industry required its largest work force during these same years as well, as the demand for silk cloths of all kinds reached its highest levels ever in 1859.

This extra labor came primarily from immigration, for, as Joseph Arminjon has demonstrated, the rate of natural increase in population actually declined during these years as a result of a fall in the birth rate, larger than the decline in mortality from improved hygiene in the city. Between 1831-1835 and 1861-1865, for example, the average annual number of births per 10,000 inhabitants in the department of the Rhône fell by 20%, from 332 to 265. The average number of deaths fell by 16% during the same period, from 274 to 231. As a result, the excess of births over deaths per 10,000 inhabitants fell from 58 in 1831-1835 to 34 in 1861-1865. During the same period, the average size of the population per 10,000 inhabitants increased by 46%, or 212 persons.<sup>12</sup> The population of the department thus expanded largely by means of immigration from other departments and from abroad. The role of immigration was probably even more important in supporting the rapid population growth of Lyons, the major city of the department, because of migration from the Rhône countryside as well.

Many of these migrants swelled the artisanal sectors of the urban economy, so that even after the influx of étrangers a large proportion of the working population remained artisanal. These new arrivals worked not only in the older building, textile and machine-goods industries or in the newer steam-engine construction, dyeing and locomotive maintenance industries as skilled or semi-skilled craftspeople, but also in the domestic food and clothing industries and commerce serving the needs of the rest of the laboring population.

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<sup>12</sup>Joseph Arminjon, La population du département du Rhône: Son évolution depuis le début du XIXe siècle (Lyon, 1940), pp. 119, 133.

The census of 1866, analyzed in detail by Yves Lequin in his recent thèse d'état, demonstrated this preponderance of artisanal labor among the working class of Lyons.<sup>13</sup> In the industrial sector of the city's economy, 17,787 establishments employed 131,573 persons (42% of the total population) and furnished the livelihood of an additional 69,423 persons (23% of the population) dependent on the first. This represented only 7.40 persons per establishment. In food and clothing commerce, the average size of the establishment was much smaller -- 1.97 persons. The number of persons depending on food and clothing commerce for their livelihood (workers and their families) was 23,725, or 8% of the total population. In other words, nearly three-fourths of the total population in Lyons in 1866 depended for their income on industrial and commercial enterprise employing, on the average, no more than eight persons per shop. Despite the impressive growth of large-scale enterprise in the city during the Second Empire, the labor which settled in the city remained predominantly artisanal.<sup>14</sup>

Yves Lequin's study of socio-professional mobility of workers in the Lyons region between 1851 and 1901-11 suggests some reasons for this maintenance of artisanal labor in a large urban population growing primarily through immigration. Lequin found that the proportion of migrants from rural areas who married in Lyons was mediocre in

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The population figure used for each five year period is the average of the figures of the first and last years of each period (that is, the figures of the two quinquennial censuses associated with each) and is therefore called an average. (Ibid., p. 117.)

<sup>13</sup>Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 a 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), I, 345-371.

<sup>14</sup>"1866: Dénombrement de la population de la ville de Lyon, ler à 5e Arr.," ADR, 5M.

comparison with the proportion from towns and small cities in the Lyons region.<sup>15</sup> He also found a decline in the tendency of urban workers native to the city of Lyons to follow the same craft as their fathers and a rise in the tendency of these same workers to take on spouses employed in different occupations than their own, when these spouses were also native to the city. Workers not native to the city of Lyons, however, tended to remain in the craft of their fathers, and women not born in Lyons tended to marry within their own craft as well.<sup>16</sup> Migrants married in Lyons thus tended to migrate in order to preserve the craft of their fathers, and they came primarily from towns and small cities rather than from the farms. They were artisans in short, moving into the city in order to remain in that state. They strengthened not only the artisanal character of the city but also the traditional attachment to a single craft. Natives of Lyons, on the contrary, weakened such attachment by pursuing other crafts than those of their fathers and by marrying outside of their own craft. Natives rather than migrants contributed most to the formation of an artisanal 'class' transcending the frontiers of a single trade by their socio-professional mobility from one trade to another, or by that of their wives.

Lequin's data do not, of course, take account of the large numbers of migrant labor which did not marry in the city and therefore is biased in favor of the settled workers. In all probability, the other migrants came more largely from the farms to work as day laborers in the construction of streets, parks, quays and buildings

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<sup>15</sup> Lequin, "Le monde ouvrier de la région lyonnaise," II, 77-80.

<sup>16</sup> Ibid., II, 85.

and in the unskilled occupations in the dyeing, chemical, metal and textile industries. Some even worked as journeyworkers or as auxiliaries in the small artisanal shops. These alone were genuinely 'proletarian' in their conditions of work as well as in their relations to their employers, but they constituted a minority of the working 'class' of Lyons in this period of rapid industrialization and extended urbanization.

## II The Differential Impact of Environmental Change

### A. The Impact on Neighborhoods in General

The growth of industry and population in the city did not affect all sections of Lyons in the same way. The growth was concentrated in the 'new' areas of the Brotteaux, the Guillotière, and Villeurbanne rather than in the 'old' areas of the presqu'île, the Croix-Rousse and the right bank of the Sône. (See map of Lyons on page 493) The population of the latter in fact stagnated somewhat between 1856 and 1876. During this twenty-year period, the population of 'New Lyons' (Brotteaux, Guillotière and Villeurbanne) increased from 83,000 to 143,000 (+ 72.3%), while that of 'Old Lyons' (arrondissements 1, 2, 4, 5) decreased from 221,000 to 218,000 (- 1.4%).<sup>17</sup> Although 'Old Lyons' remained the most populated section of the city, it contributed little to the growth of population over this period. Table 37 demonstrates this more precisely for the two major silk-weaving districts in these two sections of the city -- the Croix-Rousse in 'Old Lyons' and the Brotteaux-Guillotière in 'New Lyons'.

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<sup>17</sup>Arminjon, La population du département du Rhône, pp. 71-72.

Table 37

a. Population of the Croix-Rousse  
(in 'Old Lyons'), 1829 - 1872

Year	Population	Quinquennial Change		Decennial Change	
		Numbers	%	Numbers	%
1829	12,000	.	.	.	.
1836	17,934	+ 5,934	+ 49.4	.	.
1841	18,790	+ 856	+ 4.8	+ 6,790	+ 56.6
1846	19,587	+ 797	+ 4.2	.	.
1851	28,711	+ 9,124	+ 46.6	+ 9,921	+ 52.8
1856	33,000	+ 4,289	+ 14.9	.	.
1861					
1866	33,670			+ 4,959*	+ 17.3*
1872	33,222	- 448	- 1.3		

b. Population of the Brotteaux-Guillotiere  
(in 'New Lyons'), 1831 - 1872

1831	18,000				
1836	22,890	+ 4,890	+ 27.2		
1841	25,730	+ 2,840	+ 12.4	+ 7,730	+ 42.9
1846	35,500	+ 9,770	+ 38.0		
1851	41,528	+ 6,028	+ 17.0	+ 15,798	+ 61.4
1856					
1861					
1866	109,105			+ 67,577*	+162.7*
1872	112,598	+ 3,493	+ 3.2		

Sources: 1829 (31), 1836, 1841, 1846, 1851, 1856 (Croix-Rousse); Joseph Arminjon, La population du département du Rhône, son évolution depuis le début du XIXe siècle (Lyon, 1940), pp. 35, 72.

1866: "1866: Dénombrement de la Population de la Ville de Lyon, 1er à 5e arrondissements," ADR, 5M.

1872: Statistique de la France, Résultats Généraux du Dénombrement de 1872 (Paris, 1873), p. 249.

\*. Change and percentage change in population from 1851 to 1866.

Before 1850 population grew rapidly in both sections of the city. The Croix-Rousse developed more rapidly than the Brotteaux-Guillotière between 1829 and 1836 and between 1846 and 1851, but the latter compensated for this relative sluggishness by a more intensive growth between 1836 and 1846. Over the whole period from 1829-31 to 1851, the rate of population growth was not very different in the Croix-Rousse than in the Brotteaux-Guillotière. After 1850, however, the rate of increase in the Croix-Rousse declined while that of the Brotteaux-Guillotière spurted ahead. Between 1851 and 1872, population in the Croix-Rousse increased only 16%, while population in the Brotteaux-Guillotière grew by 171%. Population in the Croix-Rousse stagnated so much in the 1860's that it even lost some of its inhabitants between 1866 and 1872.

Besides differences in population growth during the Second Empire, these two sections of the city differed also in territorial size, population density and especially industrial character. Population density measured by the average number of persons per building was higher in the smaller territorial area of the Croix-Rousse (23.9 persons per building) than in the larger territorial area of the Brotteaux-Guillotière (16.1 persons per building).<sup>18</sup>

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<sup>18</sup>"1866: Dénombrement de la population de Lyon," ADR, 5M.



The working population of the Croix-Rousse, moreover, consisted predominantly of silk workers, while that of the Brotteaux-Guillotière included many more workers in other industries besides, notably in chemicals, dyeing, machine-goods and locomotive repair and construction industries. The Brotteaux-Guillotière was, in short, the region of industrial as well as population growth in the city. The attraction of this area for new industries had begun well before the time of the Second Empire. Between 1810 and 1827, for example, about twenty dyeing shops were set up here, most of them in the Brotteaux. Low rents, the availability of soft, temperate waters in underground wells, and the scarcity of space in the traditional dyeing districts of St. Clair and the quai Sérin all motivated this choice of location. The attraction of the area for dyeing enterprise remained strong until 1880, when a fourth of all dyeing establishments in the city were located there.<sup>19</sup> Dyeing favored the development of chemical industries in the same region. The first sulfur-manufacturing shop of Claude Perret, for example, was situated in the Brotteaux.<sup>20</sup> Dyeing and chemical firms, both large and small, were especially evident in the industrial landscape of the Brotteaux-Guillotière after 1850, when both industries experienced their most rapid growth.

Another industry which developed rapidly in the Brotteaux-Guillotière after 1850 was steam-engine manufacture. As noted earlier, the steam-engine industry developed from the merging of

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<sup>19</sup> Laferrère, Lyon: ville industrielle, p. 28.

<sup>20</sup> Ibid., p. 29, note 30.

skilled assemblage and mechanic labor formerly employed on boat construction on the Saône with artisanal metallurgical labor indigenous to the Brotteaux-Guillotière -- "founder-forgers, metal turners, very often of Dauphinois origin."<sup>21</sup> After 1860 this steam-engine industry "revived the Lyons docks for river construction," only now on the banks of the Rhône.<sup>22</sup> Steam engines made in the Brotteaux-Guillotière were also used in some of the nearby railroad car construction and locomotive repair shops. The shops of the Buire for car construction, for example, were located in the eastern section of the Guillotière. Farther south, the shops of La Mouche for locomotive maintenance added another large establishment to the industrial profile of the area. Along with the large chemical factories in the same area, these shops gave the Brotteaux-Guillotière industry a more factory-like 'air' than any other region of the city. Although artisan manufacture remained predominant there as elsewhere in Lyons, the newer form of industrial enterprise was making rapid headway in the two decades of the Second Empire.

Silk weaving and public works construction on the quays and dikes of the Rhône and on the Parc de la Tête d'Or also employed an increasing share of the population of the Brotteaux-Guillotière during the same period. Yet silk weaving was only one among several industrial pursuits in this area and not the predominant employer of the working population as it was in the Croix-Rousse, in the First or Fifth Arrondissement of the city. Table 38 shows the extent of this industrial diversity of the areas of 'New Lyons' (Third

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<sup>21</sup>Ibid., p. 288.

<sup>22</sup>Ibid..

Table 38

Distribution of Population  
of Lyons by Selected In-  
dustrial and Commercial  
Occupations, 1866

<u>Industry</u>	<u>Old Lyons</u>			<u>New Lyons</u>	
	<u>1st Arr.</u>	<u>4th Arr.</u>	<u>5th Arr.</u>	<u>3rd Arr.</u>	<u>3rd Banlieu</u>
Textile	24,779	23,008	17,367	10,559	1,028
Metal	440	201	532	2,779	59
Leather, Wood					
Furniture	922	527	1,440	2,661	244
Chemical	63	15	474	2,436	1,690
Building	2,187	834	3,219	11,933	1,321
Clothing	9,586	2,253	6,323	8,621	594
Food	2,632	1,094	3,052	6,117	596
Transport	320	320	2,273	5,554	671
Other	<u>1,515</u>	<u>160</u>	<u>1,396</u>	<u>4,926</u>	<u>1,122</u>
TOTAL INDUSTRY	42,444	28,412	36,076	55,586	7,325
<u>Commerce</u>					
Clothing	2,182	292	985	3,251	145
Food	1,870	1,249	2,714	4,495	440
Other	<u>1,181</u>	<u>368</u>	<u>1,625</u>	<u>3,473</u>	<u>261</u>
TOTAL COMMERCE	5,233	1,909	5,324	11,219	846
TOTAL, ALL TRADES	57,796	33,670	53,414	95,802	13,303

Source: "1866: Dénombrement de la  
Population de la Ville de Lyon,  
1er à 5e arrondissements,"  
ADR, 5M

Old Lyons

<u>Industry</u>	<u>1st Arr.</u>		<u>4th Arr.</u>		<u>5th Arr.</u>	
	<u>% Ind.</u>	<u>% All Trades</u>	<u>% Ind.</u>	<u>% All Trades</u>	<u>% Ind.</u>	<u>% All Trades</u>
Textile	58.4	42.9	81.0	68.3	48.1	32.5
Metal	1.0	.8	.7	.6	1.5	1.0
Leather, Wood Furniture	2.2	1.6	1.8	1.6	4.0	2.7
Chemical	.1	.1	0.	0.	1.3	.9
Building	5.1	3.8	2.9	2.5	8.9	6.0
Clothing	22.6	16.6	7.9	6.7	17.5	11.8
Food	6.2	4.5	3.8	3.2	8.5	5.7
Transport	.7	.5	1.1	.9	6.3	4.2
Other	3.6	2.6	.6	.5	3.9	2.6
<b>TOTAL INDUSTRY</b>		<b>73.4</b>		<b>84.4</b>		<b>67.5</b>
<u>Commerce</u>	<u>% Com.</u>		<u>% Com.</u>		<u>% Com.</u>	
Clothing	41.7	3.8	15.3	.9	18.5	1.8
Food	35.7	3.2	65.4	3.7	51.0	5.1
Other	22.6	2.0	19.3	1.1	30.5	3.0
<b>TOTAL COMMERCE</b>		<b>9.0</b>		<b>5.7</b>		<b>10.0</b>

New Lyons

<u>Industry</u>	<u>3rd Arr.</u>		<u>3rd Bahlieu</u>	
	<u>% Ind.</u>	<u>% All Trades</u>	<u>% Ind.</u>	<u>% All Trades</u>
Textile	19.0	11.0	14.0	7.7
Metal	5.0	2.9	.8	.4
Leather, Wood Furniture	4.8	2.8	3.3	1.8
Chemical	4.4	2.5	23.1	12.7
Building	21.5	12.4	18.0	9.9
Clothing	15.5	9.0	8.1	4.5
Food	11.0	6.4	8.1	4.5
Transport	10.0	5.8	9.2	5.0
Other	8.9	5.1	15.3	8.4
<b>TOTAL INDUSTRY</b>		<b>58.0</b>		<b>55.1</b>
<u>Commerce</u>	<u>% Com.</u>		<u>% Com.</u>	
Clothing	29.0	3.4	17.1	1.1
Food	40.1	4.7	52.0	3.3
Other	31.0	3.6	30.8	2.0
<b>TOTAL COMMERCE</b>		<b>11.7</b>		<b>6.4</b>

Arrondissement and Suburban Third) as compared with the traditional silk-weaving districts of 'Old Lyons'. (First, Fourth and Fifth Arrondissements) in 1866. In the arrondissements of 'Old Lyons,' nearly half or more than half of the population employed in industry worked in textile manufacture, the largest single source of employment. The second largest employer in all three arrondissements was the clothing trade, including tailoring, dressmaking and shoemaking. Textiles and clothing together occupied 81% of the industrial population of the First Arrondissement, 89% in the Fourth Arrondissement (Croix-Rousse), and 66% in the Fifth Arrondissement. On the left bank of the Rhône, in the heart of 'New Lyons,' textiles occupied no more than a fifth of all persons engaged in industry, and were only the second or third most important employer in this area. In the Third Arrondissement (Brotteaux-Guillotière), building was a larger employer, and in the Suburban Third (Villeurbanne) the chemical industry and building each employed more persons than textile manufacture.

In neither section of 'New Lyons,' however, did any single or couple of activities dominate the labor force in the overwhelming manner of textiles or of textiles and clothing as in 'Old Lyons.' The two largest sectors in each section (building and textiles in the Third Arrondissement, chemicals and building in the Suburban Third) did not employ even half of all workers in industry, and the three largest sectors, including textiles, employed only 56% in the Third and 55% in the Suburban Third. The remaining 44% of the industrial population was distributed more or less evenly among a wide range of other activities -- food, transport, metal work, wood

work, and chemical manufacture (in that order), in the Third Arrondissement, and transport, food, clothing, wood work and metal work in the Suburban Third. Food and clothing commerce, moreover, absorbed a handsome share of the work force employed in all occupations in 'New Lyons.' In the Third Arrondissement, each commercial sector employed more than the metal-working, wood work or chemical industries, and in the Suburban Third, food commerce was a more significant employer than metal or wood work.

The number of persons employed in trades other than textiles and clothing was not small in the arrondissements of 'Old Lyons' but was far less on the whole, both absolutely and proportionately, than in 'New Lyons.' Food industries and food commerce together employed about 7% or more of the working population in the First and Fourth Arrondissements, and building occupied 4% of the workers in the First Arrondissement and 2.5% in the Fourth Arrondissement. Both food and building trades serviced the local populations, most of whom were silk workers, and thus were mere adjuncts to the dominant industry of their sections of the city. An additional 2% of the working populations of these areas provided the wood-working services for construction and repair of the weavers' looms.

The First Arrondissement, on the right bank of the S<sup>â</sup>ône, had the most diversified employment structure of all the sections of 'Old Lyons.' Food industry, food commerce and building each employed more than 5% of the total working population, 4% of the same population was engaged in transport (primarily railroad work at the new station of Vaise), and 3% worked on wood. Nevertheless, even here textile manufacture, especially silk weaving, was a much more

important industrial activity than in the newer, growing areas on the left bank of the Rhône. Here as in the rest of 'Old Lyons,' most other industries served the needs of silk workers and only rarely worked for more distant, independent, extra-urban markets as did the chemical workers and machine-builders in 'New Lyons.'

Although industry was more diversified on the left bank of the Rhône, it did not engage as large a percentage of the population as it did in the older areas of the city. Only 58% of the residents of the Third Arrondissement and only 55% of those of the Suburban Third worked in industry in 1866, while 84% of the inhabitants of the Fourth Arrondissement and 73% of those of the First were industrial workers. Commerce, agriculture and rents from properties, bonds and other investments supported a larger proportion of the population in the newly developing areas than in the older weaving districts on the central peninsula. About 37% of the residents of the Third Arrondissement and 41% of the residents of the Suburban Third were merchants, farmers, property-owners or rentiers in 1866. Only 13% of the residents of the Croix-Rousse (Fourth Arrondissement) and 19% of the inhabitants of the First Arrondissement were in these occupational categories. In the Fifth Arrondissement, the population was less industrial (67%) and more commercial, agricultural or proprietary (23%) than in the other sections of 'Old Lyons,' but more industrial than the population of 'New Lyons.'

The arrondissements in 'New Lyons' were, in short, areas of sharp contrasts -- both social and occupational -- as well as areas of expanding population and industrial growth. Some of the wealthiest and most exclusive members of the old Lyonnais notables, both

aristocratic and bourgeois, resided in the chic quarters of the Brotteaux. Not very far from these quarters ugly shops and slovenly habitats huddled against the inundated dirt roads, sheltering their impoverished residents and recently uprooted arrivals from farms and nearby villages. In 1852, A. Audiganne described the populations of the Guillotièrre as "nomadic," "ill-reputed," and "vagrant," requiring constant police surveillance. "Don't look in this confused and floating medley for the workers of Lyons, the workers of the fabrique," noted the sociologist.<sup>23</sup> Crime was most frequent in these areas and yet, as we saw earlier, many of the workers living here were 'solid' skilled artisans who migrated from their native towns to preserve their craft. The effect of this mixture of different types of workers was great instability combined with a dynamic exchange of life-styles and traditions:

Here social fear rests largely on the unknown and on the disarray of a workers' environment not known before in Lyons, concentrated very rapidly and especially throwing workers with local traditions -- canuts, masons, tailors, etc. -- together with those of an entirely different sort, working in the new industries. On the one hand, it is the presence of a proletariat of the factory, on the other hand an extreme diversity which constitute the true originality of the Guillotièrre.<sup>24</sup>

The main feature of this originally was "the coexistence of an artisanal organization [of labor] and an industrial proletariat."<sup>25</sup>

Such coexistence contrasted most sharply with the self-enclosed community of the Croix-Rousse where nearly all of the resident

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<sup>23</sup>A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon en 1852," Revue des deux mondes, 22ème année -- nouvelle période, XV(August 1, 1852), 510.

<sup>24</sup>Lequin, "Le monde ouvrier de la région lyonnaise," I, 365-366.

<sup>25</sup>Ibid., I, 369.

population worked in a single domestic industry:

The working class of the Guillotièrè had no single appearance, and it was not mere chance that all observers of the period contrasted it with the Croix-Rousse ... The Third Arrondissement was a meltingpot where a multitude of people came into contact (with one another), from different occupational specialties and from different social ranks but were confounded in the same working condition, and where an industrial proletariat was undoubtedly formed.<sup>26</sup>

#### B. The Impact On The Neighborhoods Of Silk Weaving

The cleavage between the stagnating, mono-industrial Croix-Rousse and the growing, poly-industrial Brotteaux-Guillotièrè was especially significant in differentiating the 'neighborhood environments' of silk weavers. After 1850, urban weaving tended to concentrate increasingly in these two areas. Instead of strengthening the craft solidarity of weavers in the city, however, this concentration had the opposite effect. Because of the radically different social and economic character of their respective neighborhoods, weavers in the Croix-Rousse had a more limited, less frequent contact with workers of other crafts and conditions of employment than weavers in the Brotteaux-Guillotièrè. This division of social experience between weavers in the two sections contrasted strongly with the neighborhood solidarity of urban weavers in the early 1830's. In his recent study of the Lyons uprising of 1834, Robert Bezucha cited the formation of "distinctively working class neighborhoods -- entire quarters devoted only to weaving" between 1820 and 1834 as a major ingredient in the development of craft and class solidarity

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<sup>26</sup>Ibid..

among the silk weavers.<sup>27</sup> In 1834, the First and Fifth Arrondissements within the city and the Croix-Rousse outside formed these major weaving quarters.<sup>28</sup> After 1834, this "social and economic polarization" of urban weaving<sup>29</sup> became even more intense, as the Croix-Rousse alone absorbed an ever increasing proportion of looms in the city. The new element was the slow but certain development of weaving in the Brotteaux-Guillotière. Along with the Croix-Rousse, this new area absorbed a growing share of urban weaving at the expense of the First and Fifth Arrondissements. But in the Brotteaux-Guillotière, a wide range of other-industries emerged and developed besides silk weaving and gave this area its more diversified character of industrial activity. The Croix-Rousse remained a predominantly silk-weaving neighborhood and seems to have become even more exclusively devoted to this single industry than in the past.<sup>30</sup> Thus, as the weavers of the Brotteaux-Guillotière became integrated geographically into a more varied working environment, those of the Croix-Rousse became even more isolated from the laboring experience of the rest of the city.

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<sup>27</sup> Robert Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge: Harvard University Press, 1974), pp. 27-31.

<sup>28</sup> Ibid., pp. 30-31.

<sup>29</sup> Ibid., p. 27.

<sup>30</sup> In 1833, silk workers constituted 61% of the population of the Croix-Rousse, according to the census taken in that year (Ibid., p. 32, Table 5.). In 1866, textile workers (nearly all of whom were silk workers) formed 68% of the population of the same area. (See Tables 37 and 38 of this chapter.) Even allowing for a mild 'inflation' of the latter percentage as a result of workers employed in other textiles than silk in 1866 and not included in the percentage for 1833, silk workers (especially weavers) were a component of the population of the Croix-Rousse at least as important in 1866 as in 1833, and probably more important in the later year than in the earlier.

Table 39 traces this growing 'polarization' of urban weaving between the Croix-Rousse (Fourth Arrondissement) and the Brotteaux-Guillotière (Third Arrondissement) between 1829 and 1874. The table compares the geographical distribution of looms in the city by arrondissement (based on the 1866 definition of arrondissements) for 1829-1833 (1829 for arrondissements 1, 2, 5 and 1833 for arrondissements 3 and 4), for 1846 and for 1866 and the distribution of silk workers belonging to the 11,139-member Société civile de prévoyance et de renseignements des tisseurs de Lyon (weavers' resistance society) in 1874. The latter is not entirely comparable to the loom data because of the voluntary character of the resistance association and because the number of looms probably exceeded the number of active weavers belonging to the organization. Nevertheless, the geographical representation of weavers in the Société civile most likely reflects accurately enough the geographical distribution of weaving in the city, since most urban weavers joined this society and no section of the city seems to have 'joined' more intensively than any other. (See Appendix III.)

Table 39

Geographical Distribution of  
Silk Looms and Weavers in  
the City of Lyons, by  
Arrondissement As Defined  
in 1866

<u>Year</u>	<u>1829-33</u>		<u>1844-46</u>	
<u>Arrondissement</u>	<u>Total Looms</u>	<u>% All</u>	<u>Total Looms</u>	<u>% All</u>
1	5,623 (a)	22.1	8,787 (a)	29.5
2	5,068 (a)	19.9	2,658 (a)	8.9
3 (Brott-Guill)	2,300 (b)	9.0	2,600* (b)	8.7
4 (Croix-Rousse)	6,259 (b)	24.6	9,714 (c)	32.6
5	<u>6,241 (a)</u>	<u>24.5</u>	<u>6,066 (a)</u>	<u>20.3</u>
All (Lyons)	25,491	100.1	29,825	100.0

<u>Year</u>	<u>1866</u>		<u>1874</u>	
	<u>Total Looms</u>	<u>% All</u>	<u>Total Persons</u>	<u>% All</u>
1	8,015	24.2	2,129	20.1
2	643	1.9	94	.9
3 (Brott-Guill)	3,958	11.9	1,939	18.3
4 (Croix-Rousse)	14,053	42.4	5,344	50.5
5	<u>6,474</u>	<u>19.5</u>	<u>1,073</u>	<u>10.1</u>
All (Lyons)	33,143	99.9	10,579	99.9

- Sources: 1829-33: a. "Population de 1829 Pour 1830," AML, F2 - Fabrique de Soieries - Inventeurs - Statistiques (1811 a 1854)  
 b. "Recensement de Gasparin, Prefet du Rhone, 1833," reported in Arles-Dufour, Un mot sur les fabriques etrangeres des soieries, 1834, pp. 106 ff., 129 ff., in ACCL, Soieries - Carton 21 - Tissage de Soieries (Statistiques), Recensement des metiers a differentes epoques (1600 a 1844)
- 1844-46: a. AML, Recensement de Lyon, 1846  
 b. Same as 1829-33 (b)  
 c. AML, Recensement, Croix-Rousse, 1844-45
- 1866: M. Robin, "Situation de Fabrique," June 1, 1866, presented to Chamber of Commerce of Lyons in June 1870, Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1869, 1870, 1871, p. 101.
- 1874: Membership List of Société Civile de Prevoyance et de Renseignements des Tisseurs de la Ville de Lyon, 1874, in ADR, 10 M 2 (2) Associations des Tisseurs

\* Estimated

The data indicate the steady progression of weaving in the Fourth Arrondissement (Croix-Rousse), in absolute and relative terms, the growth of weaving in the Brotteaux-Guillotière, the slow decline in the First and Fifth Arrondissements (relatively in the Fifth), and the near total disappearance of the industry in the Second

Arrondissement of the central peninsula. In 1829-33, the First, Fourth and Fifth Arrondissements shared the urban looms almost equally, and the Second Arrondissement was not far behind these in number of looms. The Third Arrondissement (Brotteaux-Guillotière) was relatively unimportant. By 1874, the Fourth Arrondissement (Croix-Rousse) was by far the most important weaving quarter in the city, with half of the weavers and almost half the looms (according to indications in 1866). It shared this position with no other quarter. The First and Fifth Arrondissements still had sizable numbers of weavers, but their relative importance was much smaller than in the early 1830's. The Brotteaux-Guillotière, on the other hand, had grown from an insignificant weaving area to one rivalling the Fifth Arrondissement and threatening to outdistance even the First as a major silk-weaving neighborhood.

The weavers who settled in this newer area were largely plain-cloth weavers. Plain-cloth manufacture was in fact more common in the Brotteaux-Guillotière than in the older quarters of the Croix-Rousse or the First Arrondissement. In 1874, 91% of the weavers of the Société civile residing in the Brotteaux-Guillotière belonged to the plain-cloth category. Plain-cloth weavers accounted for no more than 72% of those members inhabiting the First Arrondissement and no more than 67% in the Fourth Arrondissement. (See Table 40) In this respect the weaving population of the Brotteaux-Guillotière was similar to that of the Fifth Arrondissement. Of the silk workers residing in this arrondissement and contributing to the treasury of the Société civile, 95% belonged to the plain-cloth category in 1874. The Fifth Arrondissement and Third Arrondissement

(Brotteaux-Guillotière) thus formed a 'periphery' of less skilled craft activity along the frontiers of the city, enclosing the more highly skilled 'core' neighborhoods of silk weaving in the Croix-Rousse and on the adjacent slopes of the First Arrondissement, where the more elegant products of the industry were woven. The Brotteaux-Guillotière in particular, bordering the plains of Dauphiné, thus served as a 'buffer zone' between the skilled craft of the central districts of the city and the ever more competitive unskilled craft of rural weaving in the villages of Dauphiné.

The similarity between Fifth and Third Arrondissements in types of cloth woven did not extend, however, to levels of wealth. Robert Bezucha described the Fifth Arrondissement in 1834 as the most poverty-stricken area of the city. "By 1834, the quarters on the right bank of the Saône housed the poorest canuts ... Villermé described the living conditions in this neighborhood as among the worst in all of Europe."<sup>31</sup> In 1866 this area was little better and perhaps even worse. Such was not the state of weavers' quarters on the left bank of the Rhône, especially not of those in the Brotteaux, (the northern portion of the Third Arrondissement). In a recent study of the geographical and social stratification of wealth in Lyons during the nineteenth century, Pierre Léon found that 84% of the real property value owned by artisans and workers in the silk industry for whom death inventories were registered in 1869 was situated in the Croix-Rousse and the Brotteaux; 36% was located in the Brotteaux alone, even though the proportion of wealth inventories registered in that section was only 13% of all inventories registered for silk

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<sup>31</sup>Bezucha, The Lyon Uprising of 1834, p. 31.

Table 40

Distribution of Silk Looms  
and Weavers by Kind of  
Cloth Woven in Each of  
the Five Arrondissements\*  
of Lyons in 1829-33,  
~~1844-46~~, 1873

<u>Arron-</u> <u>dissement</u>	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>Fifth</u>	<u>All Lyons</u> <sup>a</sup>
<u>Cloth Type</u>						
<u>Number of Occupied Looms</u>						
<u>1829-33</u>						
Plains	3,006	2,596		2,254	5,380	10,982
Fancies	1,166	808	?	3,416	635	2,609
Velvets	354	334		534	582	1,270
Total (L)	4,526	3,738		6,204	6,597	14,861
<u>1844-46</u>						
Plains	4,822	2,016		2,819	4,403	11,241
Fancies	2,400	222	?	4,453	487	3,109
Velvets	373	73		916	467	913
Total (L)	7,595	2,311		8,188	5,357	15,263
<u>Number of Persons in SCPR</u>						
<u>1873</u>						
Plains <sup>b</sup>	1,454	92	1,668	3,405	1,015	7,634
Fancies <sup>c</sup>	462	2	101	1,505	11	2,081
Velvets <sup>d</sup>	114	--	57	228	46	445
Total (P)	2,030	94	1,826	5,138	1,072	10,160

<u>Percentage of Total Looms (L)</u>						
<u>1829-33</u>						
Plains	66.4	69.4		36.3	81.5	73.9
Fancies	25.8	21.6		55.1	9.6	17.6
Velvets	7.8	9.0		8.6	8.9	8.5
<u>1844-46</u>						
Plains	63.5	87.2		34.4	82.2	73.6
Fancies	31.6	9.6		54.4	9.1	20.2
Velvets	4.9	3.2		11.2	8.7	6.2

<u>Percentage of Total Persons (P)</u>						
<u>1873</u>						
Plains	71.6	97.9	91.3	66.3	94.7	75.1
Fancies	22.8	2.1	5.5	29.3	1.0	20.5
Velvets	5.6	0.	3.2	4.4	4.3	4.4

\*As Defined in 1866

Sources: 1829-30: Arr. 1,2,5: "Population de 1829 Pour 1830," AML, F2 - Fabrique de Soieries - Inventeurs - Statistiques (1811 à 1854)  
 Arr. 4: AML, Recensement, Croix-Rousse, 1833  
 1844-46: Arr. 1,2,5: AML, Recensement de Lyon, 1846  
 Arr. 4: AML, Recensement, Croix-Rousse, 1844-45  
 1874: Société Civile des tisseurs, List of Members, July 5, 1873, in ADR, 10M-3, Associations des Tisseurs

1. Total arrondissements 1, 2, 5 only (city of Lyons intra muros 1829) for 1829-33 and 1844-46.
2. Categories 1, 5, 7 of Société Civile (SCPR): taffetas, satins, foulards
3. Categories 2, 3 of SCPR: façonnés, ornements de meubles
4. Categories 4, 9, 10 of SCPR: gilets et velours façonnés, velours frisés, velours à deux pièces

workers in 1869. The number of inventories for silk workers in the Fifth Arrondissement in that year was about the same (14%), but the value of immobile property held in this arrondissement was a mere 1.5% of the total value for all silk workers registered in 1869. Moreover, only in the Brotteaux and the Croix-Rousse did the proportion of property value owned by silk workers exceed the proportion of death inventories registered in the same sections of the city. In all other arrondissements this second proportion was significantly larger than the first.<sup>32</sup> (See Table 41 below.)

Table 41:

Distribution of Death Inventories by Arrondissement of Registration, and of Values of Real Property at Death by Arrondissement of Holding, for Silk Artisans and Workers of Lyons, 1869.

<u>Arrondissement</u>	<u>Death Inventories</u>		<u>Value of Real Property Owned at Death</u>	
	<u>Number</u>	<u>% of Total</u>	<u>Amount (francs)</u>	<u>% of Total</u>
1	64	32.2	33,400	13.0
2	9	4.5	---	0.0
3 (Guillotière)*	12	6.1	3,786	1.5
4 (Croix-Rousse)	60	30.3	123,254	47.8
5	27	13.6	4,000	1.5
6 (Brotteaux)*	<u>26</u>	<u>13.1</u>	<u>93,112</u>	<u>36.1</u>
Total	198	99.9	257,552	99.9

Sources: Death Inventories: "Tableau No. 87: Distribution des groupes socio-professionnelles entre les divers arrondissements de Lyon - Communautés, 1869," in Pierre Léon, Géographie de la fortune et structures sociales à Lyon au XIXe siècle (1815 - 1914) (Lyon, 1974), p. 220.

<sup>32</sup> Pierre Léon, Géographie de la fortune et structures sociales à Lyon au XIXe siècle (1815 - 1914) (Lyon: Université Lyon II, Centre d'histoire économique et social de la région lyonnaise, 1974), pp. 220, 223-225.

Property Values: "Tableau No. 89: Répartition des biens immobiliers par arrondissement - Communautés, 1869," ibid., pp. 224-225

\* By 1869 the Brotteaux-Guillotière (Third Arrondissement in 1866) had been divided into the Sixth Arrondissement (Brotteaux) and the Third Arrondissement (Guillotière).

Since most silk workers would have been unlikely to own property within the city outside of their arrondissement of residence, the two sets of data strongly suggest a relative affluence of the Brotteaux and Croix-Rousse weavers in comparison with weavers in other sections of the city.

Since one of the main reasons for settling on the left bank of the Rhône was lower housing costs, the apparently stronger tendency of Brotteaux weavers to own property is less surprising than at first glance. The importance of this tendency concerned less its cause than its effect. It demonstrated that, on the average, weavers of the Brotteaux were not necessarily poorer than weavers of the Croix-Rousse despite their heavier concentration of plain-cloth weaving. The relative affluence of the predominantly plain-cloth weavers of the Brotteaux in comparison with weavers in other plain-cloth sections of the city (such as the Fifth Arrondissement) suggest, moreover, that many of those who settled in the Brotteaux were relatively affluent to begin with or, alternatively, were more 'insulated' economically than geographically from the competition of unskilled rural weaving. In the case of the former, fortunes were made in the Croix-Rousse or in the First Arrondissement, in fancy-cloth weaving during the 1840's and 1850's, or fortunes were made in nearby rural towns and villages where weavers learned their craft from their fathers. These weavers settled in the Brotteaux during the Second Empire to improve opportunities for employment or to reduce costs of housing. In the

latter case, fortunes were made or maintained in the Brotteaux by weaving the higher-paid plain cloths rather than the inferior plain cloths put out to the least skilled workers in the fabrique. Lack of precision in loom and worker data therefore would conceal a higher level of skill and cloth quality in the weaving industry on the left bank of the Rhône than our previous conclusions suggest. In this case, the Brotteaux would have been a 'buffer zone' between the relatively unskilled rural periphery and the relatively skilled core neighborhoods of the Croix-Rousse only geographically, absorbing recent migrant weavers (both skilled and unskilled) into the urban economy, but not economically and socially, by earning and owning less than the weavers of the Croix-Rousse. In terms of wealth and income, denizens of the Brotteaux had no less opportunity than residents of the Croix-Rousse of achieving or at least of maintaining a relative artisanal affluence.

The Brotteaux weavers were like those of the First Arrondissement -- including the second largest concentration of weavers in the city (on the slopes of the Croix-Rousse) -- in another respect. Both had more neighborhood contact with auxiliary workers of the fabrique and with the few weavers of 'odd' specialties, such as tulles and passementeries, than the weavers of the Croix-Rousse or any other area. For some auxiliary trades and some silk-weaving crafts, this meant more contact with workers in the silk industry accustomed to a shop system of organization larger than that of the household-shop of most silk weavers, and therefore to a system of employer-worker relations less domestic and more factory-like, if not entirely proletarian. For most of the auxiliary trades, this meant, moreover, contact with

'lumpenproletarian' female labor, the largest constituent of the work force in most auxiliary industries.

Table 42 traces the progression of auxiliary labor in the Lyons silk industry relative to weaving labor from 1833 to 1856 to 1866. These rough estimates suggest a clear movement in favor of auxiliary

Table 42:

	<u>1833</u>	<u>1856</u>	<u>1866</u>
Auxiliares (A)	4,350	12,252	14,560
Weavers (W)	36,300	50,900	40,000
A/W	.12	.24	.36

Sources: 1833: Robert Bezucha, The Lyon Uprising of 1834, p. 33, Table 6  
 1856: "Tableau industriel -- Fabrique Lyonnaise," October 31, 1856, AML, 12-47(A), no. 165  
 1866: Statistique de la France, deuxième série, tome XIX, industrie. Résultats Généraux de l'Enquête Effectuée dans les années 1861 - 1865. pp. xxij, xxij.

trades in employing urban workers of the fabrique between 1833 and 1866. By the latter date, the ratio of auxiliary labor to weaving labor tripled. Both the relative decline of urban weaving in favor of rural weaving and the increasing demand for auxiliary services to throw and dye the thread put out to the countryside or to finish the cloth woven there for the fabricants of Lyons, explain this increase in the proportion of workers employed in the auxiliary trades.

Most of these trades were concentrated in the Brotteaux-Guillotière and in the First Arrondissement. As we saw earlier, some of the largest dyeing establishments, factories with 230 or 290 workers in 1866, for example,<sup>33</sup> were located in the Brotteaux. The Brotteaux-Guillotière also quartered some of the major silk-throwing shops in the city and at least one large cloth-finishing shop -- that of Monsieur Baboin on the rue Ste-Elizabeth in the Brotteaux.<sup>34</sup> The First Arrondissement had an even more diversified auxiliary sector. In a sample of 445 heads of households of the First Arrondissement in 1866, 72 worked in the auxiliary trades. The number of different auxiliary occupations in the sample was no less than seventeen: 41 dévideuses, 7 apprêteurs, 5 liseuses, 2 each enlaceurs de cartons, marchands de métiers, peigniers, plieurs et mouliniers, and 1 each brodeuse, cartonnier, dessinateur, navetier, guimpier, remetteuse, roseuse de velours, teinturier, and tordeuse.<sup>35</sup> The difference in concentration of such auxiliary trades between the First Arrondissement and the neighboring Croix-Rousse -- as represented by a sample of 296 heads of households -- was quite marked. In the First Arrondissement sample, 16% of the

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<sup>33</sup>'Teinturerie,' "Situation de l'Industrie au 15 7bre 1866" (September 15, 1866), AML, I2 - 47(B), No. 192.

<sup>34</sup>'Tulles,' "Situation industrielle au Mars 1869," AML, I2 - 47(B), No. 207.

<sup>35</sup>Dénombrement, 1866, Lyon, 3ème and 4ème Canton, ADR, 6M-Dé-nombrement, X-XI. The sample is stratified and systematic, just like the samples of the Croix-Rousse (Fourth Arrondissement) used in Chapter V and described in Appendix V. Like these latter samples, that of the First Arrondissement is stratified according to the geographical distribution of residences of members and leaders of the silk-weavers' associations discussed in this study.

household heads worked in auxiliary trades and 46% were weavers. In the Croix-Rousse sample, only 6% worked in the auxiliary crafts, but 64% wove at the loom.<sup>36</sup> Clearly the Croix-Rousse was much more intensively a weaving neighborhood, and much less diversified by auxiliary workers, than either the First Arrondissement or the Brotteaux. A strike of the female ovalistes (silk throwers) in June-July 1869 demonstrated this 'social' solidarity between the First Arrondissement and the Brotteaux. The strike began in the throwing shops of the latter section but spread quickly beyond the Rhône. Several bands of female strikers and their male companions crossed the river into the First Arrondissement and forced the throwing shops on the Côte des Carmelites to shut down as well.<sup>37</sup> Thus a community of protest emerged between the two sections - the Brotteaux and the First Arrondissement - despite the geographical barrier of the Rhône river, while the Croix-Rousse plateau, adjacent to the First, remained isolated from the strike.

Besides auxiliary industries, most of the larger tulle-weaving shops were also located in the Brotteaux. Tulles - delicate lace-like fabric usually made of silk - were woven on special looms in shops employing usually ten or more workers. Table 43 lists seven such tulle shops and indicates their locations and the number of active and inactive looms in each shop in March 1869. The table demonstrates the rather large size of these shops, as compared with the household-shops of other weavers in the city. The smallest tulle-weaving shop had five looms, more than the average household shop of plain or fancy weavers. The average tulle shop had about twenty looms.

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<sup>36</sup>Ibid.; Dénombrement, 1866, Lyon, 4ème Canton, ADR, 6M-Dénombrement, XVI-XVII.

<sup>37</sup>Police reports concerning strike of ovalistes in June-July

Table 43:

Seven Major Tulle-Weaving  
Shops in Lyons, March 1869

<u>Owner</u>	<u>Location</u>	<u>Number of Tulle Looms</u>		
		<u>Active</u>	<u>Inactive</u>	<u>Total</u>
Vignon	Brotteaux	12	1	13
Peju	Brotteaux	26	0	26
Revol	Charpennes*	16	6	22
Richard, Julien Boyer, Bret and Annequin	Charpennes*	20	8	28
Dognin	Croix-Rousse	45	0	45
Morel	First Arr.	9	0	9
Baboïn	Brotteaux	5	0	5

Source: 'Tulles,' "Situation industrielle au Mars 1869," AML, I2-47(A), no. 207

\*Adjacent the Brotteaux

The tulle shops were in fact more like small factories than artisanal craft enterprises. Between masters and workers in these shops the relation was more akin to that of manager or employer to laborer than to that of master to journeyman. The seven master tullists were no mere 'household heads' but small capitalist entrepreneurs. They hired tullist workers as employees and regulated their work activity with a system of rules, fines and personal oversight very much like that of the early factory owners in English cotton spinning during the eighteenth century.<sup>38</sup> Not surprisingly, these tullist workers expressed their grievances against their employers by means of strikes and other forms

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1869, especially reports of June 25-26, 1869, AML, I2 - 47(B), Corporations: ouvriers en soie ... (1819 à 1870), dossier Moulineuses - Ovalistes.

<sup>38</sup>Paul Mantoux, The Industrial Revolution in the Eighteenth Century: An Outline of the Beginnings of the Modern Factory System in England (New York: Harper and Row, Harper Torchbook, 1961), pp. 375-376; Sidney Pollard, The Genesis of Modern Management (Cambridge: Harvard University Press, 1965), pp. 181-192.

of collective action. Weavers residing in the Brotteaux were thus more exposed to these factory-like workers, and to their methods of protest, than weavers in the Croix-Rousse, for the tulleists working in the such conditions were more exceptional in the latter district than in the former.

### III. Neighborhood and Association

Silk weavers' associations in each of these neighborhoods reflected their distinctive economic and social character as described above. The extent to which such associations, or the movements of which they were a part, were 'expansive' or 'restrictive,' egalitarian or elitist, for example, was strongly related to the areas of the city in which these associations and movements emerged, and thus to the specific neighborhood experiences of the weavers involved. The tendency of socially or economically oriented associations to become politicized, and the specific political preferences of most of their members, were also highly correlated with their areas of residence within the city of Lyons. Leadership and initiative in forming new types of association -- and leadership in collective protest in times of political crisis -- also belonged to those urban quarters in which certain kinds of experience of economic and social change prevailed. The neighborhood environment was thus an important ingredient, along with craft, household and class, in fashioning a 'collective consciousness' among the weavers of Lyons, expressed by them in their movements of voluntary association.

The different social and economic experiences of weavers in the Croix-Rousse and of weavers of the Brotteaux-Guillotière was evident in

the cooperative movement, for example. Egalitarianism and open membership were stronger, to some extent at least, among the weavers of the Brotteaux-Guillotière than among those of the Croix-Rousse. The large consumers' society of the Croix-Rousse, the Provident, distributed profits to its members according to the number of shares owned by each and thus re-enforced the economic inequality among its members and the tendency to stress individual profit-making over service either to its own members or to its community.<sup>39</sup> By remaining a société à responsabilité limitée until 1875 (rather than changing to a société anonyme under the more liberal legislation of 1867), the Provident impeded the expansion of its membership beyond the statutory maximum of 400 and thus closed its doors around these 400 members.<sup>40</sup> The Workers' Union, however -- the large grocery cooperative of the Brotteaux-Guillotière -- distributed its profits according to the amount of purchases made by each member.<sup>41</sup> By choosing the commercial form of the nom collectif, moreover, the Union facilitated the entry of new members even beyond the exceptionally large number of 714 cooperators in 1867 -- the largest in the city of Lyons at that time.<sup>42</sup> Thus the Workers' Union served its members irrespective of their wealth

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<sup>39</sup> Article 23, La Prévoyante, Statuts, 1865, ADR, 9U - Sociétés: Constitutions et modifications, July 29, 1865.

<sup>40</sup> Ibid.; police report on meeting of La Prévoyante, March 7, 1875, ADR, 4M- Police administrative - associations, coops 9, La Prévoyante.

<sup>41</sup> Article 44, Union ouvrière, Statuts, 1867, ADR, ibid., coops 13, Union ouvrière.

<sup>42</sup> Ibid.; statistical report on cooperative societies of production and consumption in Lyons, c. May 1867, AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870), No. 23.

and ownership of the organization and sought to increase the number of such members to that of the neighborhood as a whole. Its aims, in short, were communitarian and service-centered, rather exclusivist-elitist and profit-oriented, as those of the Provident seem to have been.

Other consumer cooperatives, more egalitarian than the Provident -- like the Workers' Grocery, which distributed profits equally among members<sup>43</sup> -- and more communitarian, service-oriented than the 'elitist' society -- such as the Workers' Hope, which divided profits even among non-member clients of the store<sup>44</sup> -- also were organized in the Croix-Rousse. These demonstrated that neighborhood experience alone did not determine or influence ideologies of association. They did not prove that such experience was insignificant, however. In the city-wide producers' cooperative movement, wherein debate on the purpose and means of association (notably profit-sharing policies) acquired an intensity and a clarity often lacking in the smaller consumer's cooperatives, the division of opinion between the two large silk-weaving neighborhoods (the Croix-Rousse and the Brotteaux) could not have been more evident. The Brotteaux cells (séries) of the Association of Weavers (producers' cooperative) objected, in the name of social equality, to the profit-sharing policy proposed by the dominant group within the organization from the Croix-Rousse -- the distribution of profits according to number of shares owned by each member. Several Brotteaux weavers felt so strongly about this issue

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<sup>43</sup>Epicerie ouvrière, Statuts, 1868, ATCL, Actes des sociétés, September 20, 1868.

<sup>44</sup>Espérance ouvrière, Statuts, 1866, ADR, 9U - Sociétés: Constitutions et modifications, August 23, 1866.

that they seceded from the parent organization in 1867 after the alternative statutes proposed by them had been rejected by the general assembly of the Association.<sup>45</sup>

Weavers' associations in the Brotteaux-Guillotière also became involved in political activity more readily than associations in the Croix-Rousse. In 1873 the prefect of the Rhône dissolved the Workers' Club of the Brotteaux, composed largely of silk weavers, for holding "very frequent clandestine meetings" of a political nature, contrary to its statutory prohibition of political discussion.<sup>46</sup> Prominent Radical deputies often spoke there in favor of secular education -- a 'hot' political issue in this period of menacing monarchist restoration.<sup>47</sup> Under the Second Empire, the club was known to the police as a meeting place for several locally prominent members of the "militant [anti-imperial] democracy,"<sup>48</sup> and subsequently "the members of the Brotteaux Club took an active part in all the revolutionary movements of Lyons."<sup>49</sup> The Master-Weavers' Club of the Croix-Rousse,

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<sup>45</sup>Police report to Prefect of Rhône, November 10, 1866, AML, I2 - 45, No. 120; "L'Assemblée générale des tisseurs," Le Progrès (Lyon), November 15, 1866; letter from Dugélay et al., Le Progrès, November 18, 1866; "Une nouvelle société des tisseurs," Le Progrès, December 30, 1866.

<sup>46</sup>Prefect of Rhône, Decree of dissolution of Cercle des travailleurs des Brotteaux, October 11, 1873; report by Central Police Commissioner on Cercle des travailleurs des Brotteaux, n.d., ADR, 4M - Police administrative - Associations, cercles ouvriers et politiques (démocratiques) gr 13, Cercle des travailleurs des Brotteaux.

<sup>47</sup>Report by Central Police Commissioner, n.d.; report from "Brigadier commandant la brigade" to Commandant Gendarmerie, 8e Legion, Compagnie du Rhône, Arrondissement de Lyon, September 6, 1872, ADR, ibid.

<sup>48</sup>Police report to Prefect of Rhône, June 6, 1868, AML, I2 - 45, Cercle des travailleurs des Brotteaux.

<sup>49</sup>Report by Central Police Commissioner, n.d., ADR, 4M - Police administrative - Associations, cercles ouvriers ... gr 13.

the analogous organization in this section of the city, limited its discussion and activities to 'industrial' matters, such as weaving technique, employment, piece-rates and cooperation. The political preferences of the members of this club were republican but of the moderate sort -- "democratic" ideas expressed "with moderation and rather not to deny the past than to destroy the present order of things."<sup>50</sup> Even the large consumers' society in the Brotteaux, the Workers' Union, was not immune to 'politicization', as suggested by a police report on the meeting of the association in May 1874,<sup>51</sup> whereas the Provident, its analogue on the Croix-Rousse plateau, remained exclusively 'industrial' in its activities and concerns.

The Brotteaux weavers were distinguished from their semblables of the Croix-Rousse not only by their receptiveness to political ideas but also by their ambition and creativity in the practice of association. The Workers' Union of the Brotteaux, for example, was by far the most ambitious effort of consumers' cooperation in the city. It housed a vast range of retail facilities and offered numerous 'alimentary' services to its members. Its stores sold groceries, wines and liquors, and linen and woolen cloth. It had its own breadbaking ovens and made its own sausage and other cold cuts. In other consumers' cooperatives in the city, only one or two of these services were provided, but in the Union ouvrière all were combined in a single large enterprise. This enterprise served its members in three separate grocery stores plus one boulangerie dispersed throughout the

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<sup>50</sup>Police report on Cercle des chefs d'ateliers de Lyon, May 31, 1867, AML, I2 - 45, Cercle des chefs d'ateliers de Lyon.

<sup>51</sup>Police report to Prefect of Rhône concerning meeting of Union ouvrière, May 31, 1874, ADR, 4M - Police administrative - Associations,

Brotteaux-Guillotière.<sup>52</sup> Club activity among the weavers of the Brotteaux was also ambitious and innovative. The Workers' Club of the Brotteaux, inspired originally by the Master-Weavers' Club of the Croix-Rousse, rapidly surpassed its model in the scope of its activities. While the club of the Croix-Rousse limited these to discussion of craft, leisure-time conservation, drinks and reading, the Brotteaux club set up a program of weekly lectures, poetry and song gatherings, classes in reading and writing (including special classes for women and girls), and training in administration of workers' organizations. The club became a forum for exchange and advocacy of new ideas concerning education of workers and women, and Jean Macé singled it out as an example of the kind of intellectual and moral self-help effort he sought to inculcate among all workers of France.<sup>53</sup>

In the Brotteaux rather than in the Croix-Rousse, the International Workingmen's Association was most influential, during the last years of the Second Empire, and in the former area as well the movement for an anarchist-socialist Commune began in earnest after the fall of the Empire on September 4, 1870. The International was a new form of workers' association -- inter-professional, international, anti-capitalist, sometimes revolutionary -- to which most of the weavers of the Croix-Rousse remained hostile or non-committal. The anarchist-socialist uprising of September 28, 1870, led by Michael Bakunin and his local partisans in the International, failed when the

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coops 13, Union ouvrière.

<sup>52</sup>Eugène Flotard, "Bulletin Coopératif," Le Progrès, January 14, 1867.

<sup>53</sup>Ibid., November 19, December 30, 1867; February 3, March 23, June 22, 1868.

national guardsmen of the Croix-Rousse came to the aid of the Radical provisional government. The revolt of the Guillotièrre in April 1871 against the bourgeois government of city hall also collapsed in less than a day without any echo of protest from the Croix-Rousse.<sup>54</sup>

The Croix-Rousse had in fact a very different political and social temper in 1870 than it had had during the 'heroic' period of the early 1830's. During this latter period, the Croix-Rousse initiated and directed collective protest in the city and did not merely follow the lead of other neighborhoods, or retreat entirely from militancy, as it was inclined to do in 1870-71. The insurrection of November 1831 began on the Croix-Rousse plateau and descended thence into the central business and administrative districts below. The other workers' quarters in the Fifth, First and Second Arrondissements and in the Brotteaux-Guillotièrre followed the lead of the weavers from the Croix-Rousse. Instead of fighting in their own neighborhoods, most of these came to the aid of the insurgents of the Croix-Rousse, and thus the Croix-Rousse and its slope (the First Arrondissement) remained the center of the conflict.<sup>55</sup>

The April Uprising of 1834 also commenced in the weavers' neighborhoods in the Croix-Rousse and in the First, Second and Fifth Arrondissements and spread to the Guillotièrre, the Brotteaux and elsewhere only on the second day.<sup>56</sup> Although fighting was fierce on the

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<sup>54</sup>Faure, "Association Internationale des Travailleurs," February 1870, AML, Papiers de'Albert Richard: Pièces relatives à l'Association Internationale des Travailleurs, No. 27,; Maurice Moixennier, La première internationale et la commune à Lyon (Paris: Editions sociales, 1972), pp. 264, 378-381.

<sup>55</sup>Fernand Rude, L'insurrection lyonnaise de novembre 1831: le mouvement ouvrier à Lyon de 1827 - 1832 (Paris: Editions Anthropos, 1969), pp. 357-428, 436-437.

<sup>56</sup>Bezucha, The Lyon Uprising of 1834, pp. 150-152.

left bank of the Rhône (Brotteaux-Guillotière), it was more quickly repressed and less generalized than in the other neighborhoods of the city and suburbs. It was hardly as concentrated and as resilient as that on the First Arrondissement slopes leading to the Croix-Rousse, where the royal investigators presumed to see a greater degree of organization than in the other quarters.<sup>57</sup> The center of revolt in the 1830's, in short, coincided largely with the 'core' neighborhoods of silk weaving. By 1870, the same neighborhoods, including the Croix-Rousse, receded to the periphery of uprising, the center of gravity of which had shifted eastward to the left bank of the Rhône. This shift of 'insurrectionary geography' also coincided with a change in the aims, or dominant concerns, of the rebels -- from social and economic in 1831 and 1834, to political in 1871. The radicalization of the Brotteaux-Guillotière was eminently political, or at least it interpreted social questions in political terms. The radicalization of the Croix-Rousse, in its days of insurrectionary leadership, was little moved by political goals and moulded rather by grievances concerning craft, class and social position. By 1871 the nature of these grievances and the expectations concerning their satisfaction had changed to a form incommensurate with political longings and irrelevant to the militant socialism of the social anarchists, Internationalists and rebels of the Brotteaux-Guillotière.

The expansiveness and ambition of workers' associations in the Brotteaux-Guillotière, apparently more general there than in the Croix-Rousse, and the stronger tendency of workers in the first area to engage in militant politics and to take the lead in inter-professional

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<sup>57</sup> Ibid., pp. 163-165.

workers' organization as well as in political insurrection, suggest the importance of neighborhood experience in fashioning scope and kind of collective consciousness of weavers in the two areas of the city. The present state of research and the available evidence limit the definitive conclusions one can make regarding the exact kind of importance of such neighborhood experience, but some tentative conclusions can be advanced on the basis of evidence presented in this chapter. As we have seen, the major differences in neighborhood conditions confronting weavers in the Brotteaux-Guillotière, as compared with weavers in the Croix-Rousse, were two: first, more immediate and more frequent contact with workers in other trades and in other conditions of employment, and second, more direct experience of the social and economic transformation of the city of Lyons during the Second Empire -- of growing population, expanding industry, urban renewal and their visible effects: poverty, crime, social mobility, vagrancy, and traffic.

The effect of the first was the erosion, or the threat of erosion, of the identification of neighborhood with craft and, with such erosion, of the singularity or superiority of one craft (silk-weaving) above all others. Such erosion was more likely to occur among weavers whose craft identity had not been associated previously with that of a particular neighborhood, or with neighborhood identity in general. Since the Brotteaux-Guillotière absorbed not only weavers from other areas of the city seeking lower rents but also recent migrants from surrounding towns and rural villages, the weavers there fit this pattern better than weavers in other sections of the city. They were more susceptible than weavers elsewhere in the city to losing their

'craft-consciousness' or their sense of craft superiority. Besides, relatively more weavers of the Brotteaux-Guillotièrè wove plain cloths than weavers of the Croix-Rousse, and their claim to craft superiority on the basis of skill was weaker than such a claim by fancy-cloth weavers of the Croix-Rousse.

Weavers of the Brotteaux were therefore more willing to form inter-craft associations (such as the International), and were less inclined to differentiate themselves from other workers in their neighborhood on the basis of status, function, wealth or skill within their craft -- which explains the stronger communitarian, egalitarian tendencies in their practice and purpose of cooperative association. Because of this weak sense of difference from other workers, the Brotteaux weavers were also more inclined to share perceptions of social interest and even political opinions with workers whose conditions of employment and whose standards of living were different from their own. In the Croix-Rousse, on the contrary, contact with workers in other trades or conditions of work was infrequent and cursory, and thus neighborhood identity re-enforced craft identity rather than eroded it. Differences of status, skill, function and wealth traditionally associated with the craft of silk weaving were more likely to be maintained, and even strengthened, in the movements of association and in the social and political attitudes manifested in these movements. Association, in short, was more likely to be restrictive, elitist and fractionalized than egalitarian and community-oriented.

The second difference between the two neighborhood environments -- the greater intensity of social and economic change in the Brotteaux

as compared with the Croix-Rousse -- was, sociologically at least, very much like the difference described by Charles Tilly between the two areas of southern Anjou in the Vendée -- the Mauges and the Val-saumurois -- on the eve of the French Revolution. Such was the difference between a rapidly urbanizing and a already urbanized region.<sup>58</sup> The Brotteaux-Guillotièrre in the 1850's and 1860's was in a state that we might call 'industrializing,' leading to more intensified urbanization, whereas the Croix-Rousse was already industrialized (or industrial) and fully urbanized as well. Moreover, the urban-industrial 'saturation' of the Croix-Rousse was based on a traditional domestic industry, whereas the growing industry and intensified urbanization of the left bank of the Rhône was the product of artisanal industry combined with newly mechanized factory industry. The difference between the two regions was therefore not simply one of change versus lack of change, but also that of striking contrasts, imbalances and instability among the various individuals and groups within the changing region, as against the integration, equilibrium and stability -- if not homogeneity of social condition -- among the various strata and groups within the fully changed region. The former generated conflict among the various groups, notably conflict of choices in times of political and social crisis. The latter eased the imposition or emergence of a consensus of opinion, or at least of a stable coexistence of differing opinions on political matters during such times.

To carry Tilly's argument one step further (or aside), in the cause of the weavers of Lyons, the conflicts emerging from rapid social

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<sup>58</sup> Charles Tilly, The Vendée (Cambridge: Harvard University Press, 1976),

and economic change in the Brotteaux-Guillotière during the Second Empire, when political activity itself was repressed or discouraged, especially among workers, fostered the politicization of social and economic issues more rapidly and more intensely there, and not only a conflict of the political opinions which did emerge. In the more integrated, balanced, unchanging urban-industrial environment of the Croix-Rousse, however, such politicization of social conflict and of social concerns was much less likely. This did not mean that the weavers of the Croix-Rousse were apolitical. Their active role in local politics during the last years of the Empire and during the early months of the Republic gives the lie to any such argument. But their politics had little social content, for it was kept distinct ideologically from their social vision and organizationally from their industrial action.<sup>59</sup> Thus they were not encouraged to take political action in the name of a social ideal or program, but only in the name of a political aim -- democracy, the republic, separation of church and state, or reduction of military expenditures. Their cooperative associations, clubs and resistance (ie, early trade-union) societies accordingly abstained from politics, while analogous associations on the left bank of the Rhône slipped into political discussion and activity at the least instigation. For the same reasons, the weavers of the Croix-Rousse refused to support revolutionary insurrection in the name of anarchist socialism or social republicanism. They left to the workers of the Brotteaux-Guillotière both the

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<sup>59</sup>Moissonnier, La première internationale à Lyon, chapters VII-VIII, X.

initiative and the execution of plots and uprisings designed to realize such socio-political ideals.

As differences between the neighborhood conditions of the Croix-Rousse and the Brotteaux-Guillotière were mirrored in different patterns of collective ideology and activity in these two areas, similarities of social and economic condition between the Brotteaux-Guillotière and the First Arrondissement were also reflected in their respective patterns of association. The working population of the First Arrondissement included proportionately more plain-cloth weavers and more workers in auxiliary trades of the fabrique than the population of the Croix-Rousse. There were also more weavers in specialties of the fabrique distinguished by their small shop or manufactory (rather than household) mode of production -- especially weavers of tulles and passementeries -- and more auxiliary workers in similar factory-like production units (dyers and twisters especially) than in the Croix-Rousse. In all these ways, the silk-working environment of the First Arrondissement was very much like that of the Brotteaux-Guillotière.

Not very surprisingly, the First Arrondissement was the only one in central Lyons where the International had some popularity, and notably among silk workers in these factory-like conditions of employment.<sup>60</sup> Moreover, one of the best examples of imaginative,

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<sup>60</sup>In a report on the leaders of the International in 1870, for example, the police commissioner Faure listed three weavers on the nineteen-member directing committee of the Association. Two of these lived in the Sixth Arrondissement (the Brotteaux) and the third resided in the First Arrondissement. Of the remaining sixteen, five were tullistes or passementiers, and two more worked in the auxiliary trades (apprêtage and lisage). Three of these seven resided in or nearby the Brotteaux-Guillotière, and three in the First Arrondissement.

community-service consumers' cooperation in 'Old Lyons' was located in the First Arrondissement -- the Frank Cooperators.<sup>61</sup> In both respects, the First Arrondissement resembled the Brotteaux-Guillotière in its patterns of association. The resemblance did not go much further than this, however, and so it would be futile to seek any 'environmental determinism' in explaining collective attitudes and political behavior among the silk workers of Lyons. Nevertheless, affinities of neighborhood experience of social and economic conditions probably explained some similarities in the aims and practice of association within the city, as well as occasional alliances between workers of different city districts sharing similar conditions of life and work, just as the differences between the Croix-Rousse and the Brotteaux-Guillotière seem to have explained much of the variation in patterns and aims of association and political activity between these two areas.

These two were also similar in one important respect, however. The average levels of wealth of their silk weavers, as indicated by Léon's study of death inventories, were far above those of weavers in other arrondissements of the city in 1869, but similar to one another. Such exceptionally high concentration of wealthier silk weavers probably explained the exceptionally high concentration of association among weavers in these two areas of the city as compared

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Only one, a passementier, inhabited the Croix-Rousse. (Faure, "Association Internationale des Travailleurs," AML, 12 - 55, No. 27.)

<sup>61</sup>The Francs Cooperateurs distributed profits to all clients, for example. See George Sheridan, "Ideologies et structures sociales dans les associations ouvrières à Lyon, de 1848," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, No. 2, 30-32.

with other areas. The only exception was the First Arrondissement, a very active foyer of association despite its relatively low concentration of wealth as compared with the Croix-Rousse and the Brotteaux-Guillotière. Since this arrondissement was located on the slopes of the Croix-Rousse, and its association activity might be considered, quite reasonably, as an extension of the movement of the Croix-Rousse, this exception does not weaken the rule very much.

In his well-known article comparing patterns of strike activity in France among different groups of workers under the July Monarchy, Peter Stearns argued that labor organization and strike planning were more likely to be "vigorous" among artisans whose wealth and income were above the norm of workers in general.<sup>62</sup> If Stearns' argument is correct, we should not be surprised to find the most active movements of association among those artisans in Lyons who were relatively affluent in their trade or in their neighborhood, or at least in those trades or quarters of the city where such artisans assumed the leadership. Were we to draw a map of the extent and intensity of voluntary association in Lyons in the 1860's, the Croix-Rousse, the Croix-Rousse slopes (First Arrondissement) and the Brotteaux would emerge readily as the foyers of association par excellence. These areas would rate high not only by the proportion of their working populations engaged in voluntary associations, but also by the variety of forms of association organized in the same areas, which included all of the four discussed in this study --

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<sup>62</sup>Peter N. Stearns, "Patterns of Industrial Strike Activity in France During the July Monarchy," American Historical Review, Vol. LXX, No. 2 (January 1965), 387-388.

mutual aid, cooperation, educational - recreational - professional clubs, and industrial resistance.

In the Fifth Arrondissement, on the right bank of the S<sup>^</sup>ône, by contrast, there were no clubs, except in the isolated district of Saint-Just on the slopes of Fourvières, away from the central quarters of the arrondissement. There were also few resistance societies and no strikes in 1869-70, and, as best as I can determine, no major meetings of the producers' cooperative, Association of Weavers, were ever held in the Fifth as they were on the Croix-Rousse or in the Brotteaux. Except for a few small consumers' cooperatives and mutual aid societies, the Fifth Arrondissement merely followed the lead of the Croix-Rousse, participating in programs of association initiated there or in the Brotteaux-Guillotière. Weavers of the Fifth thus had relatively little life of association of their own.

The Fifth Arrondissement, we will remember, was probably the poorest district of the city. Although it had more silk weavers, absolutely and proportionately, than the Brotteaux-Guillotière, their relative poverty inhibited them, or at least failed to encourage them, from organizing associations as intensely or as variously as the weavers of 'New Lyons,' or as actively as the weavers in the central districts of 'Old Lyons.' In the political life of the city, this poverty of the Fifth was translated even more acutely into impotence and apathy. If the Croix-Rousse and the First were politically silent after September 1870, by contrast with the political 'noise' of the Brotteaux-Guillotière, the Fifth was politically absent, non-existent even. In the 1780's and in the 1830's, social and political radicals were formed in the Fifth Arrondissement,

insurrections and strikes raged as strongly as in the Croix-Rousse. It was a quarter that evoked fear in the minds of the police and political authorities.<sup>63</sup> In April 1871, the police feared a revolt in the Croix-Rousse in response to the abortive uprising of the Guillotière, but they hardly inquired of the mood of workers on the right bank of the Sône, so much had this district fallen to the periphery of revolt.

In summary, then, the relative affluence of the weavers of the Croix-Rousse and the Brotteaux favored a concentration of association in these sections, but the different social and economic conditions of these three areas oriented the nature, scope and aims of association in different directions in each section. In the 'Old Lyons' quarters of the Croix-Rousse, stagnant and dominated by a single trade, the weavers directed the movements of association largely in the interests of their craft alone and especially in the name of the independent artisanship identified pre-eminently with their craft. Theirs was association to preserve a dying order of household manufacture and a city perceived as the national and international capital of that manufacture. In the "new Lyons" quarters of the Brotteaux-Guillotière, growing rapidly with an influx of workers of various trades, the silk weavers were only one among several

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<sup>63</sup>Denis Monnet, suspected of plotting the riot of 1786 and leader of the movement for the tarif in the 1780's, resided in the Fifth Arrondissement. ("Interrogatoire de Denis Monnet," November 22, 1786, ADR, Série B, Sénéchaussée/Criminel; Maurice Garden, Lyon et les lyonnais au XVIIIe siècle (Paris: Les belles lettres, 1970), pp. 590-592.) During the insurrection of 1831, the Fifth Arrondissement rebelled along with the other quarters of the city. Among the residents of this section at that time were Pierre Charnier, founder of the first mutuelliste society, and Lacombe, leader of the paramilitary

groups of associators. Their interests and aims in associating were less craft-centered and more 'class-conscious' (in the broadest sense of this term), with an extension, though highly vulnerable, to the intention of preserving the artisan ideal. The city, town or village lives of their youth were too diverse, too distant in space if not in time, and too susceptible to corrosion to survive as an attachment to a particular urban image in the alien, ever-changing industrial quarters of the Brotteaux-Guillotière, let alone to re-enforce an identification with a single trade. Change rather than order was the norm of their social existence, and association gave them the means -- so they hoped -- to reap the best advantage, to suffer the least adversity, or at least to forge a meaningful collective identity in a new environment of industry and social intercourse.

This difference of social experience between the two leading silk-weaving sections of the city explained why neighborhood solidarity became a source of division rather than unity within the class of master-weavers, in their movements of voluntary association after 1860. The divisiveness of neighborhood was even stronger than that of craft category, associated with the different economic conditions of plains and fancies weavers during the crisis of the 1860's, and reflected in the attachment to category autonomy in the resistance movement late in the decade. Such category

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Volontaires du Rhône, which played a major role in the military events of November 1831. (Rude, L'insurrection lyonnaise de novembre 1831, pp. 386-387, 275).

differences did not prevent the organization of a unified resistance federation, the Société civile, out of the autonomous category societies, whereas different neighborhood experiences were at least partly responsible for the different political behavior of the Croix-Rousse and the Brotteaux-Guillotière in the events of 1870 - 1871.

Neighborhood solidarity during the 1860's therefore competed with other collective solidarities in forging a social identity among the weavers, instead of complementing or re-enforcing these.

Three of these other solidarities -- craft (in its unifying aspects as described in Chapter IV), household and class -- united the master-weavers of Lyons on the basis of common experience of economic and social change, or on that of the equalization of economic and social situation as a result of such change. One additional solidarity, that of the polis, united the weavers on the basis of a common idea --that of the expected role of government in their economic life. As the economic crisis of the 1860's modified the nature of the solidarities of craft, household and class, forging a common material basis for a unified social identity among the weavers, so the political evolution of the imperial regime after 1860 changed their conception of the solidarity of the polis, providing a common ideological foundation for their social unity. This change introduced economic freedom as a positive notion into the vocabulary and mentality of the silk weavers without eliminating their traditional attachment to government intervention in their economic affairs. The solidarity of the polis, like the solidarities of craft, household, class and neighborhood, therefore also fostered ideological ambivalence rather than clarity during this decade of transition in the weaver's world of work.

## CHAPTER VIII

### The Liberal Transformation of 'Political' Solidarity

The silk weavers of Lyons traditionally regarded free enterprise as the worst plague of their industry. Unlimited free trade, argued the master silk weaver 'J.A.B.' in 1832, delivered the working class into the "murderous" hands "of insatiable ambition."<sup>1</sup> In 1850, the master weaver Weichmann blamed the "unrestrained freedom of trade" for the "impious struggle in which workers are pressured, demoralized by frequent reductions of wage ..."<sup>2</sup> Competition, both foreign and local, in product markets and in labor markets (but especially in the latter), was condemned as harmful to the weavers' welfare and to the prosperity of the industry. Such competition had to be contained, to prevent it from destroying the industry and impoverishing the weaver. In the traditional opinion of the weavers, only the government and the law could achieve such containment. The solidarity of the polis therefore presumed regulation of industry by both. The "prosperity of the fabrique," declared another master weaver in 1849, "has depended above all on regulation."<sup>3</sup> This 'regulatory mentality' was evident in the weavers'

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<sup>1</sup>J.A.B., chef d'atelier, De la nécessité d'une augmentation des prix de fabrication des étoffes, comme moyen d'assurer la prospérité du commerce (Lyon: Imprimerie de Charvin, 1832), p. 10. (BMTL, C. 1559).

<sup>2</sup>Weichmann, 'Causes de la décadence de l'industrie,' 'Mémoires recueillis par le citoyen Weichmann, chef d'atelier, rue du sentier, no. 8 à la Croix-Rousse,' April 2, 1850, AN, F-12-2203 (2): Machines à tisser (1844 à 1866).

<sup>3</sup>Vernay, chef d'atelier, La vérité au sujet du malaise de la fabrique des étoffes de soie à Lyon. Moyens d'y remédier. Mémoire pour servir à l'enquête (Lyon: J.-M. Bajot, 1849), p. 3. (BMTL, C. 1559).

demand for a tarif -- a schedule of minimum piece-rates -- in 1831,<sup>4</sup> in their proposals for special commissions to regulate wages, apprenticeship, rural industry and mechanization during the Second Republic and early Second Empire (1848 - 1853),<sup>5</sup> and in their demand in 1860 for an 'industrial code' to correct abuses in cloth measuring, in allotment of thread wasted during weaving, and in mounting of designs for silk fabric.<sup>6</sup> "The law alone can restore life to this industry," concluded the petition of 1860 making this demand.<sup>7</sup>

By the mid-1860's, the weavers' attitude towards free trade -- or the attitude of the most prominent master weavers at least -- had begun to change. Freedom of trade -- meaning freedom from government regulation of industry -- was no longer considered a social evil or a plague, but rather part of a more general political and social liberty that

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<sup>4</sup>See Fernand Rude, L'insurrection lyonnaise de novembre 1831: le mouvement ouvrier à Lyon de 1827 - 1832 (Paris: Editions Anthropos, 1969), Chapter V.

<sup>5</sup>Weichmann, 'Création d'une commission spéciale,' 'Mémoires recueillis ...,' April 2, 1850; Vernay, La vérité au sujet du malaise ..., pp. 14-15; Citoyen Xavier Pailley, Système de réforme industrielle ou projet d'association entre tous les citoyens qui concourent au commerce et à la fabrication des articles de soieries (Lyon: Chanoine, 1848), pp. 6-8 (BMTL, C.1558); Philippe Thierrat, Du malaise de la classe ouvrière et de l'institution des prud'hommes appliquée à l'augmentation du travail dans la fabrique lyonnaise (Lyon: J. Nigon, 1848), pp. 32-33 (BMTL, C.1559); report from Special Police Commissioner to Prefect of Rhône, "Rapport sur la Pétition des Chefs d'atelier," s.d. (Response to letter from prefect to police commissioner, April 1, 1853), AML, F2 - Fabrique de Soies - Règlement - Tarif - Affaires diverses (1810 à 1874).

<sup>6</sup>Pétition of Tray et al. to Emperor Napoleon III, August 1860, ACCL, Soieries Carton 41-I - Législation - Usages (an 8 à 1936), 13. - Pétition remise à l'Empereur, à son passage à Lyon par les ouvriers en soie.

<sup>7</sup>Ibid.

was beneficial and desirable. The principles of liberty, declared the Proudhonian silk weaver J.-M. Gauthier, were "without question the true generators of every society."<sup>8</sup> Weavers like Gauthier were more willing to accept free enterprise than they had been in the past, because of their confidence in the cooperative movement, organized on the principle of self-help, to achieve for them a position of strength and prosperity in a competitive economic environment. "Free trade forces us to progress or to die of hunger," declared the representatives of twenty-one cooperative societies of Lyons, many of them silk weavers, in a statement of their aims in 1865.<sup>9</sup> "[A]ll our means of action, all our force must be combined to place us in a position to advance as equals with our competitors..."<sup>10</sup> Their movement would thus enable them to prosper in a free-trade world, and they too would reap the advantages of economic freedom. The belief that free trade could be beneficial was not exceptional even for the weavers who suffered most from reduced wages and unemployment. The journeymen weavers planning to demonstrate in 1866, for example, against the freedom of merchant manufacturers to put out silk cloths in the countryside acknowledged in their declaration of protest that "freedom is very good ..." <sup>11</sup> After 1860, in

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<sup>8</sup> Eugène Tartaret, ed., Exposition universelle de 1867. Commission ouvrière de 1867. Procès-verbaux, tome II, p. 257. (BCCL, L1-284).

<sup>9</sup> 'Mémoire adressé par les associations coopératives de la ville de Lyon, à MM. les membres de la Chambre de Commerce,' in Eugène Flotard, "Bulletin Coopératif," Le Progrès (Lyon), December 25-26, 1865.

<sup>10</sup> Ibid.

<sup>11</sup> "Reunion Général [sic] des Tisseurs à la préfecture, Le 15 Octobre [1866]," AML, 12-47 (B), Corporations: ouvriers en soie (1819 à 1870), No. 887.

other words, the weavers' conception of the solidarity of the polis no longer remained associated exclusively with paternal, interventionist government but merged with more liberal notions of economic and social order emphasizing self-determination.

The acceptance of free trade, or at least of some degree of commercial freedom, by several weavers in the 1860's was encouraged by social policy and political opinion representing to them more advantages of free enterprise than they had been accustomed to observe in the past. The laissez-faire social and economic policies of the 'liberalizing' Empire of the 1860's, for example, differed very much in this sense from the 'free-trade' policy of the July Monarchy. The latter was used most frequently to justify government support for employers in their conflicts with workers, by proscription and suppression of strikes and by control of the size and aims of workers' voluntary associations.<sup>12</sup> The liberal program of Napoleon III included, by contrast, the legalization of strikes from 1864 and the freedom of non-political meetings and toleration of strike organizations from 1868. Moreover, laissez-faire in product markets under the Second Empire, promoted, for example, by the Cobden-Chevalier low-tariff treaty of 1860 between England and France, proved advantageous rather than ruinous to the prosperity of the fabrique of Lyons. At a time when the important American market was cut off by the war between the states, the British market, 'liberated'

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<sup>12</sup>See Robert Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge: Harvard University Press, 1974), p. 136 and Peter N. Stearns, "Patterns of Industrial Strike Activity in France During the July Monarchy," American Historical Review, vol. LXX, no. 2 (January 1965), pp. 382-383.

by the treaty to the advance of French silks, compensated somewhat for the loss and gave work (although on an inferior-quality cloth) to many weavers who would have been otherwise unemployed.<sup>13</sup> Finally, liberal economists and republican deputies of the 'opposition,' elected with the workers' votes in the major French cities, praised and promoted the weavers' cooperative associations -- designed to improve the welfare of their class by their own efforts -- by stressing the affinity of cooperation with the basic principles of economic liberalism. Eugène Flotard, a local cooperative promoter of Lyons and a prominent republican lawyer, claimed that cooperation had "liberty, individual initiative" as its basis and "privilege and authoritarian tutelage" as its "anti-thesis."<sup>14</sup> The real demon in the organization of economic life was therefore not free trade or free competition, but rather monopoly and government control. "Competition is synonymous with freedom," declared the liberal Swiss economist Dameth lecturing the workers of Lyons on the advantages of free trade in 1866. "Without liberty, there is no competition, [but then] all kinds of freedom must be abandoned. Then monopoly or privilege will rule, and then an inevitable decline, the despotism of past ages [will set in.]"<sup>15</sup>

The strongest advocate of free trade among the workers was the imperial government of Napoleon III, especially after 1864. The

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<sup>13</sup>See Chapter II.

<sup>14</sup>Eugène Flotard, Le mouvement coopératif à Lyon et dans le Midi de la France (Lyon, 1867), p. iii.

<sup>15</sup>Dameth, Lecture at the Palais Saint-Pierre, Lyons, on November 24, 1806, from notes taken by Jn. Abel, AML, I2-46 (A), Sociétés et clubs, cercles et conférences; Franc-Maconnerie (1788 à 1870), No. 321.

strength of the government's message was its affirmation in action, not only in word. In particular, it adhered closely to a laissez-faire position in conflicts between weavers and their employers, with an impartiality that often favored the weavers. On May 24, 1864, the Corps législatif modified articles 414, 415 and 416 of the Penal Code to permit strikes not resulting from a "concerted plan" and not accompanied by "violence, assaults, threats or fraudulent schemes..."<sup>16</sup> Nearly two years later, when sixty satin-stitch weavers of the firm Avril-Cottin of Tarare stopped working to demand a wage increase, the government demonstrated its intention of following the modified Code. On March 10, 1866, the sub-prefect of Villefranche reported to the prefect of the Rhône his plan to visit Tarare personally in a few days, if the situation failed to improve, "in order to offer some official admonishments to the Employers and to the Workers."<sup>17</sup> Such a gesture by a higher authority was not an uncommon method of resolving local disputes in such rural towns, and the prefect welcomed the plan.<sup>18</sup> But the Minister of the Interior did not agree. "The Government of the Emperor," wrote the minister to the prefect on March 13,

desires that the largest latitude be left to  
employers as well as to workers for the discussion

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<sup>16</sup>Bulletin des lois, Law of May 24, 1864: Modification of articles 414, 415 and 416 of the Penal Code, reprinted in J.B. Duvergier, ed., Collection complète des lois, décrets, ordonnances, règlements et avis du Conseil d'état ... année 1864 (Paris: Charles Noblet, 1864), Tome 64, 188-189, 194-195.

<sup>17</sup>Letter from Sub-Prefect of Villefranche to Prefect of Rhône, March 10, 1866, AML, I2-48, Délits de coalition ouvrière et grèves. Grèves hors Lyon (1803 à 1870).

<sup>18</sup>Letter from Prefect of Rhône to Sub-Prefect of Villefranche, March 10, 1866, AML, I2-48, No. 450.

of their interests, and the administration should intervene only to keep order if it is troubled, and to protect those who might be the object of threats or violence. The presence of M. the Sub-Prefect of Villefranche at Tarare, his effort of conciliation could be seen badly and give way to misleading interpretations by suggesting that the authorities are taking sides either for the employers or for the workers.<sup>19</sup>

The government, in short, wished to leave the resolution of industrial conflicts to the parties involved.

A month later, the prefect wrote the same sub-prefect, again on the orders of the Minister of the Interior, to allow collections for strikes taken up in the workshops, "given the liberal intentions expressed by the Empire, given especially the difficulty of preventing secret collections."<sup>20</sup> Again two months later, the prefect instructed the sub-prefect to allow several satin-stitch weavers of Valsonne, near Tarare, to form an "Industrial Society" to discuss their common interests, including those related to their current strike.<sup>21</sup> The prefect based his instruction on the Emperor's recent announcement "in his speech on opening the legislative session, that the authorization to meet should be granted to all those who, outside of politics, wish to deliberate on their industrial or commercial interests."<sup>22</sup> Thus,

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<sup>19</sup> Letter from Minister of Interior to Prefect of Rhône, March 14, 1866, AML, I2-48.

<sup>20</sup> Letter from Prefect of Rhône to Minister of Interior; April 16, 1866; letter from Prefect of Rhône to Sub-Prefect of Villefranche; April 16, 1866, AML, I2-48.

<sup>21</sup> Letter from Mayor of Valsonne to Sub-Prefect of Villefranche, June 8, 1866; letter from Prefect of Rhône to Sub-Prefect of Villefranche, June 16, 1866, AML, I2-48.

<sup>22</sup> Letter from Prefect of Rhône to Sub-Prefect of Villefranche, June 16, 1866, AML, I2-48.

under the rubric of a 'public meeting,' workers were permitted to 'concert' in preparation for a strike -- a rather liberal interpretation of the Penal Code, hardly unfavorable to the workers.

The government demonstrated the same tolerance in several strikes by tulliste weavers between 1864 and 1868. In May 1865, for example, the police investigated complaints by the master-tullists Baboin and Péju concerning threats against their workers to force them to strike. The police found no evidence of threats but only polite, friendly efforts by strikers to persuade their comrades to join their action. "The attitude of the strikers is beyond reproach," reported the gendarme on May 5.<sup>23</sup> One fabricant stopped by the police even complained that the authorities were obstructing the "men of order" while allowing large gatherings of workers in the streets.<sup>24</sup> In a strike of tullist weavers nearly a decade earlier (Fall 1856), the police had not been so tolerant to the workers. In September 1856 they arrested several of the strikers and thus put a quick end to their action.<sup>25</sup> Times had indeed changed since then, much to the advantage of the weavers.

This official impartiality in labor disputes, often favorable to the weavers, eroded their traditional dependence on the government to mediate between them and the merchant-manufacturers in industrial matters. Their strong 'regulatory mentality,' evident as recently as

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<sup>23</sup> Reports of police agent to police-commissioner concerning strike of tullist weavers, May 4-5, 1865, AML, I2-47 (B).

<sup>24</sup> Report of Special Police Commissioner to Prefect of Rhône concerning strike of tullist weavers, May 20, 1865, AML, I2-47 (B).

<sup>25</sup> Police reports concerning strike of tullist weavers, September 4-5-6, 1856, AML, I2-47 (B).

1860, was already sufficiently weakened by 1865 to persuade the leaders of the weaving communities to seek improvement of their conditions of work by their own efforts. This was especially apparent in their enthusiasm for producers' and consumers' cooperation, the programs of which explicitly rejected state aid. In 1865, a list of weaver candidates to the Conseil des Prud'hommes (industrial court) easily defeated the weaver incumbants on the Conseil in the elections of that year in part because the latter had "not participated in the formation of the ... Grande Société industrielle [the producers' cooperative of silk weavers]." <sup>26</sup> These victorious weaver prud'hommes had been "sought out preferably among those who have given proof of their advanced liberalism." <sup>27</sup>

Such abandonment of a regulatory attitude was not always shared, or not shared to the same degree, by all silk weavers. In early October 1866, journeymen weavers planned to descend the slopes of the Croix-Rousse to demonstrate in front of the prefecture against the emigration of silk-weaving from Lyons into the countryside. These weavers wanted the authorities to restrict the freedom of the merchant-manufacturers to put out thread and cloth orders in the rural areas. As a handwritten poster found on the Place de la Croix-Rousse declared, these weavers were not questioning the advantages of free trade in general. But when free enterprise deprived the people of work, it had to be limited:

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<sup>26</sup> Report of police commissioner to Monsieur le Sénateur (Prefect of Rhône) and to Monsieur le Procureur Imperial concerning elections to Conseil des Prud'hommes of Lyons, December 6 and 10, 1865, AML, F - Prud'hommes - Elections (1806 à 1871).

<sup>27</sup> Ibid.

Messieurs Les négociants ... tell us that they have freedom to trade. Freedom [sic] is very good but it must have a limit to prevent the export of the earned bread of the people, who suffer from want.<sup>28</sup>

Economic liberalism was thus received with mixed favor among the silk weavers of Lyons. For many it represented freedom to strike, to form strike associations, and to organize cooperative societies to liberate the weavers from their tutelage to the merchant-manufacturers. For others it merely gave to the latter license to undermine the traditional fabrique of the city for the advantage of the countryside, which was more amenable to weaving at a lower piece-rate. The authorities tried to convince themselves that the difference of opinion represented a difference of economic position and status within the class of weavers, between the prominent master-weavers -- the leaders of the weaving communities -- and the 'masses' -- journeyworkers and 'small' masters with few looms. The prefect of the Rhône believed "that the principal master-weavers [would] not take part" in the demonstration planned in October 1866,<sup>29</sup> that it was rather an affaire of ouvriers tisseurs. This belief had some plausibility, in fact, for the 'masses' of the urban fabrique wove the inferior-quality plain silks which were most exposed to the competition of rural labor and of foreign silk industries. The 'prominent' master weavers of fancy silks and of medium or better-quality plain silks, on the other hand, were more insulated from such competition, because of the necessary skills and

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<sup>28</sup>"Réunion Général [sic] des Tisseurs à la préfecture, Le 15 Octobre (1866)," AML, I2-47 (B), No. 877.

<sup>29</sup>Dépêche télégraphique from Prefect of Rhône to Minister of Interior, October 15, 1866, AN, Fic III Rhône 10, Correspondance et Divers (1816 à 1870), dossier "Ouvriers de Lyon."

surveillance by the fabricant, for the provision of which urban weaving commanded a relative advantage. Or their industrial problems had sources other than rural competition -- the American Civil War and Parisian fashion design -- over which the government had little or no power. These 'elite' weavers could thus accept the arguments in favor of free competition with much less hesitation, for they were not directly subject to its rigors.

But such an easy division between 'free-trade-minded' elite artisan weavers and 'regulation-minded' silk-working masses was probably much farther from reality than the authorities claimed or hoped it was. When the prefect called upon the 'masses', in October 1866, to abandon their project for a demonstration and to send him representatives to present their grievances, the weavers commissioned their traditional leaders -- prominent master weavers, weaver prud'hommes and cooperative leaders -- to state their case along with a smaller number of journeymen.<sup>30</sup> More likely, ambiguity concerning free trade thus characterized the opinions of all weavers, not only those of weavers most threatened by rural industry. The government itself, moreover, cultivated such ambiguity by continuing its traditional displays of paternal 'benevolence' during periods of duress in the silk industry, while preaching, by word or by deed, the virtues of economic liberalism. In 1865, for example, during the unemployment crisis following the American Civil War, the prefect of the Rhône, Henri Chevreau, organized a "Commission of Charity" to collect funds for those without work. The Emperor added

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<sup>30</sup>"Les Réclamations des Tisseurs," Le Progrès, October 20, 1866.

another 100,000 francs to assist the poor.<sup>31</sup> Then in 1867, at another trough in the trade cycle of the industry, the army purchased 66,200 meters of silk gauze for its rifles, even though the fabriques of Zurich and Paris could have made these more cheaply.<sup>32</sup> Unlike the similar paternal acts of government during the 1850's, however, which associated the solidarity of the polis with imperial authoritarianism, these gestures of official benevolence demonstrated the compatibility of liberalism with paternalism under the imperial regime of Napoleon III.

The most spectacular gesture of Imperial benevolence -- one that commanded national attention -- was provoked by the same threatened demonstration of silk weavers in October 1866 which revealed their ambiguities towards free trade. In response to the five demands of the weavers' delegates to the prefect -- one of which called for restrictions against countryside weaving and another of which sought liberalization of the commercial law to facilitate the organization of cooperative societies -- the Emperor invited the weavers to submit the statutes of their faltering producers' cooperative for approval as a société anonyme (with assurances of acceptance by the Conseil d'Etat), thus relieving the embryonic association of legal impediments to its growth and potential success. The Emperor and Empress agreed to lend the new society 300,000 francs from the Société Prince Imperial to enable it to establish itself immediately, and then promised to order from it silk fabric for

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<sup>31</sup>Le Sénateur, Prefect du Rhône, Letter of invitation, April 17, 1865, AN, Fic III Rhône 10.

<sup>32</sup>Letter from Prefect of Rhône to Minister of Interior, March 15, 1867; letter from Minister of War to Minister of Interior, March 25, 1867, AN, Fic III Rhône 10.

the Imperial Court valued at 300,000 francs. The government would provide an additional 300,000 francs to the weavers of Lyons to assist them in the formation of other cooperative societies.<sup>33</sup>

The offer was, strictly speaking, a breach in the government's official policy of 'impartiality,' or non-intervention in the affairs of the marketplace. And acceptance of the offer by the silk weavers -- with enthusiasm and, ironically (from a free-trade point of view), at the sacrifice of any restriction against putting-out in the countryside -- violated the so-called 'liberal' ideology of cooperation, which rejected state aid for cooperative societies. But such breach and violation of free trade on the part of government and weavers was in fact quite consistent with the 'liberal' opinion of both. This opinion might be described best as 'tempered liberalism.' Tempered liberalism was essentially ambivalent towards economic freedom, for it allowed government intervention in the marketplace to restore the balance among actual or potential competitors, to prevent any one from absorbing or destroying the others by means of its 'natural' economic advantage. Such liberalism invoked the argument of preserving competition along with social welfare, like anti-trust ideology in the United States. Unlike the latter, however, tempered liberalism used this argument to justify positive intervention by the government to support the weaker competitor or class -- the weavers, for example -- against the stronger, not merely negative intervention to break up monopoly. "The Government," argued the prefect of the Rhône in November 1866, in defense of the Emperor's gesture, "by

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<sup>33</sup>Letter from Minister of Interior to Prefect of Rhône, Biarritz, October 17, 1866, AN, Fic III Rhône 10, dossier "Ouvriers de Lyon"; "Lettre de M. de la Valette (Minister of Interior to Prefect of Rhône) sur le chômage lyonnais," Le Progrès, October 28, 1866.

extending the freedom of workers' associations did not want to accord [the workers] only an illusory favor, ... from which the lack of capital would have prevented them from taking advantage."<sup>34</sup> Economic liberalism -- at least that of the Second Empire -- thus did not exclude government activism to aid the 'naturally' disadvantaged party to compete on equal or nearly equal terms. Such a notion of commercial freedom was at least compatible, if not entirely coincident, with the notion advanced in posters and flyers by spokesmen for the weaving 'masses' threatening to demonstrate in October 1866:

The laws should be for one as for the other, there must be a balance in everything. To re-establish the balance there must be a dike against free trade.<sup>35</sup>

Such convergence of opinion concerning free trade between government and weavers encouraged the authorities to use the cooperative movement to wean the weavers away from their current political allegiance to the republican opposition. The Minister of the Interior and the prefect hoped that the cooperative society aided by the Emperor in 1866 "would occupy their minds" and abate any tendency to disorder<sup>36</sup> that would profit only the enemies of the regime. For a while at least, the hopes of the government were not disappointed. On November 8, 1866,

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<sup>34</sup> Report from Prefect of Rhône to Minister of Interior, November 8, 1866, AN, Fic III Rhône 5, Comptes-Rendus administratifs (An III à 1870).

<sup>35</sup> Untitled statement of principles in demands of ouvriers tisseurs, October 1866, AML, I2-47 (B), No. 878.

<sup>36</sup> Letter from Minister of Interior to Prefect of Rhône, Biarritz, October 18, 1866, AN, Fic III Rhône 10, dossier "Ouvriers de Lyon"; report from Prefect of Rhône to Minister of Interior, November 8, 1866, AN, Fic III Rhône 5.

the prefect was able to report to his superior in Paris:

minds are calm, hope has replaced despondency and irritation. The cooperative movement is naturally very active; each day I see a large number of master weavers and I note with pleasure that they abandon political theories almost entirely, as being powerless to improve the condition of the class of workers.<sup>37</sup>

In December the police agent observing the conditions of the silk industry claimed that "Napoleon III will not have better supporters than the weavers if the good action which he has lavished on them could one day make people say that he stopped the decline of the fabrique lyonnaise ..."  
 "[T]oday," he continued, "the Emperor is loved by the working population of Lyons."<sup>38</sup> Two years later the prefect could report the same happy news: "The cooperative movement is the main preoccupation of the working class..."<sup>39</sup>

But such optimism did not last for long. The liberalization of press and meeting laws in 1868 unleashed a new torrent of political propaganda and organization. This torrent rekindled a dormant passion for democratic republicanism and labor militancy among the workers of Lyons. Without abandoning entirely the 'pragmatic program' of cooperation, the Lyonnais workers directed their most intense energies elsewhere. They formed political and educational clubs, some of which

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<sup>37</sup> Report from Prefect of Rhône to Minister of Interior, November 8, 1866, ibid..

<sup>38</sup> "Rapport à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies au 4e Trimestre Xbre 1866," December 8, 1866, AML, I2-47 (B), No. 301.

<sup>39</sup> Report from Prefect of Rhône to Minister of Interior, November 18, 1868, AN, Fic III Rhône 5.

became regular forums for discussion of the political and social programs of the radical democrats. Beginning in 1869, with the return of industrial prosperity in the silk industry, they formed 'societies of resistance,' embryonic trade unions, to negotiate and enforce wage increases with their employers. And in 1867, and again in 1869-1870, workers in several different trades in the city organized the Lyons Section (later Lyons Federation) of the International Workingmen's Association to unite all workers' and workers' societies, especially societies of resistance, into a single, inter-professional, semi-revolutionary organization. As the police commissioner of Lyons remarked with some disappointment in December 1869:

The cooperative movement of production and consumption does not advance rapidly ... The ideas of the workers concerning this matter have changed much in the last two years and especially since political liberties have been enlarged. The social theories have regained much ground over the practical ideas encouraged by the Government.<sup>40</sup>

Common to these newer forms of workers' organization was strict independence from the government, if not outright hostility to it. Unlike the cooperative movement, supported morally and -- in the case of the weavers' producers' cooperative -- materially by the government, the new organizations neither received government favor nor accepted funds from the authorities. They belonged to movements that the government could tolerate at most, but could not control or direct in its own interest. The Lyons branch of the International was especially immune to such government interference. Albert Richard, leader of the Lyons

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<sup>40</sup>'Observations générales,' "Situation industrielle au Décembre 1869," AML, I2-47 (B), No. 212.

Federation in 1870, made it clear to his followers that internationalism meant "war against capital, against the bourgeoisie and against authority under whatever form it takes, political, social or religious."<sup>41</sup>

The silk weavers participated actively in all of these new associations, except for the International (which attracted only a few weaver activists). Despite the preferential favor bestowed upon them by Imperial 'benevolence,' they too stepped out beyond the protective umbrella of official paternalism and pinned their hopes for a liberal society to the banner of republicanism -- especially to the banner of radical republicanism. When Napoleon III fell at Sedan on September 4, 1870, the silk weavers of the Croix-Rousse and elsewhere joined other republicans in Lyons to celebrate the end of the Empire. No tears were shed for the Emperor once "loved by the working population of Lyons."<sup>42</sup>

Yet to presume from this that the weavers had also abandoned their old expectations of government intervention in their industrial affairs would surely be an exaggeration. Only weeks before the weavers of the Croix-Rousse cheered the advent of the Republic, the police overheard murmurs among them, suggesting that the imperial prefect had taken their side in the current strike against merchant-manufacturers of fancy cloths and expressing hope for his intervention to force the fabricants to concede their demands. The strike of fancy-cloth weavers had broken out in early June to force two 'offending' merchant-manufacturers to

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<sup>41</sup>Report to Minister of Interior on meeting of the International in Lyons, March 14, 1870, AML, I2-55, Papiers d'Albert Richard: Pièces relatives à l'Association Internationale des Travailleurs ...

<sup>42</sup>"Rapport à Monsieur Delcourt ...," December 8, 1866, AML, I2-47 (B), No. 301.

accept a schedule of minimum piece-rates agreed upon by their colleagues and the weavers. The newly-formed weavers' resistance society, the Société civile de prévoyance, was financing the strike. Early in the strike, the weavers believed that the prefect was resisting pressure from the fabricants to force them to return to work. According to one woman,

The heads of the four largest establishments of Lyons have gone to see Monsieur le Préfet to ask from him authorization to close their counters temporarily, in order to bring the workers to terms and to force them to accept work at rates lower than the tarif accepted and signed by the fabricants. Monsieur le Préfet refused this authorization and answered in these terms: 'You support the consequences of what you want to do and that will just be too bad for you.'<sup>43</sup>

Later in the strike, the weavers imagined the prefect threatening to use force if the fabricants did not settle with the strikers. On July 3, police agents overheard groups of workers on the Croix-Rousse saying that "Monsieur le Sénateur Chevreau [the prefect] attended the meeting [between representatives of weavers and fabricants] and said that, if the fabricants had not accepted the new tarif within 15 days, he would have their counters closed."<sup>44</sup> On July 14, a "female worker, mother of a family" was heard saying:

Monsieur le Préfet is getting involved in this business: he has heard all that has happened and has sent agents to Ravier and Piotet [the fabricants against whom the strike was initially called] to find out what they planned to do. We are certain that Monsieur le Préfet will take care of things.<sup>45</sup>

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<sup>43</sup>Report of Special Police Commissioner to Prefect of Rhône concerning strike of fancy-cloth weavers, June 25, 1870, AML, I2-47 (B).

<sup>44</sup>Report of Special Police Commissioner to Prefect of Rhône, July 3, 1870, AML, I2-47 (B).

<sup>45</sup>Report of Special Police Commissioner to Prefect of Rhône, July 14, 1870, AML, I2-47 (B).

Whether or not these popular beliefs were true (probably they were not), they indicated the persistence of a 'sense of dependence' on government authorities in social and economic matters, and the identification of solidarity of the polis with interventionist government, at least among the 'masses' of silk weavers in the city. Even while radical politicians and revolutionary militants were leading these 'masses' into the folds of the enemies of the Empire, this expectation of government intervention to 'right the balance' between themselves, the weaker class, and their employers endured. It was not a question of loyalty to a regime, but rather of loyalty to an idea -- the idea that the fabrique of Lyons flourished, that its trades people prospered, only under the protective shield or with the positive support of a 'benevolent,' concerned authority. The solidarity of the polis remained dependent upon the vigilant eye and the occasional helping hand of concerned government in industrial life. The acceptance of economic liberalism by the silk weavers of Lyons in the 1860's implied no rejection of this fundamental notion, sanctioned by a long tradition of intervening government.

## CONCLUSION

### Solidarity and Association

Sreten Maritch, the first historian of the Second Empire workers' movement in Lyons, described the course of that movement as a progression from an elite movement of master artisans to a mass movement of proletarian workers. The elite movement produced mutual aid societies dependent on the government and cooperative societies of consumption, production and credit, most of which began 'autonomously' but some of which eventually accepted government aid as well. The mass movement generated strikes, militant trade unionism -- called 'industrial resistance' -- and revolutionary socialist political organization. The mass movement alone appealed to the common proletarian interests of journeymen and factory workers and therefore achieved true class consciousness. The elite movement represented instead the retrograde, petty-bourgeois interests of master craftsmen, especially those of the master silk weavers of the fabrique lyonnaise, and therefore failed to produce a genuine workers' movement.<sup>1</sup>

Maritch's interpretation of the 'social movement' (as he called it) of Second-Empire Lyons has been criticized in some of its details,

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Sreten Maritch, Histoire du mouvement social sous le Second Empire à Lyon (Paris: Rousseau, 1930), especially chapters I, IV, V, VII, IX, X.

notably by Jacques Rougerie in his work on the International Workingmen's Association.<sup>2</sup> Yves Lequin will offer a more thorough revision of Maritch in his forthcoming book on the workers' world in the Lyons region, by situating the Second-Empire movement of Lyons in the context of the eight-department région lyonnaise, for the period 1848 to 1914, with greater breadth of sociological research and understanding, than Maritch's thesis permitted.<sup>3</sup> But at least before Lequin's doctoral thesis (which will form the substance of his book), Maritch's interpretation was generally accepted by social historians of Lyons. In The Lyons Uprising of 1834, for example, Robert Bezucha relied upon this interpretation to distinguish the strength and militancy of the silk-workers' movement of 1831-1834 from the weakness and social conservatism of silk workers in the 'social movement' of the Second Empire. The former was "predicated on the protoindustrial solidarity between master-weavers and their journeymen," while the latter depended exclusively on masters, whose "mentality was increasingly that of petit-bourgeois craftsmen who believed themselves superior to the factory worker employed in the new chemical and metallurgical industries."<sup>4</sup> In La première internationale et la commune à Lyon, Maurice

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Jacques Rougerie, "La première Internationale à Lyon (1865 - 1870)," Problèmes d'histoire du mouvement ouvrier français. (Annali dell'Istituto Giangiacomo Feltrinelli, 1961), pp. 126-193.

<sup>3</sup>Yves Lequin, Les ouvriers de la région lyonnaise dans la seconde moitié du XIXe siècle (1848 - 1914) (Lyon: Presses universitaires de Lyon, 1977).

<sup>4</sup>Robert J. Bezucha, The Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge: Harvard University Press, 1974), pp. 194-195.

Moissonnier also stressed the conservatism of weavers' social and political movements under the late Empire, early Republic. Moissonnier explained this conservatism by the prominence of master weavers in these movements, who "found hard-nosed social theories repugnant and who refused to question private property of the means of production."<sup>5</sup> Both Bezucha and Moissonnier traced the social origins of this conservatism to the paucity of journeymen weavers — "true workers possessing only the force of their labor"<sup>6</sup> — in the fabrique of Lyons under the Second Empire.<sup>7</sup>

In developing his interpretation of the workers' movement, especially that among the weavers of the fabrique, Maritch relied upon many of the same documents from which the present study has been fashioned. The present work adds some new sources, especially quantitative data on social and economic conditions, but offers, above all, a different method for understanding the same social movements. This method has consisted of the 'decomposition' of social and economic change, and of voluntary association reflecting such change, into five collective solidarities, prior to the 'reconstruction' of the movements of voluntary association as a whole. The task of decomposition by collective solidarities is now complete. The task of reconstruction remains. The question naturally arises, whether this reconstruction will modify the

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<sup>5</sup>Maurice Moissonnier, La première internationale et la commune à Lyon (Paris: Editions sociales, 1972), p. 24.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid.; Bezucha, The Lyon Uprising of 1834, p. 194.

'standard' interpretation made by Maritch nearly fifty years ago in any essential way. Without attempting this reconstruction here -- this concluding chapter will suggest some of its major probable directions and some of the major modifications of Maritch's interpretation which these directions may require.

This reconstruction would describe and interpret the course of the weavers' movement as a passage from a movement deeply rooted in the traditional solidarity of the polis to a movement deeply rooted in the new solidarity of the neighborhood. 'Depth' in both cases would refer to the extent of ideological appeal by these movements to the 'structures' of social solidarity in the weavers' world of work -- to old, unchanging structures, in the case of 'traditional' appeal, or to new or changing structures, in the case of 'novel' appeal. The first movement, based on the solidarity of the polis, would be described as reflecting a unity of craft and class solidarities in the weavers' social identity. The second movement would be described as manifesting a dissociation of craft from class and a new ideological division in the notion of class solidarity. The agent of such dissociation and division would be the new solidarity dominating the weavers' social identity in the later period -- the solidarity of the neighborhood.

Following this interpretation, the first movement would be described as generating mutual aid societies appealing largely to tradition for their ideological and organizational élan. These societies dominated collective action among the weavers of Lyons throughout the 1850's. The organization of the Silk Workers' Society for Mutual Aid in 1850,

initiating the movement of the 1850's, best demonstrated the traditional alliance of craft, class and 'political' solidarities explaining the appeal of mutual aid. As indicated in Chapter III, the organization of the Society effectively recognized the importance of the weavers of Lyons in their city -- the polis of most immediate attention -- and in their trade, especially in its 'horizontal' dimension of craft solidarity.<sup>8</sup> The establishment of the Society also recognized, at least implicitly, the traditional identity and social and political significance of the silk weavers as a class. It was formed, probably mainly, out of fear of the political power and class militancy of the weavers, demonstrated most recently by the Voraces -- a paramilitary association of republican weavers -- during the first five months of the Second Republic in Lyons.<sup>9</sup> The Society reproduced in its administrative council, moreover, the traditional pattern of class representation of the Conseil des Prud'hommes, affirming, in effect, the specific class identity of the weavers, although in their traditionally subordinate position of power vis-à-vis the fabricants.<sup>10</sup>

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<sup>8</sup> Chapter III, section II-B-1, p.

<sup>9</sup> Francois Dutacq, Histoire politique de Lyon pendant la révolution de 1848 (Paris: Edouard Cornely, 1910), pp. 170-186, 382-385.

<sup>10</sup> On the administrative council of the Silk Workers' Society, silk-worker 'participating members' were represented equally with 'honorary members,' most of whom were merchant-manufacturers of the fabrique. The president of the council, however, was ex officio the president of the Chamber of Commerce of Lyons, 'weighting' the balance of the council in favor of the mercantile - bourgeois members by one member. On the Conseil des Prud'hommes, the balance was also 'weighted' in favor of the fabricants by one member.

By recognizing the integrity and significance of polis, craft and class together in this fashion, the Silk Workers' Society anchored its ideological appeal in a structure of social solidarity familiar to the weavers, while the economy of the silk industry still kept that structure intact. Napoleon III's promotion of the smaller mutual aid societies appealed more strongly to the traditional solidarity of the polis than to the solidarities of craft and class, and interpreted the polis in an imperial rather than urban sense. But even this promotion presumed and sought to preserve a social order based on traditional class hierarchy and did not question the traditional foundations of craft solidarity.

The second, later social movement generated political militancy and organization under the late Second Empire and early Third Republic (1870 - 1871) and appealed to new sources of social identity with new ideologies of social reform. The movement followed a period of active voluntary association, adding cooperative societies, clubs and resistance organizations to the established mutual aid societies. It also followed a period of fundamental economic and social change in the silk industry and in the city of Lyons. Between the revival of mutual aid during the 1850's and the emergence of the political movement in 1869-1870, the fabrique lyonnaise traversed one of the longest and deepest economic crises of the century; and intensified industrialization, urban renewal and population growth transformed the 'neighborhood' environment of the city of Lyons. The crisis of the fabrique weakened 'structurally' (that is, in a deep, fundamental way) the

traditional solidarities of craft and class and replaced these, to some extent, with new craft and class solidarities. The transformation of Lyons created new and deep social and economic divisions by neighborhood.<sup>11</sup> In some neighborhoods, such as the Brotteaux-Guillotière, this transformation dissociated craft solidarity from class solidarity, by exposing silk weavers to workers in other trades and conditions of employment. Such exposure encouraged weavers in these neighborhoods to reform their notion of class, from the traditional notion associated for the most part with a single trade, to a new conception of class solidarity extending beyond the frontiers of individual trades. In other neighborhoods, such as the Croix-Rousse, isolation from the forces of urban transformation 'spared' the denizens this exposure to new elements and preserved their traditional identification of class with craft. In these ways, neighborhood solidarity profited from the weakening of traditional craft and class solidarities by asserting its own priority in determining the weavers' social identity.

This assertion of neighborhood over other solidarities explained much of the political conflict between the Croix-Rousse and the Brotteaux-Guillotière concerning the form of the Republic after the

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<sup>11</sup>Here, as throughout the previous chapters, the word 'neighborhood' has been used somewhat loosely to characterize certain sections of the city, such as the Croix-Rousse or the Brotteaux-Guillotière, each of which consisted of several quarters. The word 'neighborhood' is applied to the entire section, not only to each quarter, because of its primary reference to a form of social solidarity which most quarters in each section shared in common. Thus, the residents of the Croix-Rousse, regardless of their quarter within this section, experienced a certain 'Croix-Rousse' identity -- here called a particular 'neighborhood' identity.

fall of the Empire on September 4, 1870. The Croix-Rousse defended the Radical Republic and even 'permitted' this Republic to become moderately conservative. The Brotteaux-Guillotière -- or rather, the Lyons Federation of the International Workingmen's Association, with its base of support in the Brotteaux-Guillotière -- fought for a socialist Commune. This political conflict was really a conflict between neighborhoods, each of which 'carried' a different class ideology, but not a radically different class character in one trade at least -- that of silk weaving. The political movement manifested, in effect, the 'triumph' of neighborhood over craft and class in determining the collective consciousness of the silk weavers of Lyons.

The differences between this interpretation of the history of the social movement in Lyons and that of Maritch and his followers do not appear very significant at this point. Maritch described the mutual aid movement as a deliberate, although unsuccessful, attempt on the part of the Emperor "to turn workers away from politics"<sup>12</sup> by "canalizing" workers' organization, that is, "by placing it under his patronage."<sup>13</sup> Mutual aid was, moreover, an instrument for preserving the established social order, "for turning [the workers] away from hazardous enterprises," in particular, "an obstacle rather than an instrument for strike[s]."<sup>14</sup> Like the present study, Maritch described mutual aid as an attempt to defend a traditional order of

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<sup>12</sup>Maritch, Histoire du mouvement social à Lyon, p. 34.

<sup>13</sup>Ibid., p. 31.

<sup>14</sup>Ibid., p. 39.

'political' solidarity, here identified with a particular regime, and a traditional hierarchy of class. The interpretation of the present study claims a bit more 'success' for the movement, by stressing the 'depth,' or rootedness, of mutual aid ideology in socially-meaningful solidarities still grounded in current economic conditions. Moreover, with more sociological precision, the present interpretation locates the source of this 'depth' in the weavers' social and economic experience. The main orientations of the two interpretations -- that of Maritch and that of this study -- are nevertheless the same.

Moissonnier's adaptation of Maritch to the political events of the late Empire and early Republic also produced an interpretation of these events generally similar to that of the present study. Like the present study, Moissonnier stressed the different political loyalties and class ideologies of different neighborhoods in the city and explained these as the result of the different social character of the neighborhoods. The Croix-Rousse, dominated by master-weavers of the fabrique, was socially conservative and therefore supported the Radical party. The Guillotière, dominated by workers in the newer industries of the city, was socially progressive and rallied behind the International.<sup>15</sup> Moissonnier's interpretation of those tendencies, like Maritch's interpretation of mutual aid, was sociologically less precise than the present interpretation.

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<sup>15</sup>Moissonnier, La première internationale à Lyon, pp. 24, 26-27 ff.

Moissonnier did not specify, for example, whether the socialist class ideology of workers in the Guillotièrre was simply the consequence of their common proletarian class situation, or whether it was also, as the present study argues, the consequence of greater contact of master artisans with proletarian workers, eroding the traditional unity of class and craft solidarities among these masters and promoting among them a sense of class solidarity similar to that of the true proletarians in the area. Despite this lack of precision, Moissonnier's general argument and the present interpretation appear similar in their most salient features.

Such apparent similarities between Maritch and his followers, on one hand, and the present study, on the other hand, become less significant when compared with the different interpretations of the cooperative and resistance movements by the two. Both of these movements were 'transitional' from one form of workers' voluntary association, mutual aid, to another form, including both socialist political organization, such as the International or the (Guesdist) Parti ouvrier, and syndicalist unionism. The first form was dependent upon the state for support and promoted class collaboration; the second rejected state aid or intervention and was ouvrieriste or anti-capitalist in orientation. Among the silk weavers of Second-Empire Lyons, the cooperative and resistance transitions between these two forms reflected the long and severe economic crisis in the silk industry during the 1860's. Maritch's interpretation of these transitional movements stressed the defensive, reactionary character of the cooperative movement, exacerbated by economic crises revealing

the threat of modern industry to the master silk weaver, and the offensive, progressive character of the resistance movement, fruit of the return of economic prosperity and generator of class solidarity, class consciousness, and socialist organization. The present interpretation, by contrast, emphasizes the 'expansive,' progressive nature of cooperation, based on a recognition and acceptance of new solidarities created by the changing economy, and the 'restrictive', reactive character of industrial resistance, reviving and consolidating traditional notions of class relations favored by the return of prosperity.

The cooperative movement coincided with the worst years of economic depression and reflected the crisis of the 1860's both in its disruptive aspects, destroying or weakening old collective solidarities, and in its reformative effects, laying the foundations of new solidarities. Cooperation appealed to traditional concerns over the destruction or weakening of old solidarities by evoking traditional perceptions, aspirations and ambitions in its statement of aims, in its program of activities and in its mobilization of membership, leadership and support. Cooperation directed its strongest appeal, however, to the new solidarities created by social and economic change during the 1860's. Its aims and methods were new and especially responsive to the new conditions of the weavers' world of work, and it was eminently open and receptive to the incorporation of new aims, new forms of organization and new groups of workers into the movement. In 1865, the leaders of twenty-one cooperative societies of Lyons stressed this novel character of cooperation by declaring: "The cooperative associa-

tions are a new economic force."<sup>16</sup> Because of the open, receptive character of cooperation, it accepted old ideals along with new aims and methods, building social reform on the foundations of traditional values. This joint appeal to novelty and tradition in fact constituted the special genius of the cooperative movement during this period of economic and social transition. Such appeal was the special source of the ideological strength of cooperation among the silk weavers of Lyons.

In contrast to this openness of cooperation, the resistance movement was ideologically restrictive in its appeal to social solidarity. Instead of encouraging new ideas and new forms of voluntary organization, the resistance movement consolidated and concentrated the weavers' organizational energies around a single collective solidarity -- that of class -- and in its traditional hierarchical form. Although the movement appealed somewhat to a broader notion of class, in the sense of 'mass', by integrating rural weavers, journeymen and women into the movement, it accepted the 'traditional' notion of the 'other' class -- the merchant-manufacturers to whom the weavers were subordinate in the process of production -- and the hierarchy of classes upon which such notion was founded. Resistance appealed to this traditional hierarchical notion by stressing the need of classes for one another in the manufacture of silks and by promising the weavers, the subordinate class, a 'fair share' in the gains of manufacture -- insured, so to speak, by this need -- without upsetting the traditional class

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<sup>16</sup> 'Mémoire adressé par les associations coopératives de la ville de Lyon, à MM. les membres de la Chambre de Commerce,' in Eugène Flotard, "Bulletin Coopératif," Le Progrès (Lyon), December 25-26, 1865.

hierarchy. In this sense, resistance was not only a movement more ideologically closed than cooperation but also a movement more traditional, or 'regressive,' in the sources of its ideological appeal.

The progressive character of the cooperative movement was apparent in its appeal to new forms of collective solidarity in defining its aims among the weavers, and in the novelty of its organizational program and method. Its appeal to new or changing collective solidarities -- in particular, to solidarities of class, household and polis -- was 'deep'; that is, it addressed explicitly and precisely the economic and social 'questions' posed by changes in these solidarities and proposed responses to these 'questions' that were both 'efficient' -- profiting from new opportunities emerging from the same changes -- and 'radical' -- demanding the constitution of new forms of organization of work and/or community and not merely the marginal correction or redressing of old forms. Since the changes in solidarities thus addressed by cooperation were themselves 'structural' in many respects, cooperative ideology reached into some of the deepest social and economic roots of the urban fabrique.

Cooperative production, for example, accepted the new class situation of the urban master-weavers and fostered the continued transformation of traditional class relations by its pursuit of autonomy in the work process through self-help. The new cooperative silk-weaving enterprise, for example -- the Association of Weavers -- would enable the weavers to "emancipate" themselves from their onerous dependence on the orders of a single fabricant, many of whom, especially the petits fabricants, had no concern for their welfare

and no scruples about cheating them of their low piece-rates by fraudulent mesurage of woven fabric. Cooperation would enable them to achieve such "emancipation" by their own efforts -- in particular, without the assistance or cooperation of the once paternal grands fabricants, who were abandoning the urban weavers to their rural fabriques and who were thereby losing concrete class relationship with the weavers of the city. Cooperative consumption enabled the weavers to respond more 'efficiently' to the new economic and social situation of their households. The procurement of household necessities at wholesale cost through the organization of cooperative groceries reduced expenditures on these items at a time when the individual master-weaver's attention was focused on expenditures rather than on revenues of the household budget. This attention to expenditures was in part the result of the impossibility of increasing revenues, because of low piece-rates and high unemployment, and in part the result of the familialization and feminization of the household, facilitating the reduction of household expenditures by reducing living standards of household members. Consumers' cooperation provided an institutional mechanism for accommodating this reorientation of household budget management, even permanent (hence the structural 'depth' of its appeal), and also 'humanized' this accommodation by relieving the more easily exploitable family and female household members from some of the burden of re-adjustment. The cooperative movement as a whole, finally, presumed a new kind of 'political' solidarity -- in particular, one receptive to liberalism -- and fostered the acceptance of this new solidarity among weavers who traditionally regarded liberalism with

hostility. The gradual 'liberalization' of the Empire after 1859 gave the workers more freedom to organize cooperative societies and even encouraged such organization by the commercial laws of 1864 and 1867. Even more importantly, the cooperative movement of the 1860's weaned the weavers away from their 'traditional' attachment to state-sponsored voluntary association -- whether 'utopian' cooperative association of the Second Republic or subsidized mutual aid of the early Empire -- and encouraged their acceptance of a 'tempered liberalism' in other areas of their social and economic life as well. Cooperation thus served as an agent of the transformation of their ideal of the polis and of their solidarity with the government founded on that ideal.

Besides appealing 'deeply' in these ways to new or changing solidarities of class, household and polis, cooperation also appealed to new solidarities of household, craft and class in a more superficial manner. Cooperative societies reflected, for example, the feminization of the household by admitting a few female shareholders, but members of these societies never elected women into positions of leadership. The cooperative movement also reflected the new 'vertical' solidarity of craft among master weavers, based on equality of earnings, by concentrating on the reform of the distributive mechanism of the distributive mechanism of the economy -- its more 'superficial' (or 'superstructural') dimension -- to increase the earnings of weavers, rather than on the transformation of productive organization and

technique, to 'revolutionize' the work process as such.<sup>17</sup> This greater concern with distribution also fostered a semblance of class unity among the masters, by appealing to an interest shared equally by all -- in greater earnings. The weakness of this foundation for class solidarity was revealed by the ease with which the small-group autonomy of consumers' cooperation, and the ideological divisions within producers' cooperation, rapidly eroded class unity within the movement after 1866.

Cooperation combined such appeals to new or changing solidarities with appeals to tradition. Like the former, the latter included both 'deep' and 'superficial' responses to changing economic and social conditions, but unlike the latter, these responses were reactive, intending to restore old, threatened solidarities or at least to preserve habits and ambitions traditionally 'founded' on these old solidarities, in new conditions of economic and social life. Such appeals to tradition responded in this manner to changes in weavers' households, in a 'deep' way, and to changes in their craft solidarity, in more 'superficial' ways. Cooperation addressed the former by promoting entrepreneurship in the small consumers' societies. Consumers' cooperation replaced the household with the small retail business as a field of entrepreneurial endeavor. This replacement permitted the master to extend his traditional entrepreneurial ambitions over a much wider range and scale of activities than he had ever been able to do

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The producers cooperative of silk weavers, the Association of Weavers, sought, for example, to preserve urban hand-loom weaving and the domestic economy of silk manufacture from the competition of mechanized factory weaving as well as from the competition of rural domestic weaving.

in the domestic economy of silk weaving, by making available to him two new instruments for increasing revenues -- profit-making and portfolio investment. Producers' cooperation addressed changes in the craft solidarity of the weavers but more superficially. Two of the most prominent changes were the emigration of the fabrique to the countryside, undermining the traditional centrality of Lyons in the 'horizontal' solidarity of craft, and the levelling of fancy-weavers' income to that of plain-cloth weavers, eroding the traditional preeminence of fancy-cloth weavers in the 'vertical' solidarity of craft. Defense of these two foundations of craft solidarity was, however, more informal than that of entrepreneurship. Defense of the urban fabrique was a mere hope on the part of the Association of Weavers, not a carefully-developed program, and defense of the status of the fancy-cloth weavers was an 'informal' (that is, unofficial) interest of the majority of the administrators of the Society, who were fancy-cloth masters. Nevertheless, even these superficial bases of appeal added a breadth to the depth of cooperative ideology and thereby gave the weavers more reason to subscribe to the cooperative program.

The appeal of consumers' cooperation to traditional entrepreneurial ambitions, once exercised in the household, and the appeal of producers' cooperation to traditional notions of 'horizontal' and 'vertical' solidarity of craft, would seem to justify Maritch's argument that that the cooperative movement "was no more than a defensive reaction" against the "rationalization of production" by the mechanization of industry and by the erosion of skill to the level of the "non-qualified"

(that is, unskilled) worker.<sup>18</sup> The appeal to entrepreneurial ambition, associated traditionally with the autonomous or semi-autonomous household, might be argued to have reflected the master-weaver's attachment to "the life of the family" and his "petty-bourgeois" "sense of independence."<sup>19</sup> The appeal to traditional craft solidarity, based on distinction of skill in an exclusively urban craft, might be said to have manifested the master-weaver's elitist, corporative assertion of his "only remaining defense" against the "democratization" of labor by the machine and against the competition of rural labor -- "craft skill acquired by a long apprenticeship."<sup>20</sup> Both appeals thus would justify Maritch's claim that the cooperative vision was narrow, closed in upon family and craft, and retrograde, seeking to revive an obsolete form of work. His contention that the cooperative movement could never have become "a workers' movement, that is a movement for the emancipation of the masses, a socialist movement" would therefore also seem to be accurate.<sup>21</sup>

Maritch's perception of the traditional bases of appeal of cooperative ideology was in fact quite accurate, but his failure to situate these bases with those explaining the appeal of cooperative novelty

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<sup>18</sup> Maritch, Histoire du mouvement social à Lyon, p. 109.

<sup>19</sup> Ibid., pp. 128-130. This is, of course, stretching the similarity somewhat. Maritch's description of the 'typical' master-weaver is closer to the 'artisan' master than to the 'entrepreneurial' master, as these were defined in Chapter I. (See Chapter I, section I-B-I.) The similarity consists primarily of the original attachment of Maritch's 'type' and this study's 'entrepreneurial' master to the domestic economy of silk weaving.

<sup>20</sup> Ibid., pp. 110-111.

<sup>21</sup> Ibid., p. 129.

distorted the 'truth' value' of his perception. In other words, his recognition of a partial truth of the cooperative movement -- its appeal to traditional solidarities -- became a vehicle of false understanding when taken as the whole truth of the movement -- that is, as a claim that the movement appealed only to these solidarities. Besides appealing to the latter in household and craft, the cooperative movement also addressed changing solidarities of craft, household, class and polis. This joint appeal to novelty and tradition was at the essence of its particular kind of 'utopianism' -- one that pointed to a new society and to new social relations founded on traditional ideals and experience. By focusing only on these foundations and by ignoring the direction of the cooperative movement, Maritch failed to appreciate its progressive character.

Maritch also failed to appreciate the revolutionary potential of cooperative ideology and the democratic sources of at least some of its appeal. Cooperation did not produce a revolution, nor even a revolutionary consciousness, nor probably could it ever have done so, but it welcomed and 'disciplined' ambitions for 'deep' social reform to the point where they could be mobilized by other movements for revolutionary purposes. Cooperation persuaded the weavers to accept economic liberalism for the first time, for example, and thereby weaned them away, to some extent at least, from dependence on the government in social and economic affairs and in the organization of voluntary associations. The International capitalized on this acceptance of autonomy in industrial affairs and on the wider experience of autonomous workers' organization by appealing to autonomy in its

revolutionary aims and organizational methods. The cooperative capacity for tapping the roots of revolutionary consciousness was the result of its 'depth' of ideological appeal to 'deeply' changing solidarities in the weavers' world of work. Cooperation was rooted, in other words, in the structural transformation of the fabrique during the 1860's, and it responded to this structural change (in part, at least) by encouraging it or by formulating its own aims and building its own programs on the effects of this change. Among these effects were the erosion of certain traditional differences among weavers in the fabrique -- such as differences of earnings, of household size and of household dependence on single fabricants, between plains and fancies weavers, and differences of task within the household economy, between male and female workers. Such erosion effectively equalized -- or "democratized" -- the economic situations of these weavers, without transforming the techniques or organization of their household economy as such. As indicated in Chapters IV, V, VI,<sup>22</sup> cooperative ideology, appealed to these newly "democratized" solidarities as well as to some of the older solidarities based on hierarchical distinctions within the craft. It appealed, in other words, to new egalitarian experiences of a traditional type of workers produced by changes in their economic conditions rather than to the experiences of new types of workers emerging out of a radical transformation in productive organization and technique. Maritch

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<sup>22</sup>Chapter IV, section II-C; Chapter V, section I-E; Chapter VI.

underestimated the impact of the first kind of change on the receptivity of cooperative ideology to social democracy.

The weakness of the cooperative movement was not its atipathy to progress, revolution or social democracy but rather its inability to promote class unity -- solidarity of class in the sense of 'mass' -- even within a single trade, such as silk weaving. This was partly the result of its 'open,' receptive character, stressing autonomy and individual initiative in the organization of cooperative enterprise. In Lyons, this attachment to autonomy was manifested in the organization of small consumers' cooperatives, each concentrated in a particular silk-weaving neighborhood and each jealous of its independence from other consumers' societies.<sup>23</sup> Such jealousy prevented the organization of a unified federation of consumers' cooperatives and consequently of a unified, class-conscious workers' movement on the basis of these societies. The greatest weakness of the cooperative movement in its efforts to promote class unity among the silk weavers was, however, also the source of the ideological appeal of producers' cooperation, considered by most observers to be the most 'class-conscious' part of the cooperative movement. This was the diffuse, ambiguous character of class relations to which producers' cooperation offered the most ambitious response. Because of their abandonment by the large merchant-manufacturers, the weavers' conception of the other class, against

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<sup>23</sup>Societies demonstrated this jealousy by prohibiting their members from belonging to any other association with a similar purpose. See, for example, Article 4-1, Esperance ouvrière, Statuts, ADR, 9U - Sociétés: Constitutions et modifications, August 23, 1866.

which they defined their own class solidarity, was that of one losing concrete relationship with themselves. They were faced with a situation, in other words, in which the notion of class as such became ever less meaningful, because of the departure of the other class (or at least of the grands fabricants, who represented the weavers' 'ideal' of the other class) from the scene of traditional class confrontation. In this situation the weavers' own class solidarity could be maintained only in idea -- through cooperative ideology, for example -- without the concrete support of daily class interaction. The class ideology of the cooperative movement was therefore acutely susceptible to division by other collective solidarities, such as neighborhood.

Such division first emerged in the form of ideological orientations of prominent consumers' societies of one neighborhood area -- the Croix-Rousse -- as compared with those of another neighborhood -- the Brotteaux-Guillotière. The former tended to be elitist and exclusive in their recruitment of members and sharing of profits, while the latter tended to be more egalitarian and expansive. Such differences did not cause serious conflict within the cooperative movement until 1866. Then, in October of that year, the silk weavers had to decide whether to abandon certain cherished principles of their movement -- independence from government assistance and capitalist involvement and equality in the sharing of business profits -- in order to secure for their slowly budding producers' association the legal advantages of recognition as a société anonyme and the financial benefits of a government loan. The Emperor himself proposed such recognition and assistance in response to a set of demands by the weavers which they finally presented to the prefect through some of their elected

representatives, after first threatening a mass demonstration. The majority of the weavers accepted the proposals, following the leadership of master-weavers of the Croix-Rousse. A minority, following the séries (organizational cells) of the Brotteaux-Guillotière, at first lobbied for reform of the new statutes and then seceded from the parent Association to join another producers' society whose "goal [was] cooperation; that is, equality of conditions under the heading of the distribution of profits."<sup>24</sup> This split within the producers' movement reflected the divisions of social ideology and of social and economic experience between the two silk-weaving neighborhoods and rended class unity within the cooperative movement as a whole. As Chapter VII indicated, these divisions also became apparent in club activity after 1868 and in the extent and direction of politicization of clubs and consumers' cooperatives after 1870.<sup>25</sup>

This weakness of class solidarity prevented the cooperative movement from becoming a mass movement with a socialist ideology. The resistance movement, by contrast, consolidated and concentrated class solidarity and organized the working 'masses' into unified class associations. Industrial resistance achieved such consolidation and concentration, however, only by an ideological and psychological 'closing in,' or focussing, of 'associational' energy and purpose around the single-minded pursuit of class unity and class organization. Among the silk weavers at least, this 'closing in' had curious implications for a movement described by Maritch and Moissonnier as

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<sup>24</sup>"Une nouvelle société des tisseurs," Le Progrès, December 30, 1866.

<sup>25</sup>Chapter VII, section

progressive; namely, a revival of traditional notions of class solidarity and an acceptance of traditional class hierarchy. Unlike the cooperative movement, which sought to achieve complete autonomy for the workers from the fabricants, industrial resistance recognized, at least implicitly, both the subordination of weavers to fabricants and the need of the fabricants for the labor of urban weavers -- the two traditional foundations of their class relations. Resistance sought to obtain for the weavers a 'fair share' in the earnings of industry within this traditional class hierarchy. By reviving tradition in this manner, resistance promoted class consciousness among the weavers by appealing to their common experience of 'exploitation,' which at least clarified their reasons for class unity, rather than to their experience of abandonment, which obscured class unity and left room for the assertion of other solidarities. The single-minded pursuit of class unity thus made the resistance movement 'regressive' and narrow, instead of 'progressive' and open like cooperation.

In the name of class unity, the resistance movement nevertheless extended beyond the frontiers of class as defined in the past -- especially the frontiers of urban, master and male weavers -- to a broader view of class including rural weavers, journeymen, and women workers in the fabrique. In this way, resistance became a 'mass' movement in the fabrique more thoroughly than cooperation or mutual aid had ever been. In some instances, this extension of resistance to the silk-weaving masses undermined the original intentions of the movement based on more traditional notions of class solidarity. The weavers hoped, for example, that resistance would restore the old

'horizontal' primacy of the urban craft over rural weaving, but the need for class unity in the largest sense, to preserve negotiated increases in the piece-rate, required the organization of rural weavers into societies of resistance as well. Such organization effectively extended the notion of class solidarity to the region rather than confining this notion to the city alone. The acceptance of journeymen weavers as equal partners of masters in the same resistance organizations and the acceptance of female workers in the same societies on more than a 'token' scale, extended class solidarity to additional workers within the urban fabrique as well. In the early 1830's, masters of the Society of Mutual Duty had allied with journeymen of the Society of Ferrandiniers for mutual assistance during strikes,<sup>26</sup> but rarely did masters and journeymen organize for resistance in the same association, as they did in the 'category' societies and in the Société civile de prévoyance federating ten of these categories in 1869-1870.<sup>27</sup>

Cooperative societies admitted a few women during the 1860's, but never before had women associated in large numbers with male masters and journeymen weavers for militant strike activity, as they did in the resistance movement of the late Second Empire.

Because of this 'depth' of appeal to a single consciousness of class and because of the breadth of class organization in the resistance movement, Maritch's assertion that the strike (applied resistance) "was a great school of solidarity and discipline, organizing

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<sup>26</sup> Bezucha, The Lyon Uprising of 1834, pp. 106, 123-125.

<sup>27</sup> See Chapter IV, section II-C.

the mass[es] and awakening in them the consciousness of class" was fully justified.<sup>28</sup> What was not justified was his and Moissonnier's description of the movement as uniquely progressive. As we have seen, resistance aroused class solidarity and class consciousness by appealing to the past -- to a traditional order of hierarchical class relations. Because of his failure to recognize this importance of tradition, Maritch regarded the moderation of the weavers' societies as a deviation from the 'essence' of industrial resistance. Such deviation was evident in the refusal of the weavers' Société civile to join the International along with most other societies in the city. Maritch explained this refusal by the dominance of the master weavers in the movement, who feared inciting journeymen and other subordinate workers to resistance against themselves.<sup>29</sup> When tradition is instead regarded as the core of resistance, the same facts and events advanced by Maritch as evidence for his argument receive a different interpretation. The examples he offers of master-journeymen hostility in the movement, for example, become exceptions to a triumph of traditional organizational and ideological solidarity between masters and workers,<sup>30</sup> and the revolutionary program and organization of the inter-craft International become deviations from the original and essential

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<sup>28</sup> Maritch, Histoire du mouvement social à Lyon, p. 248.

<sup>29</sup> Ibid., p. 249.

<sup>30</sup> Ibid., pp. 249-251. As evidence of such master-worker hostility among the weavers of plain cloths, Maritch cites the separate meetings of journeymen to discuss the proposed tarif of piece-rates. He relies heavily on this evidence to support his argument. It is doubtful that separate meetings to discuss rates paid by fabricants and earned in equal shares by masters and journeymen can serve so strongly as evidence for hostility between the latter two parties. In fact, the only firm evidence of hostility between masters and journeymen offered by Maritch

stabilizing, restorative goals of craft-centered resistance. These goals were pursued conscientiously and scrupulously by the trade most conscious of the sources of its strong class solidarity in the past and most practiced in expressing its class identity independently and confidently -- the trade of the silk weavers. The transition from industrial resistance to the International, and from there to socialist and anarchist politics, was therefore not a logical, linear progression, as Maritch and Moissonnier would have one believe, but rather a step in a different direction of social ideology and collective organization.

This step introduced, or rather re-introduced, neighborhood solidarity as a significant determinant of social ideology. As in the cooperative movement, neighborhood became a source of division among the weavers of Lyons. Only now, in the political movement, that division focussed on two questions posed most acutely by the resistance movement -- the notion of class solidarity and the relationship of resistance to politics. One neighborhood, the Croix-Rousse, generally identified class solidarity with craft solidarity, limiting class action to one trade and scrupulously keeping resistance organization and goals separate from those of politics. Another neighborhood, the Brotteaux-Guillotière, regarded class solidarity as intersecting or transcending craft solidarity and resistance as a means of promoting the aims of social revolution. Some silk weavers and many other workers residing in the Brotteaux-Guillotière therefore subscribed to the inter-professional,

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was strikes in shops of tulle-weaving and passementerie. These exceptions occurred in branches of the silk manufacture that were exceptional by their technology, cloth texture, and organization of manufacture. They were not, as Maritch claims, simply "the rich and prosperous specialties" of the silk-weaving trade proper (that is, of the weaving of étoffes de soie).

revolutionary program of the International as the latter sought to federate the newly-formed resistance societies in 1869 - 1870. The same militants of the Brotteaux-Guillotière supported the Lyons Federation of the International in its struggle for an anarchist-socialist Commune after the fall of the Empire on September 4, 1870. They were opposed by the silk weavers of the Croix-Rousse, whose notions of class and of the relationship of resistance to politics were more compatible with the Radical and liberal republicans dominating the early Third Republic in Lyons than with the socialism of the International. The 'industrial' solidarity of resistance was thus split by a 'political' conflict of neighborhoods, but only after the issues on which neighborhoods separated from one another -- the issues of class solidarity and class organization -- had been posed with clarity and intensity in the resistance movement.

This neighborhood conflict emerged most dramatically during the first months of the Republic in Lyons. On September 28, 1870, Bakunin and his fellow conspirators of the International, with headquarters in the Brotteaux-Guillotière, staged a coup against the Municipal Council of the Commune of Lyons, dominated by Radical democrats. The coup failed because of the intervention of two National Guard battalions of the Croix-Rousse. The battalions were commanded respectively by Chavant, a dyer, and by Antoine Arnaud, a master silk weaver. A few months later, the Croix-Rousse saved the 'bourgeois' Republic from socialism by refusing to follow the lead of the Guillotière in revolting against the Versailles government and its accomplices in Lyons. On April 30, 1871, some fifteen workers in the Guillotière occupied

the mairie (town hall) to prevent elections to the Municipal Council and thus registered a protest against the dismantling of the Commune. A crowd of some 150 persons gathered around the mairie, apparently in support of the insurgents. Several National Guardsmen sent to eject them from the building joined the crowd and fraternized with the rebels. Later in the day the regular army under the command of the prefect suppressed the revolt and liberated the mairie. The death toll, totalling some thirty persons, was relatively light in comparison with similar events in the past. What the government feared most was an even more severe reaction in the Croix-Rousse to the aborted rebellion. In fact, the Croix-Rousse did not revolt. The few insurgents plotting in this district were unable to rally any mass support. They were finally persuaded to dismantle the few barricades they erected. The day passed with little incident in the neighborhood of the silk weavers.<sup>31</sup>

Unlike the Guillotière, the Croix-Rousse was not interested in social revolution, especially not in revolution favoring a class solidarity alien to the traditional experience of class in this silk-weaving neighborhood. This experience concentrated the notion of class around a single craft and around a single neighborhood dominated by that craft. The continued prominence of the silk weavers in the Croix-Rousse in 1870 confirmed this notion of class, then as during the early 1830's. The notion of class solidarity in the name of which the International staged its coup of September 28 and for which the workers of the Guillotière revolted on April 30 presumed, on the contrary, a dissociation of craft from class. Such class solidarity transcended

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<sup>31</sup>Moissonnier, La première internationale à Lyon, pp. 262-264, 366-381.

the frontiers of individual trades and recognized a common proletarian identity among workers in all trades. Among the silk weavers residing in the Brotteaux-Guillotière, such solidarity was a consequence of their daily neighborhood contact and exchange with workers in other trades and conditions of employment. As a result of such contact, their recognition of their subordination to the fabricants as the 'other' class and of their own 'massive' character within the fabrique of Lyons extended to a recognition of their subordination to capitalists in general and of their common proletarian identity with workers in society as a whole. The International appealed successfully to such recognition in this neighborhood, where daily experience confirmed this larger notion of class, but its socialist and revolutionary message fell on deaf ears in the neighborhood of the Croix-Rousse, where craft, class and neighborhood solidarities still converged.

Maritch and Moissonnier cited such differences of appeal, with much reason, as evidence of the social conservatism of the Croix-Rousse and of the social progressivism of the Brotteaux-Guillotière. They tended to explain such differences by those of class types dominant in each of the two areas -- of property-owning masters in the Croix-Rousse and of laboring proletarians in the Brotteaux-Guillotière. The present interpretation of the political movement, based on the analysis of social solidarities, suggests that the explanation lay elsewhere than in these fixed social and economic types -- masters or workers -- bound by certain class situations and therefore confined to a particular class ideology. The explanation lay instead in changing historical circumstances -- circumstances that altered the material conditions, the social and economic situations and the

notions of class and other solidarities of the same master artisans, without changing their class position vis-à-vis their subordinate workers. These changing circumstances first favored the expression of several social solidarities at once, in both traditional and novel forms, through cooperation; then favored class solidarity above all others, through resistance; and finally asserted the prominence of neighborhood solidarity in shaping social ideologies and political loyalties, in the political movement. Differences of neighborhood contact and of neighborhood experience, more than differences of dominant class types as such, explained the different political and social opinions of weavers of the Croix-Rousse as compared with weavers and workers of the Brotteaux-Guillotière. Among the silk weavers of the fabrique lyonnaise, such division of opinion and party manifested the triumph of neighborhood solidarity over all other solidarities in the weavers' world of work.

Although this strength of neighborhood solidarity was apparently a novel feature of that world, this strength did not affect the balance of political power in the city in a new way. In 1870-1871, that balance was held by the silk weavers of the Croix-Rousse, as it had been held by them in 1831 and in 1848. The Croix-Rousse asserted its influence in the Commune by providing necessary support and some leadership for the formation of the new Municipal Council, by successfully preventing the overthrow of the Council by Bakunin and his conspirators on September 28, and by refusing to intervene on the side of the Guillotièrè rebels on April 30. In 1831, the Croix-Rousse had led other quarters of the city in the insurrection of November, and

during the same insurrection, several master-weavers of the Croix-Rousse, members of the Conseil des Seize, assumed control of the city government until the forces of order regained power.<sup>32</sup> In 1848, the Voraces of the Croix-Rousse had controlled the city during the first month of the Revolution of 1848, by occupying the forts of the Bernardines, and remained an occult power in Lyons throughout the Second Republic.<sup>33</sup>

In all three years -- 1831, 1848 and 1870 -- the Croix-Rousse was at or near the center of the local political movement toppling the old regime or threatening the present one. In 1831 and in 1870, the Croix-Rousse defended the original revolution from more radical elements and then complied with the shift to a more conservative settlement. Its political strength in 1870-1871 as before was rooted in the same sociological fact; namely, in the convergence of craft, class and neighborhood solidarities among the master silk weavers residing there. The triumph of the Croix-Rousse over the Brotteaux-Guillotière in the republican 'settlement' of 1870 - 1871 was thus a confirmation of the continuing power of tradition in the weavers' world of work, even after the profound disruption of that world by the crisis of the 1860's.

The force of tradition in fact remained strong in that world for many decades thereafter. When it finally 'died,' it did so

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<sup>32</sup>Fernand Rude, L'insurrection lyonnaise de novembre 1831: Le mouvement ouvrier à Lyon de 1827-1832 (Paris: Editions Anthropos, 1969), pp. 357-428, 507-521.

<sup>33</sup>Dutacq, Histoire politique de Lyon pendant la révolution de 1848, pp. 170-186, 382-385.

without the fanfare of ideological onslaught and without the brutality of catastrophic industrial revolution. Instead it died slowly, peacefully and almost quietly, as the silk industry continued to migrate out of Lyons, as mechanization steadily replaced artisan labor, and as Lyons became less an industrial center and more a center of tertiary economic activity -- of trade and commerce, of banking and finance, of administration and culture. Silks were dethroned, and the world of the silk weavers passed away, as the consumers and producers of the modern age turned their favors to woolen, cotton and synthetic fashion fabrics. But this demise of craft and tradition had a certain dignity and grace, for the change of regime in textiles was achieved without revolution.

## APPENDICES

Appendix I:  
Estimation of Class Dependence  
of Master Weavers  
in an Illustrative Silk-Weaving Enterprise  
(Maison Bellon-Conty)

Construction of Table 2, "Evaluation of Potential Class Consciousness," requires the quantitative specification of probability of dependence of master-weavers on a single merchant-manufacturer, in order to indicate a level of discrimination of the class character of fabricants and of weavers respectively in large-scale plain-cloth establishments. By comparing the distribution of looms of a single large merchant-manufacturer of plain cloths, the maison Bellon-Conty in 1860, among different households, with a sample distribution of plain-cloth households in the Croix-Rousse in 1866, according to the number of looms per household, we can trace a tentative pattern of 'dependence probability' among the 200 or so weavers of this establishment. Such a pattern should provide a reasonable estimate of 'class' discrimination for the purposes of Table 2, the value and intent of which are merely illustrative.

The data for the maison Bellon-Conty are taken from a financial accounting sheet listing master-weavers employed currently by the establishment along with the number of looms occupied in the household of each by the same maison. The list was compiled in response to a petition of masters in 1860 complaining of certain practices of compensation for wastes

of silk thread during weaving.<sup>1</sup> The sample data for the Croix-Rousse, the major weaving district in the city of Lyons in 1866, was taken from the population census of that year, which recorded number and type of looms along with personal information for each household in the district.<sup>2</sup> The method of sampling these households is described in Appendix V. Unfortunately the data for the establishment and for the sample of households are not entirely comparable. Besides their different dates, the two distributions measure different variables. The Bellon distribution measures the frequencies of putting out one, two, three, four or five looms per household without specifying whether these households were occupied entirely by the maison Bellon, that is, without specifying, for example, how many households in the one-loom group had only one loom in the household, and how many had additional looms besides, occupied by other fabricants. The Croix-Rousse sample distribution, on the other hand, measures the frequency of households with a total of one, two, three, four or five looms respectively, without indicating how many of the households with two or more looms were occupied by more than one merchant-manufacturer. The missing 'joint probability' of an n - loom household (a household with a total of n looms) with k looms occupied by the Bellon establishment prevents any certain generalizations from the existing data. Yet a direct impressionistic comparison of the two data sets suggests a probable trend for the different household categories towards or away from

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<sup>1</sup>Bellon Frères et Conty, Response of fabricants to request for accounts of balances with chefs d'ateliers, c. 1860, ACCL, Soieries Carton 41-I-Législation-Usages (an 8 à 1936), 13. -Pétition remise à l'Empereur à son passage à Lyon, par les ouvriers en soie.

<sup>2</sup>ADR, 6M-Dénombrement, 1866, Lyon, 4ème arrondissement, XVI, XVII.

exclusive dependence on the orders of this single fabricant. The trend is summarized by the following tables and graphs of the relative and cumulative frequency distributions of households by looms--total looms occupied by the maison Bellon, in the case of the Bellon sample, and total looms owned by the master-weaver, in the case of the Croix-Rousse sample:

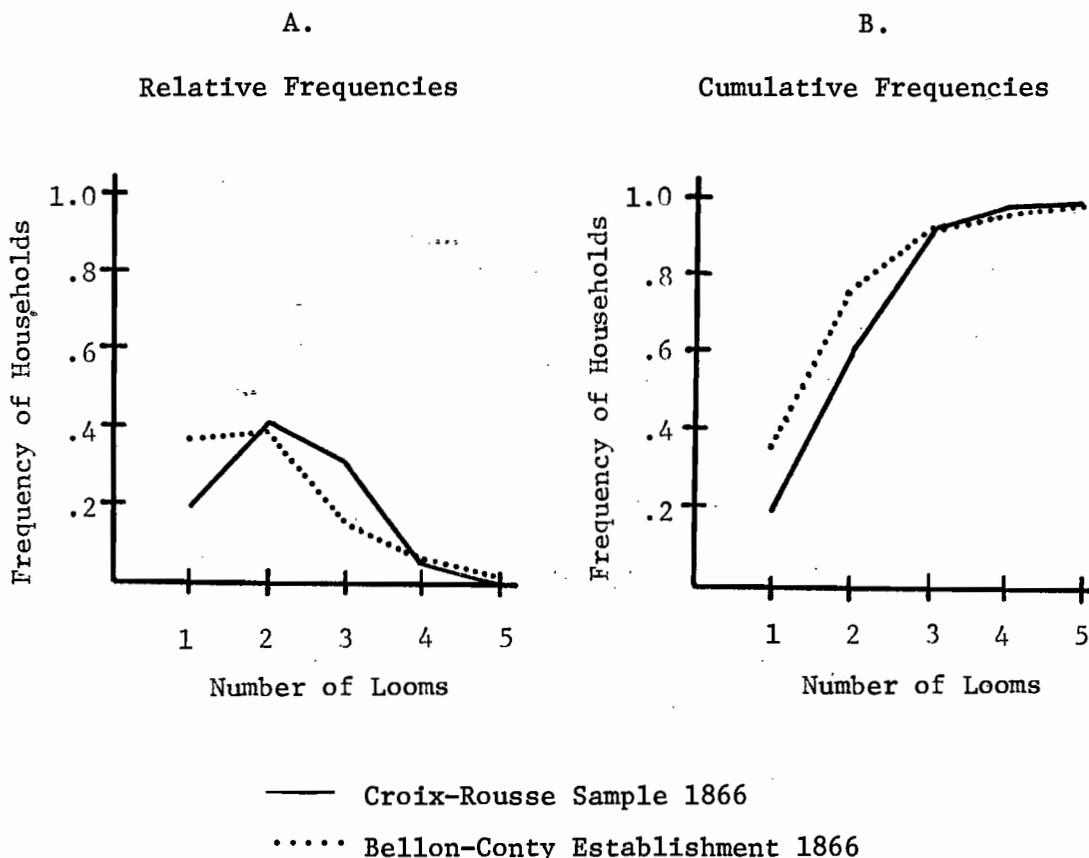
Table 44

- A. Distribution of Households According to the Number of Looms Occupied per Household by the Bellon-Conty Establishment, 1860
- B. Distribution of Households According to the Total Number of Looms Per Household in the Croix-Rousse Sample of Households with Plain-Cloth Looms Only, 1866

<u>Number of Looms</u>	<u>Number of Households</u>	<u>% of Total HH (relative)</u>	<u>% of Total HH (cumulat.)</u>	<u>Number of Households</u>	<u>% of Total HH (relative)</u>	<u>% of Total HH (cumulat.)</u>
1	71	36.98	36.98	16	19.70	19.70
2	76	39.58	76.56	34	41.97	61.67
3	29	15.10	91.66	25	30.90	92.57
4	12	6.25	97.91	5	6.17	98.74
5	<u>4</u>	2.08	99.99	<u>1</u>	1.23	99.97
Totals	192			81		

- Sources: A. Bellon Frères et Conty, Response of fabricants to request for accounts of balances with chefs d'ateliers c. 1860, ACCL, Soieries Carton 41-I Législation-Usages (an 8 à 1936), 13.-Pétition remise à l'Empereur à son passage à Lyon, par les ouvriers en soie.
- B. ADR, 6M - Dénombrement, 1866, Lyon, 4ème arrondissement, XVI, XVII.

Graph 10



The tables and graphs illustrate the much stronger tendency of the Bellon establishment to put out one loom of plain cloth per household (37% of all households) than of the plain-cloth households of the Croix-Rousse to possess only one loom (20% of the total). A relatively large percentage of Bellon's one-loom-occupied households very likely possessed more than one loom and therefore accepted orders from other fabricants at the same time. At the other extreme, Bellon's master-weavers who occupied four or five looms with his fabric probably had no obligation to any other fabricants, because these four or five looms were all they possessed. This is suggested by the slightly greater tendency of the Bellon house-

holds to concentrate in the four- and five-loom-occupied groups (8.33%) in comparison with the movement of the Croix-Rousse households into these same size groups for looms owned (7.40%).<sup>3</sup> The proportion of these four- to five-loom-occupied households in the Bellon distribution was not large in any case, at least not as compared with the two- or three-loom-occupied households. These two latter groups represented in effect the transition from the diffusion among several fabricants, or relative independence, which seems to have been characteristic of the one-loom-occupied weavers of the Bellon establishment, to the exclusive dependence on the maison Bellon among the four- to five-loom-occupied weavers. The two-loom-occupied Bellon weavers and especially the three-loom-occupied Bellon weavers were both relatively less represented than their corresponding two-loom households and three-loom households respectively in the Croix-Rousse sample. Graph 10-A shows this most clearly. The two-loom group is the 'transition point' from relative abundance of Bellon households to relative dearth, in relation to the household sample of the Croix-Rousse.<sup>4</sup>

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<sup>3</sup>Unlike the Bellon one-loom-occupied households, the Bellon four- or five-loom-occupied households cannot be 'distributed' over the 'remainder' of the Croix-Rousse sample included in the one-, two-, or three-loom cells, because each household in the relevant cells must have at least four or five looms. Hence a larger relative proportion for the Bellon sample, as compared with the Croix-Rousse sample, suggests exclusive and total occupancy of the weavers' looms--that is, complete dependence on Bellon--in the case of the four- and five-loom-occupied households, whereas a larger Bellon proportion suggests diffusion of several fabricants over several looms by the weavers occupying only one loom with orders from Bellon--that is, their relative independence of the Bellon establishment.

<sup>4</sup>This transition is in no way 'cushioned' or 'absorbed' by the four- or five-loom-occupied or loom-owned household groups, if our conclusion of 'high' exclusiveness (complete dependence) is indeed correct for these. The only 'cushion' is the non-represented household of six or more looms which can absorb all others. The Croix-Rousse sample suggests that these were rare.

One might say, very roughly, that the 'extra' two-or three-loom household percentage in the Croix-Rousse sample above the percentage of households fully occupied by the Bellon two-or three-loom-occupied groups, absorbed the surplus percentage of Bellon one-loom-occupied households in two-or three-loom-owned households with two or three different fabricants. Chances were strong, in other words, that the merchant-manufacturer of plain cloths occupying only two or three looms per household thus occupied the entire household, but that many other households in the weaving district owning two or three looms took only one order from that same merchant-manufacturer and occupied the rest of their looms with orders from one or two other fabricants. We might summarize these various tendencies to exclusive occupation of looms in the weaver's household by one fabricant in the following manner:

<u>From the Perspective of the Fabricant</u>		<u>From the Perspective of the Weaver</u>	
<u>Number of Looms Occupied</u>	<u>Tendency to Exclusive- ness (Dependence of Weaver on this Single Fabricant)</u>	<u>Number of Looms Occupied</u>	<u>Tendency of Exclusive- ness (Dependence on One Fabricant)</u>
1	Weak	1	Very Strong (Certain)
2,3	Strong	2,3	Weak
4,5	Very Strong	4,5	Uncertain (Probably Weak)

Returning to the same tables, we must now situate the importance of each loom category--and of each degree of exclusive occupancy by a single

fabricant, associated with each loom category--within the entire Bellon entreprise, on the one hand, and within the entire sample of plain-cloth households in the Croix-Rousse, on the other. This will offer some indication of the distribution, of 'dependent' and 'independent' weaver-fabricant relations, both from the perspective of the fabricant's enterprise, 'typified' by the Bellon establishment, and from that of the class of master-weavers, 'typified' by the Croix-Rousse sample. Simple observation shows that within the Bellon establishment, some 40% of the weavers occupied tended to be 'independents,' that is, were likely to weave for other fabricants besides Bellon at the same time, and that the remaining 60% tended to depend more or less exclusively on orders from him. This assumes that all 71 one-loom-occupied households were 'independent' (i.e. 37%), and that an additional 3% from the remaining 121 households was in the same 'independent' category. The assumption is of course very strong and the estimates are therefore subject to a large margin of error--for the data is extremely inadequate--but the guess is not unreasonable.

Within the Croix-Rousse sample of plain-cloth households, about 20% of the weavers was entirely dependent on the orders of a single fabricant, with absolute certainty, for these weavers owned only one loom each; a minimum 18%--the difference between the Croix-Rousse and Bellon percentages in the 2-3 loom category--was 'independent' with relatively high certainty; and of the remaining 62%, about three-fifths (37%) was possibly 'dependent'--a figure based on the estimated proportion of 2 to 5 loom-occupied households in the Bellon group dependent on Bellon alone (60%)--and the remaining 25% was 'independent.' In sum, about 43% of the weavers in the sample was 'independent' and about 57% 'dependent.' This propor-

tion is effectively the same as that of the Bellon group of households-- a not unreasonable conclusion if all plain-cloth fabricants occupied their weavers, on the average, in the same proportion of 'independent' and 'dependent' status, as the Bellon establishment. On the whole, therefore, dependence of the individual master-weaver on a single fabricant seems to have been the dominant trend among plain-cloth households, at a 60:40 likelihood, although chances that such weavers might become 'independent' by occupying their several looms with the orders of several fabricants simultaneously were not insignificant--probably 40% at least.

Appendix II:Construction of Cost-of-Food Index

The cost-of-food index I traces the percentage change in costs of three major food items from 1830 to 1878, relative to the base year 1830: bread, meat and potatoes. The index I is computed from official prices of bread ( $P_B$ ), meat ( $P_M$ ) and potatoes ( $P_P$ ), quoted on the mercuriale of the market of Lyons. The prices are used as proxies for expenditures (E) on these items. According to one response of the Enquêtev Parlementaire of 1848 concerning conditions of industry in the city of Lyons, a celibate worker spent at that time, on the average, about 65% of his annual budget on food. This food expenditure was shared among the different food items in the following way (daily expenditure):

bread	30 centimes	
meat	10 centimes	
wine	10 centimes	
soup	20 centimes	(1)
fruit, cheese, vegetables	<u>20 centimes</u>	
TOTAL	90 centimes per day <sup>1</sup>	

In the construction of the index, potatoes were used as a proxy for fruit, vegetables and cheese. Fifteen centimes of the expense on soup were divided equally among additional expenditures on bread, meat and potatoes, since all three probably entered soup as major ingredients. With these simplifications, food expenditures were itemized in the following manner:

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<sup>1</sup>Yves Lequin, "Le monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), II, 168.

<u>Item</u>	<u>Expenditure</u>	<u>% of Total Food Expenditure (E)</u>	
bread (B)	35 centimes	47	
meat (M)	15 centimes	20	
potatoes (P)	25 centimes	<u>33</u>	(2)
total food expenditure (E)	75 centimes	100	

This total food expenditure (E) represented 83% of the actual average daily food expenditure given by the Enquête of 1848, and 54% of the average annual budget of a celibate weaver. Although this was only slightly more than half of the budget, the estimate is quite conservative. Since food was an item of first necessity, its proportion in the weaver's budget was more likely to increase at the expense of other items, especially in periods of low employment, low wages, or high food prices. Other items, such as clothing, benefited more from the income effect of low food prices, rather than the other way around, because of the relatively inelastic demand for basic food items. It is therefore not unreasonable to regard costs of food as dominating the costs of living throughout the period under study.

Since the mercuriale quoted only market prices (p) rather than quantities sold (q), some method of using prices as reasonable proxies for expenditures (pq) was needed. This method was derived by assuming that the quantity of each food item consumed remained constant for changes in their relative prices and that the quantity of all food consumed remained constant for changes in the relative prices of food and other items in the weaver's budget. These assumptions simplify the exposition and were probably not often discordant with 'reality,' since bread, meat and potatoes seem to have constituted staples of the weavers' diets

(meat, in other words, was not a 'luxury good' among the weavers of Lyons), thus were consumed in 'standard' amounts regardless of the relative price structure.

Given these assumptions, total expenditures (E) varied only with the variation in the prices of the three food items of which the index I was constructed. In symbolic terms, this may be expressed as:

$$E = p_B \bar{q}_B + p_M \bar{q}_M + p_P \bar{q}_P \quad (3)$$

where E = total food expenditure

$p_B$  = unit price of bread

$\bar{q}_B$  = quantity of bread consumed

$p_M$  = unit price of meat

$\bar{q}_M$  = quantity of meat consumed

$p_P$  = unit price of potatoes

$\bar{q}_P$  = quantity of potatoes consumed

$\bar{q}_B, \bar{q}_M, \bar{q}_P$  are all constant

The change of expenditure on food in one year relative to the total food expenditure on a previous (or common base) year may be expressed as  $dE/E$ , where  $dE$  equals the difference between the given year expenditure and the base year expenditure--the given year E minus the base year E. The value  $dE/E$  is the difference between the given year expenditure expressed as a percentage of the base year expenditure, and the base year value 100 (one hundred percent). This value  $dE/E$  is therefore labelled  $\underline{i}$ , where  $\underline{i}$  signifies the increment (positive or negative) of a given year value, expressed as a percentage of the base year value, above or below the standard base value of 100. The value  $\underline{i}$  for each year after 1830 traces the percentile change in expenditure for that year relative to the expenditure of the base year 1830.

The problem is to compute  $i = dE/E$  using only the prices of the

three food items-- $p_B$ ,  $p_M$ , and  $p_P$ -- and assuming that the quantities of these items consumed remained constant throughout the period 1830-1878 ( $\bar{q}_B$ ,  $\bar{q}_M$ ,  $\bar{q}_P$ ). Computation of an appropriate formula for  $\underline{i}$  proceeds in the following manner: First, the total derivative of  $E$  with respect to  $p_B$ ,  $p_M$ , and  $p_P$  is calculated:

$$dE = \bar{q}_B dp_B + \bar{q}_M dp_M + \bar{q}_P dp_P \quad (4)$$

Then  $\underline{i}$  equals:

$$i = dE/E = (\bar{q}_B dp_B + \bar{q}_M dp_M + \bar{q}_P dp_P)/E \quad (5a)$$

$$= \bar{q}_B dp_B/E + \bar{q}_M dp_M/E + \bar{q}_P dp_P/E \quad (5b)$$

Let us now return to the table of itemized expenditures for the three food items (2). Assuming the relative proportion of each item in this table is valid and unchanged for the entire period, 1830-1878, the expenditure on each item can be expressed as a separate but constant proportion of the total expenditure  $E$ . In other words:

$$\begin{aligned} \text{Expenditure on bread} &= p_B \bar{q}_B = .47 E \\ \text{Expenditure on meat} &= p_M \bar{q}_M = .20 E \\ \text{Expenditure on potatoes} &= p_P \bar{q}_P = .33 E \\ \text{Total food expenditure} &= E = 1.00 E \end{aligned} \quad (6)$$

Solving for  $E$  in each equation in (6) gives:

$$\begin{aligned} E &= p_B \bar{q}_B / .47 \\ E &= p_M \bar{q}_M / .20 \\ E &= p_P \bar{q}_P / .33 \end{aligned} \quad (7)$$

Now substituting the values for  $E$  in the expression (5b) for  $\underline{i}$  in the following manner:

$$i = dE/E = \bar{q}_B dp_B / (p_B \bar{q}_B / .47) + \bar{q}_M dp_M / (p_M \bar{q}_M / .20) + \bar{q}_P dp_P / (p_P \bar{q}_P / .33) \quad (8)$$

and simplifying and cancelling terms gives:

$$i = dE/E = .47 dp_B/p_B + .20 dp_M/p_M + .33 dp_P/p_P = .47 i_B + .20 i_M + .33 i_P \quad (9)$$

where  $i_B = dp_B/p_B$  = percentile increment in bread prices relative to price of bread in base year (1830)

$i_M = dp_M/p_M$  = percentile increment in meat prices relative to price of meat in base year (1830)

$i_P = dp_P/p_P$  = percentile increment in potato prices relative to price of potatoes in base year (1830)

For each year after 1830, then, the percentile increment in food expenditures  $i$  is calculated as a linear function of the percentile increments in food prices  $i_B$ ,  $i_M$ , and  $i_P$ . The cost-of-food index  $I$ , charted on Graph 5, Chapter III, is simply the sum of  $i$  and the base value 100, or  $I = 100 + i = 100 + (.47 i_B + .20 i_M + .33 i_P)$ .

#### Note on Sources

The prices of bread, meat, potatoes are calculated from the mercures for the department of the Rhône available in A.N. series F11\*. The mercures were quoted twice each month (approximately every two weeks) on the major markets of the department--the market of Lyons, for the arrondissement of Lyon, and the markets of Beaujeu, Belleville and Tarare, for the arrondissement of Villefranche. The market of Lyons dominated prices in most other markets of the department, so that movements in departmental averages very nearly approximate movements for the city of Lyons. Bread prices were usually quoted per kilogram, separately for

three kinds of bread--pain blanc (best quality), pain bis-blanc (medium quality) and pain bis (poorest quality). Prices for pain bis-blanc were used for the index I. Meat prices included separate quotations for beef, mutton, and pork, per kilogram. The average of the three was used for the single meat price index. Potato prices were quoted per quintal.

For the years 1830-1836 and 1860-1878, yearly averages of mercuriales quotations were used to arrive at a single annual price for each item. These yearly averages were easily calculated from the monthly averages recorded concisely in A.N. F11\*-2848-2849 (for 1825-1836) and in A.N. F11\*-2850 à 2857 (for 1860-1878). For the years 1837-1859, however, the mercuriales in the archives (A.N. F11-1924\*, ..., 2187\*) are recorded separately for each month. Limitations on consultation privileges and on research time required selection of one 'base' month for each year during this interval. This did not allow, of course, computation of the yearly average. The month of January was chosen, so that the index I for the period 1837-1859 consists only of movements of prices from one January to the next, rather than from one year's average to the next.

Appendix III:

Use of Membership List of  
Société Civile des Tisseurs  
As a Source for Loom Data

In Tables 11 (Chapter IV) and 40 (Chapter VII), the membership list of the silk-weavers' resistance federation, the Société civile de prévoyance et de renseignements pour le travail des tisseurs de la fabrique lyonnaise (abbreviated SCPR: List of Members, July 5, 1873, ADR, 10M-2, Associations des tisseurs), was used as a proxy for a loom census in estimating the changes in distribution of looms in the city by cloth category and by neighborhood from 1844-46 to 1873. A proxy was required for the latter year because of the lack of a census of looms for the entire city with type and neighborhood specifications since 1846. This list promised to serve well as such a proxy. The span of membership of the SCPR covered the entire city and, with very few exceptions, only the city. The membership promised, moreover, to reflect closely the character of the silk-weaving population as a whole, because SCPR was a 'mass' organization. The information concerning each member, finally, was sufficiently detailed to permit the tabulation of membership distribution by cloth category and by neighborhood of residence.

The list was submitted to the prefecture of the Rhône about one year before the prefect dissolved Société civile. The prefecture had requested the list in August 1872. Apparently, the very large size of the association (11,137 members) delayed the final completion of the list until July 1873. (See letter from Pally, Rochet, Mathé aîné to Minister of Commerce, September (?) 1874, ADR, 10M-2, Associations des tisseurs).

Because of this delay, it is likely that the list includes all weavers who signed the registers of the Society at any time during the intervening years (plus members still on the registers in August 1872) and not only members remaining in July 1873. In other words, there is little chance that a large drop-out rate, incurred as a result of unemployment throughout the year, for example, made the list seriously unrepresentative of the weaving masses.

For each individual member, the list gives name, exact address (street and house number), and cloth category--one of the ten categories which originally constituted the SCPR. From these specifications, the distribution of members by cloth category and by arrondissement can be determined. The question nevertheless remains, whether this membership data can properly serve as a reliable proxy for loom data, with which it is compared in Tables 11 and 40. The two sets of data--loom data for 1844-46 and membership data for 1873, are comparable only if we assume:

- 1.) a fixed ratio of  $\underline{x}$  occupied looms in 1873 per member of the SCPR,
- 2.) similar levels of employment of looms and members in both years, and
- 3.) either the representation of all occupied looms in the fabrique by the membership of the SCPR or the randomness of the sample of looms represented by the members of the SCPR relative to the entire population of looms in the city in 1873. The second assumption is most easily accepted, the third probably valid and the first questionable.

As for the second assumption, both periods represented by loom and membership data respectively--1844-46 and 1872-1873--were prosperous years in the fabrique, so that levels of employment of looms and of weavers were likely to have been similar. Moreover, most weavers joining the SCPR were likely

to have been employed at the time of their entry into the organization, because its purpose was defense of piece-rates, not preservation of employment, and because it was financed by portions of the piece-rate paid its members for weaving silks. They had to be working to pay these dues. Even presuming some unemployment during the period in which the list was compiled, the delay in completing this compilation gave the organization more time to enroll weavers working at some time during this interval, so that the final list reflected a situation of full employment more closely than the total actual membership at any particular time. (The year 1872-1873 was not a time of exceptional unemployment.)

The third assumption is probable, at least for the purpose for which the data are used in this study. No single cloth category or section of the city had more or less reason to join the organization. For this reason, all categories and 'neighborhoods' were equally likely to join, so that for practical purposes the list can be considered statistically as good as a random sample for its use in this study.

The first assumption is more questionable. The organization served weavers alone, and so all of its members--or nearly all of them--represented at least one loom and, for reasons mentioned above, this loom was occupied sometime during the period in which the list was compiled. The number of looms represented by each member, however, is obscure. Journey-men weavers 'typically' represented only one occupied loom. (I say 'typically' because conceivably, two or more journeymen members of the SCPR could have worked at the same loom at different times of its activity during the period of compilation of the list, so that each represented 'statistically' only a fraction of a loom.) Master-weavers 'typically'

represented the number of occupied looms in their household, which might have been one or more, depending on the number of looms they owned and on the state of activity of their looms during the period of compilation. This uncertainty is compounded by the fact that journeymen and masters, considered as 'representatives' of looms, were not mutually exclusive sets and therefore cannot simply be 'added' (even when presuming a certain loom-weight for each) to obtain the total number of looms represented in the SCPR. Surely some of the journeymen and journeywomen members of the SCPR worked on the looms belonging to the masters in the same organization and thus reduced the effective loom-weight of the latter. To the extent that this occurred, however, the assumption of one member of the SCPR representing one loom becomes more probable. (The master himself presumably worked at least one loom in all cases.) It is unfortunately impossible to know to what extent this did occur and therefore impossible to assign to each member a loom-representation weight, even presuming we knew whether each was a master or a journeyman weaver (which we do not know).

There are two consolations to these apparently insuperable difficulties concerning the first assumption. First, the number of looms per household, hence per master, was likely to be quite low (2 or 3 at most) in 1872-1873, after the crisis of the 1860's had reduced the number of looms each household could support. Because of this small number of looms per household, the difference in loom representativeness between master and journeyman was reduced significantly. Second, this reduction was probably greatest for the fancy-cloth category of looms and members, since the intersection of the journeymen set and master set was likely

to be strongest in this category (that is, strongest tendency for journeymen members to weave for master members of the SCPR). Journeymen fancy-cloth weavers were likely to have been more 'settled' in the city than journeymen plain-cloth weavers and were thus more likely to join the SCPR than the latter. Moreover, many journeymen, members of the SCPR, were active during the fancy-weavers' strike in June-July-1870 --more than one would expect from the low employment in their category-- and this suggests that nearly all journeymen fancy-cloth weavers were members of the resistance federation. Among journeymen plain-cloth weavers, on the contrary, there were probably still many 'floating' journeymen who did not join the SCPR, because of their 'uprooted' situation. Consequently, the statistical distribution of the membership of the SCPR by cloth category is more likely to overestimate the proportions for the fancy-cloth category, when membership is used as a proxy for looms and when each member of the SCPR is given the same 'loom-weight.'

For the use of the SCPR list in Table 11 (Chapter IV), this latter conclusion is especially welcome. The table is used to demonstrate the relative decline in fancy-cloth weaving as compared with plain-cloth weaving. If the proportion of fancy-weaving members was in fact an overestimate of the proportion of fancy-cloth looms--as seems to be the case--this relative decline in fancy-cloth weaving is more than adequately confirmed by the table. The use of the list in Table 40 (Chapter VII) is less fraught with dangers of comparing loom proportions for an earlier census with membership proportions for the later date. The table compares distributions of loom types for the different arrondissements of the city synchronically. In other words, the table focuses

on one period alone (1871-1873, the period of compilation of the list) and uses the same source to invoke the comparison. The 'neighborhood' analysis in Chapter VII does not require a comparison of loom-type proportions as such, but only a comparison of the extent of 'contact' of weavers with the more elegant specialties of the fabrique among the different neighborhoods. Such concentration may have been the result of relatively more fancy-cloth looms in the Croix-Rousse as compared with the Brotteaux-Guillotière, or it may simply have been the effect of more workers 'associated' with each fancy cloth loom, on the average, in the first neighborhood than in the second. Such association may have been the result of frequent changes of weavers on each fancy-cloth loom in the Croix-Rousse, for example, because of the short duration of orders given to each. In either case, the more extensive contact of the Croix-Rousse with the 'elite' specialties of the craft would have been accurately reflected simply by the category distribution of members of the SCPR.

Appendix IV:

Use of Police Reports on the State of

Industry for Analyses of

Conditions of Employment and

of Wage Movements and Levels

1859-1870

In Chapter IV, the study of conditions of employment and of wage movements and levels in the fabrique lyonnaise during the 1860's relied exclusively on trimestrial reports by the local police on the state of the silk industry in Lyons. These reports, the "Situations industrielles" in AML, I2-47 (B), Situation de l'industrie lyonnaise: . . . rapports sur la soierie et les ouvriers en soie . . . (1819 à 1870), were compiled by the Special Police Commissioner at the Prefecture of the Rhône from notes of police agents, such as the "Rapports à Monsieur Delcourt, Commissaire spécial, sur la situation de la fabrique des étoffes de soies," in AML, ibid. The agents' notes and the Commissioner's reports both specify the exact range of wages prevailing in the urban fabrique at the end of each trimester and, more impressionistically, the levels, stability and 'quality' (favored speciality) of employment, both during the trimester and at its end, in each of the six cloth categories discussed in Chapter IV and in each of several auxiliary and other related sectors of the fabrique, such as dévidage and tissage de tulles. Each trimestrial note and report also includes general observations on the industry as a whole--such as the nature of product demand

and the sources of current 'crises' of unemployment--and observations on the economic conditions of the silk workers--their poverty or prosperity, apprenticeship, and female labor. Some of these miscellaneous observations are also included occasionally in the separate reports on each cloth category or auxiliary branch of the silk industry.

The quality of the writing of the agents' notes, especially its grammar, spelling and punctuation, and their detail suggest that the agents were both 'of the people' and very knowledgeable of the trade. They were probably silk weavers, former weavers or residents of silk-weaving neighborhoods. The information they offer is specific and apparently accurate. Even when reporting weavers' opinions on the conditions of their trade, they are faithful to their sources. They report unfavorable opinions along with the favorable, even when the former are critical or damaging to the imperial regime. Perhaps partly because of their lack of education and cultivation, the agents demonstrate little tendency to interpret facts, events and opinions, but simply reproduce what they see and hear. The historian of social and economic conditions could have few sources more reliable than these agents' reports for communicating the same information.

The agents' sources are not always evident from the documents. We can therefore only speculate on their character and reliability. The weavers' expressions of opinions reported by these agents had the quality of quotation and indicate that the agents received some of their information, at least, by visiting the weavers' quarters and discussing industrial conditions with them. Among the information they seem to have received in this manner were wage data. Wages, specified to the

centime, were daily earnings of journeymen weavers, and their source was either the journeymen themselves and/or master-weavers. In either case a selected 'trustworthy' few were probably consulted for each report. Information concerning conditions of employment, especially approximations of levels of employment, came more likely from certain fabricants, from the Chamber of Commerce, or from the Conseil des Prud'hommes. Their information on employment, though not comprehensive, was more current than that of the prefecture itself, which took censuses of active and inactive looms only occasionally, and was informed by a wider vision than that of the master or journeymen weavers. Other information, such as that concerning cloth specialties favored by the market or the conditions of apprentices, was probably secured from weavers or from fabricants according to their proximity to the matter. Or this information may have been simply gleaned from general impressions made by both in the course of discussion. In any case, the agents' final observations do not seem to suffer from any lack of precision or accuracy not evident from the notes themselves.

Unfortunately, the agents' notes have not been preserved for the entire decade of the 1860's. As a result, this source could not be used for constructing systematic wage series and for reading employment conditions for the decade as required in Chapter IV. Instead, the chapter relies on the summaries of the notes in the reports by the Special Police Commissioner on the "Situations industrielles" of the fabrique. These have not only the advantage of more complete coverage of the decade than the original notes, but also the advantage of more systematic and clearer presentation of wages and employment conditions

than the notes. This presentation allows the investigator to follow the same issues from one trimester to the next without 'getting lost' in too much extra data pertinent only to one trimester. The major disadvantage of the reports, however, is their slightly stronger tendency to interpret events, trends and statistics. This tendency derives partly from their systematic, summary quality and partly, perhaps, from the intellectual culture of the Special Commissioner who also was not as familiar, by training or by intimate acquaintance, with the technical and social details of the fabrique as were his agents. This disadvantage nevertheless did not lessen the utility of these reports for the analytic purposes of Chapter IV.

#### Nature and Utility of Employment Information

Information concerning conditions of employment leaves much to be desired, especially for the purposes of quantitative analysis. In most reports, employment conditions are not specified beyond general indications, such as "recovery" or "decline," "great activity" or "little activity," "satisfactory" or "unsatisfactory," "good" or "bad." In all these pairs, the first predicate referred indiscriminately to an increase or to a regularity of number of looms active, of number of weavers working at the loom and of number of cloth orders put out. Such rising trends all suggest prosperity or at least activity, at some level of the fabrique. The second predicate referred to a decrease in all or some of these numbers or to a stagnation at a low level, indicating actual or oncoming depression. Because of this indiscriminate 'lumping' of three different signs of economic prosperity or depression--all of

which affected rates of employment, to be sure, but not all in the same way or at the same time or pace--it is impossible to specify exactly how often, how long and at what rate<sup>1</sup> the silk weavers were working at their trade during any particular trimester.

Usually the police observers were more interested in whether or not the weavers were idle than in business prosperity or economic growth as such. Idleness, in their minds, bred agitation, created fertile soil for political opposition to the regime and therefore needed to be recognized immediately and eliminated, preferably by useful employment in the private sector. The comments of the police on the state of the industry therefore presumably reflected, above all, their interpretation of the prospects for falling or rising idleness among the weavers. Whether such interpretation was based on actual observation of more urban weavers working or merely on rising output or sales of silk cloth by fabricants is not always clear from these general reports. If the second basis was the grounds for the optimistic interpretation, this interpretation was very weak. Rising output or sales of silks could be achieved by putting out more orders or orders of longer duration to weavers already employed part-time, by putting out more orders to the countryside, or by selling accumulated inventories, none of which would raise the number of employed workers in the city. Moreover, the extent of employment or unemployment of workers and looms in relation to the total number of workers employed or looms active in 'normal' times (that

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<sup>1</sup>That is, the number of weavers in relation to all weavers seeking work in their trade.

is, before 1860), on the one hand, or in relation to the total number of weavers seeking work in their trade, or of looms present in the weavers' households, on the other hand, is not specified either. As a result, 'rates of employment' are also impossible to evaluate at any particular time. In some reports, the proportion of weavers employed or the proportion of looms active in relation to a total is indicated as two-thirds, one-half, or three-quarters of workers or looms, for example. But failure to specify which totals are used as standards of comparison (for example, proportion of weavers currently seeking work in their trade, or proportion of weavers 'normally' employed) and failure to use one or another proportion (of looms or of workers) regularly weakens the value of these proportions for specifying rates of employment at any particular time and also weakens them for tracing changes in these rates with any quantitative exactness.

Even these very inadequate reports on employment conditions, however, can serve as useful indicators of comparative prosperity or depression among the six cloth categories when examined over a relatively long period of time, such as a decade. They may not indicate clearly whether weavers are working in greater numbers, for longer hours, or at higher rates (in relation to a total) in a particular cloth category as compared with the immediate past. But they do indicate whether weavers would tend to remain in the trade of their training and skill, or to return to this trade, and they also would indicate generally how strong or weak this tendency would have been in one cloth category as compared with another. Such tendencies are suggested, with reasonable confidence, by the history of prosperity and depression in each category, raising or

lowering expectations of rising employment or of continuing high levels of employment in the future. Such a history is 'constructed' from the frequency and persistence of "satisfactory" and "unsatisfactory" observations on the state of the fabrique over two or more years. Interpreting employment information in this manner presumes that "satisfactory" observations eventually (that is, within one or two years) become translated into a rising demand for labor and probably also into a rise in the number of urban weavers at work, and that "unsatisfactory" observations have the opposite effect. Such an assumption is not unreasonable for the fabrique, even during the 1860's.

Such an interpretation of employment reports also permits differentiation of employment trends by specialty as well as by cloth category. In this way, the transformation of 'vertical' craft solidarity can be observed not only between cloth categories but also within each category. Chapter IV examines the evolution of employment primarily in comparative fashion, among different cloth categories and specialties, and therefore does not strain the sources upon which its argument is based beyond their credibility and exactness. The discussion of conditions of employment in section II-A of the chapter presumes, of course, the particular notions of employment and unemployment described above; namely, tendencies based on expectation rather than necessarily actual increases in numbers of weavers employed or unemployed during any particular trimester.

#### Nature and Utility of Wage Data

Wage data present problems of interpretation similar to those of employment information and also lend themselves to similar use. As

indicated earlier in this appendix and in the text of Chapter IV, these data describe daily earnings of journeymen weavers in each cloth category. They provide no direct information, however, concerning the level of the piece-rate,<sup>2</sup> the length of the working day, and the productivity of the journeymen weavers, all of which influenced the average level of journeymen's earnings. Moreover, these data are averages of daily earnings of journeymen differing perhaps in some or all of these matters, for one or several of the following reasons: 1) they worked on cloths put out by different fabricants and therefore may have received different piece-rates for the same type of work; 2) they had different working habits, or they worked for masters with different working schedules, causing variations in the length of the working day; or 3) they had different physical capacities or skills and thus wove more or less productively for each hour worked. Besides these possible variations within each average wage, the constitution of the average also remains a mystery. It is impossible to determine whether it is a simple average of a carefully selected sample of journeymen, an average weighted by some criteria--such as the three elements mentioned above--or simply an impression based on discussions with a few 'trusted' journeymen and masters. For all of these reasons, the exact meaning of each wage value--

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<sup>2</sup>The piece-rate was usually paid by the fabricant to the master-weaver rather than to the journeyman working on the loom. The master received a certain salaire calculated as the piece-rate (so many centimes per unit of cloth) times the length of the cloth. The master then gave one-half of this salaire to the journeyman working at the loom. In some cases, the fabricant paid the salaire directly to the journeyman, who then gave the master a portion for rental of loom, light, dévidage, and so forth. In both instances, the fabricant determined the piece-rate. The manner of dividing the salaire between master and journeyman thus had no impact on its amount.

its constituents (piece-rate, length of working day, productivity) and their relative importance in determining an average wage--are obscure. Consequently, any effort to extrapolate from the wage back into any of its components, such as levels of piece-rates and rates of employment, would be a vain endeavor.

Certain characteristics of these wages and of the manner of reporting them in the "Situations industrielles" nevertheless make these data useful for the analytic purposes of Chapter IV. Unlike most reports on conditions of employment, wage reports are both numerically precise and static readings at a single point in time--at the date of the trimestrial report--rather than averages for the entire trimester. Because of this exactitude and temporal specificity, these wages are not distorted by averaging over time. The average wages reported, in other words, represent only daily earnings of currently employed weavers. These weavers may indeed have differed in the number of hours worked each day, but this synchronic variation in daily employment was probably not very large, especially not during the crisis decade of the 1860's, when weavers accepted whatever work they could find and remained at work as long as possible. It is reasonably certain, therefore, that daily earnings of most weavers working at the end of the trimester during the 1860's were at or near the level indicated in the reports.

Another advantage of these wage reports is their specification of several different averages for each cloth category, notably their indication of a minimum wage and of a maximum wage for each. These reports are made in several different ways, such as "The wage salaire varies between 1.75 francs and 2.25 francs" and "The average wage varies among

2.10 francs, 2.40 and 3.60." In all cases, I interpreted the minimum reported wage as that of the 'common' specialty within each category, and the maximum wage as that of the 'rich' specialty. This interpretation seemed reasonable, especially given the context in which wages were usually reported--immediately following the report of employment conditions in each of the separate specialties. In a few cases, the attribution of the maximum wage to the 'rich' specialties and of the minimum wage to the 'common' specialties was made explicit in the text and presumed that minimum and maximum wages had the same implicit attribution even when this was not stated explicitly. This indication of daily earnings by specialty not only provides further confirmation of the exactness of wage reporting but also permits a comparative analysis of wage movements and levels by specialty as well as by cloth category.

In fact, it is precisely for such comparative analysis that these wage data are especially useful. Wages for all categories and for all specialties were read at the same time, and all were based on the earnings of employed journeymen. Because of this derivation of wage data from the employed only, differences in employment conditions among categories and specialties probably did not affect relative wages among these very much. Moreover, differences in the length of the working day probably also had little impact on relative wages during the 1860's, when all employed weavers seemed to work long days. The only remaining cause of synchronic variation in wages among categories and specialties, besides the piece-rate, was productivity. This varied primarily as a function of skill, and such variation was probably reflected in corresponding differences of piece-rates, the more difficult cloth categories and

specialties commanding a higher piece-rate. Relative wages, as reported in the "Situations industrielles," therefore were probably good proxies for relative piece-rates of the categories and specialties, even though the importance of the piece-rate in determining the absolute size of the wage in each category or specialty remained obscure.

Chapter IV profits from these characteristics of the reported wage data by examining movements and levels of wages of different cloth categories and specialties comparatively, and by focusing on the effects of relative earnings rather than on the constituents of each level of earnings. Such an examination provides the information needed to assess the nature and sources of changing 'vertical' solidarity of craft, for which the analysis was primarily designed. Such assessment requires neither knowledge of the movement of wages nor information concerning rates of employment between wage readings. It requires only the observation of shifts of position of the daily wage of one category or specialty relative to another, from one reading to the next. The absolute increase or decrease of piece-rate in any single category or specialty and the rise or fall of total annual earnings of any one are immaterial for this analysis of 'vertical' solidarity. For this reason, wage movements can be analyzed meaningfully, for the purposes of the chapter, without a continuous wage series and without knowledge of the effects of reported wage levels on total annual earnings.

In the discussion of the effects of wage movements and levels on 'vertical' craft solidarity, the chapter offers occasional explanations of 'absolute' wage movements and traces the sources of such movements in changing levels of the piece-rate. Such explanations are intended

to be merely intelligent guesses, not confirmed hypotheses. They presume a strong reflection of piece-rate movements in wage movements-- a stronger reflection, perhaps, than the wage data warrant with confidence. These explanations intend, primarily, therefore, to provoke further reflection and research. The main concern of the chapter lies elsewhere, in any case, than in the causes of wage movements and levels. This concern is the effects of such movements on vertical solidarity of craft.

To facilitate presentation of the argument, the graphs in the chapter average trimestrial wage data for the same category and specialty on a yearly basis. Correlation analysis of the wage series, however, uses the entire series of trimester data, without any inter-temporal averaging. In the case of trimesters missing from some reports but not from others, I estimated missing wages as simple averages between the wage levels of prior and succeeding trimesters. In this way, all wage series were given the same number of trimestrial components--twenty-nine in all.

Appendix V:  
Description of Census Data and Method of  
Sampling Households From Census

The census data used in this study, especially in Chapter V, were extracted from three separate sources: the registers of households in the fiscal census of the town of the Croix-Rousse in 1847 (AML, Recensement, Croix-Rousse, 1847); the registers of households in the population census of the Croix-Rousse in 1851 (ADR, 6M-Dénombrement, Croix-Rousse, Tomes XXIII-XXIV); and the registers of households in the population census of the Fourth Arrondissement (the Croix-Rousse as incorporated into the city of Lyons in 1852) in 1866 (ADR, 6M-Dénombrement, 1866, Lyon, 4<sup>ème</sup> arrondissement, Tomes XVI, XVII). The dénombrements of 1851 and 1866 are handwritten copies of the original census manuscripts--probably second or third copies<sup>1</sup>--and copyists changed throughout the registers, as indicated by changes of handwriting and sometimes by names of copyists specified in an introductory ledger. The change was not very frequent, however, in the district of the Croix-Rousse (Fourth Arrondissement) from which the household samples were taken. The fiscal census of the Croix-Rousse for 1847 seems to have been transcribed by the same person. It is apparently, also, a copy of the manuscript censuses but closer to the original than the copies of the 1851 and 1866 censuses (that is, a first copy), as indicated by the frequent strikeouts and generally sloppy appearance.

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<sup>1</sup>Interview with Yves Lequin, Caluire, France, January 1974.

Nature of the Information Available

As indicated in Chapter V, the kind of information available for these three censuses is similar in several respects but not entirely comparable. Table 45 below summarizes, in comparative fashion, the information concerning several different economic and social characteristics available in these three sources.

Table 45:

Comparative Summary of Information Available  
in Censuses of 1847, 1851 and 1866 of the  
Croix-Rousse (Fourth Arrondissement)

<u>Economic or Social Characteristic Concerning</u>	<u>1847</u>	<u>1851</u>	<u>1866</u>
<u>Head of Household</u>			
Name	x	x	x
Address (Number & Street)	x	x	x
Occupation (a)	x	x	x
Civil Status (b)	x	x	x
Age	x	x	x
Place of Birth	x		
<u>Family of Head</u>			
Resident Children			
Number	x	x	x
Ages (d)	x	x (exact)	x (exact)
Sexes	x	x	x
Occupations		x	x
Children in Nursing	x		
Resident Parents	x		
Spouse			
Maiden Name		x	x
Age		x	x
Occupation (a)		x	x
<u>Looms in Household</u>			
Occupied (Active) Looms			
Number	x		x
Type (c)	x		x

Table 45: (Continued)

<u>Economic or Social Characteristic Concerning</u>	<u>1847</u>	<u>1851</u>	<u>1866</u>
<u>Looms in Household</u>			
Unoccupied (Inactive) Looms			
Number	x		x
Type (c)			x
<u>Other Household Residents</u>			
Number	x	x	x
Ages		x	x
Sexes	x	x	x
Occupations (a)	x (some)	x	x
Surnames		x	x
'States' (Journeyman, etc.) (e)	x		
<u>Other Household Information</u>			
Rents, etc. (f)	x		

Notes: a. The specificity of occupational information is extremely varied within each census register as well as between yearly registers. In all cases, the profession of weaver (tisseur or ouvrier en soie) is unambiguous. Frequently, the 'state' of the weaver is specified also--chef d'atelier (master-weaver), ouvrier tisseur or compagnon tisseur (journeyman weaver), or apprenti (apprentice weaver). Certain weaving professions differing by technique and household organization are also differentiated, such as tullistes, sometimes with 'states', such as 'ouvrier tulliste' for a journeyman weaver of tulles. Auxiliary tasks are always distinguished from weaving proper; that is, dévideuses, plieurs, liseurs, and so forth are specified as such. For other trades, the same variety of distinction prevails, but the specification of 'state' is haphazard. Only in the 1847 census is the 'state' of subordinate workers in the household specified systematically. Moreover, in 1847 and 1866, the 'state' of the household head can usually be inferred from the presence or absence of looms. In these cases, masters had looms in their households, whereas journeymen had none.

b. Civil status is specified as one of the following six types: unmarried male, married male, widowed male; unmarried female, married female, widowed female. Such specification thus indicated both marital state and sex.

- c. Looms are distinguished according to one of the following types: uni, façonné, velours, châle, tulle, bas, passementerie.
- d. In the 1847 fiscal census, only two categories of ages of resident children are specified--children less than 10 years, and children aged 10 or above. In the 1851 and 1866 censuses, the exact age of each resident child is given.
- e. The 'states' specified in the 1847 fiscal census are: domestic, journeyman, apprentice, pensioner.
- f. The other household information in the 1847 census is the following: rents of household and shop, floor of household, number of rooms, numbers of doors and windows, number of dévidage machines distinguished by type (round or elongated).

As indicated in Chapter V, certain information available in one census can be inferred, given certain assumptions, from one or both additional censuses in order to establish comparable, or nearly comparable, information. For example, kin relations of members of the household to the head (blood relations or marital relations) can be reasonably inferred, for the 1851 and 1866 censuses, by comparing surnames of members of the household with those of the head and with those of his spouse. In the 1847 census, comparable kin relations can be inferred by counting all residents classified by state--domestics, journeyworkers, and apprentices--as non-relatives, and the remainder of the household (spouses, parents, children) as relatives. Inferences in both cases (1851-1866 and 1847) are obviously liable to certain errors--in the first case, the error of missing distant relations with the surname of neither head nor spouse, or the error of counting as relatives non-kin with (coincidentally) the same surname, and in the second case, the error of ignoring relatives apprenticed to the master or working or living in his household as domestic or journeyworker. The danger, in my opinion, is greatest in the second case. Yet the liability to error is probably not sufficiently great to justify invalidating

most conclusions concerning kin relations advanced in this study. These conclusions are reasonable, albeit tentative, until further research in more precise documents of comparable scope (if such do indeed exist) can be undertaken.

#### Method of Sampling Households

The samples of households taken from the three census registers were originally intended to provide an independent perspective on the economic and social characteristics of silk weavers of their neighborhoods to compare with the same characteristics of members of silk-weavers' associations residing in the same neighborhoods of the Croix-Rousse. The selection of the samples was therefore guided primarily by the residential patterns of a sample of household members of several weavers' associations which could be traced in the registers, especially in the register of 1866--the year when data for individual members of associations was most abundant.<sup>2</sup> Such a selection criterion would permit a more meaningful analysis of the relationships between social and economic change and voluntary association among the silk weavers than indiscriminate sampling of weavers' households in the city as a whole.

All members of associations residing in the Croix-Rousse and traced in the 1866 census were distributed by street of residence. Those streets with the largest number of traced association members were used as the basis for selecting the 'independent' sample of Croix-Rousse households.

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<sup>2</sup>The associations for which the members were traced in the censuses, the number of successful tracings for each association and the number of silk weavers among these tracings are tabulated in George Sheridan, "Idéologies et structures sociales dans les associations ouvrières à Lyon, de 1848 à 1877," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, No. 2, 10.

In order to form a more geographically coherent sample, a few streets in the outlying regions of the Croix-Rousse were excluded. The sample therefore includes only streets in the eastern region of this district (east of the Grande Rue de Cuire), where the great majority of traced members of associations resided.

The sample size was set arbitrarily at 250 households. The distribution of these 250 households by street was the same as that of the households in the sample of association members. In other words, the proportion of households in the latter sample located on a particular street determined the proportion of the 250 households in the 'independent' sample on the same street and therefore the number of households to be selected from that street for this second sample. The households were then selected 'systematically'; that is, the total number of households on the street was divided by the number to be selected from that street, giving a quotient  $\underline{n}$  and then each  $\underline{n}$ -th household on that street was selected from the register, in order of listing, beginning with the first household on the street. To reduce systematic bias, the selection procedure was varied, in more or less random fashion, by starting with the second or third household on the street (as listed in the register), instead of the first, and sometimes also by sampling households at varying intervals on the same street (taking the  $\underline{n}$ -th,  $\underline{m}$ -th,  $\underline{s}$ -th and  $\underline{t}$ -th households, for example, instead of every  $\underline{n}$ -th household).

Circumstances of research, including the condition of the census registers and the time and resources available for sampling, were partially responsible for this method of selecting the 'independent' sample. Such circumstances were also responsible for slight differences in sample

size for the years 1851 and 1847 as compared with 1866. Additions of new streets between 1847 and 1866 in the sampling area also caused such inter-temporal variations in sample size. To correct for such variations, the 'raw' samples taken in the archives were pruned even further, so that sample size, street representation and even distribution of households by street would be exactly comparable. The method of random selection, with a table of random digits, was used to prune the relatively over-sized street sample for one year down to a size equal to that of the year with which the former was to be compared. By means of such pruning, two sets of comparable, equally-sized samples were constructed, including households of weavers and non-weavers in the eastern section of the Croix-Rousse. One set compares samples for 1847 and 1866, and the other set compares samples for 1851 and 1866. Table 46 below indicates the streets represented in each set of samples and the number of households in each sample.

Table 46:

Distribution of Sample Households by Street

<u>Samples for 1847 and 1866 (a)</u>		<u>Samples for 1851 and 1866 (a)</u>		<u>Total Number of Households on This Street in 1866</u>
<u>Name of Street</u>	<u>Number of Households</u>	<u>Name of Street</u>	<u>Number of Households</u>	
Fossés - Austerlitz (b)	30	Fossés - Austerlitz (b)	30	354
Chariot d'Or	20	Chariot d'Or	20	270
Place de la Croix-Rousse	18			289
Grande Rue de la Croix-Rousse	57			937
Gloriettes	16	Gloriettes	16	195
Henry IV - Ivry (b)	30	Henry IV - Ivry (b)	30	320
Mail	50	Mail	50	413
Chapeau Rouge - Saint Vincent de Paul (b)	30	Chapeau Rouge - Saint Vincent de Paul (b)	30	301
Place de la Visitation	8	Place de la Visitation	8	107
Dumenge	9			243
Dumont d'Urville	8	Dumont d'Urville	8	107
Petite Rue des Gloriettes	5	Petite Rue des Gloriettes	5	12
Pailleron	5			217
Pavillon	5			74
Montée Rey	5	Montée Rey	5	117
		Visitation	25	259
		Sainte Rose	5	100
TOTALS	296		232	4,315

Notes: a. Two samples were taken from the 1866 census, one for comparison with the sample from the 1847 census and the other for comparison with the sample from the 1851 census.

b. Hyphenated street names indicate changes of name between the two census years. The first name is that of the earlier census year, the second name that of the later census year.

Appendix VI:

Construction of Entrepreneurial

Index Ie

The value Ie was computed for each household in the samples of weavers' households in 1847 and 1866 for which loom data are available. Ie takes a value from - 1 (zero entrepreneurship) to + 1 (highest entrepreneurship). As indicated in Chapter V, it is computed on the basis of comparison of the number of occupied looms in the household with the total number of persons residing in the household and old enough to weave; that is, all persons aged 14 or above in 1866, including the head of the household and spouse, and all aged 10 or above in 1847. (The difference between the two years is the result of different types of age data available for each of the two censuses.) Let us label the number of occupied looms OTOT and the number of persons of weaving age in the household TAGEW. Then  $A = TAGEW/OTOT$  is the ratio of persons of weaving age to the number of occupied looms.

If TAGEW exceeds OTOT or is equal to OTOT ( $TAGEW \geq OTOT$ ), or  $A \geq 1$ , then the labor available in the household is sufficient to occupy all active looms, assuming one person occupying one active loom. This assumption is valid, of course, at the limit of economic necessity; that is, in times of economic crisis. Presumably the weaver will then occupy as many of his looms as he can with labor residing in the household, which he can exploit more easily by greater control over its standard of living, before hiring labor from the outside. If all of this resident labor of weaving age is also familial, related to the head of the household or to his spouse, then the level of entrepreneurship, defined as

the extent of employment of non-relative and/or non-resident labor to occupy the active looms, is at its lowest value, namely,  $-1$ . Symbolically this is expressed as:  $A \geq 1$  and  $NORAGEW = 0$  implies  $I_e = -1$ , where  $NORAGEW$  signifies the number of non-relative residents of weaving age.

If some of the residents of weaving age are non-relatives, the index  $I_e$  should represent this fact. To achieve this in an unambiguous manner, we assume that the master-weaver occupies his active looms with resident non-relatives first and then with resident relatives. We have no proof, of course, of this pattern of occupancy of looms either generally or in the cases of the specific households in hand. In many households, some or all non-relatives probably worked on auxiliary tasks, such as dévidage, instead of weaving. Their presence in the household nevertheless demonstrated with little doubt the application of non-relative labor to some tasks. This fact is represented most conveniently (that is, quantitatively, with no ambiguity in computed results) by assuming the above order of application of non-relative labor to weaving proper. Thus the strength of presence of such non-relative labor is given as a proportion of the number of non-relative residents of weaving age to the number of occupied looms, or  $NORAGEW/OTOT$ . Since the master is more entrepreneurial to the extent that this proportion is larger, we express the effect of the presence of non-relatives on  $I_e$  as a difference from zero entrepreneurship, or total familialization of weaving labor ( $I_e = -1$ ), in the direction of higher levels of entrepreneurship ( $I_e > -1$ ). Algebraically, we achieve this by defining  $I_e = (NORAGEW/OTOT) - 1$  for  $A \geq 1$  and  $0 < NORAGEW < OTOT$ .

Along our scale of rising entrepreneurship, thus computed on the presumption of sufficient resident labor for occupying all active looms, we encounter the level at which the number of non-relative residents

alone suffices to occupy all these looms. At this level,  $NORAGEW = OTOT$ , and, according to our formula above,  $I_e = (1) - 1 = 0$ . Suppose we move one step beyond this level to the case where  $NORAGEW > OTOT$ ; that is, where, according to our assumption, all active looms are occupied by non-relative residents and where the remainder of the household, including at least one additional non-relative of weaving age, is employed at auxiliary tasks. Strictly speaking, our index  $I_e$  should represent this overabundance of non-relative labor beyond the need for weaving labor. For such is also evidence of entrepreneurship in managing the total work of the household. Yet to do so by allowing  $I_e$  to exceed the value of 0, for example, would confuse two qualitatively different forms of entrepreneurship which the index should differentiate. One form, already discussed, involved employment of resident non-relative labor. The other form, to be discussed, involves the employment of non-resident labor. This second form, as we saw in Chapter I, minimized affective solidarity between the master and non-resident worker and approached the modern form of wage contract, or 'pure' hired labor, more closely than the resident worker. To avoid this confusion, we define  $I_e = 0$  for all cases in which non-relative resident labor is sufficient to occupy all active looms, whether or not there is an excess of such labor beyond weaving needs. Symbolically,  $I_e = 0$  when  $A \geq 1$  and  $NORAGEW \geq OTOT$ . This manner of defining  $I_e$  minimizes, of course, the extra degree of entrepreneurship due to employing non-relatives for auxiliary tasks in addition to employing them for weaving. This is indeed a weakness in the construction of  $I_e$ . The weakness is compensated, at least partially, however, by the non-ambiguity of  $I_e$  for the purpose of distinguishing between entrepreneurship limited to relations of affective solidarity with subordinate workers and entrepreneurship including contractual relations with hired,

non-resident laborers.

The reason for the possible confusion of the two forms of entrepreneurship, by allowing  $I_e$  to exceed 0 for  $NORAGEW > OTOT$ , derives from the manner of calculating  $I_e$  when non-resident labor is required to occupy at least some of the active looms. We want  $I_e$  to approach the value of 1 (highest level of entrepreneurship) as the proportion of looms occupied by non-residents, as compared with the total number of occupied looms, increases. According to our original assumption concerning patterns of applying labor to looms, this proportion will exceed zero only when the total number of household residents of weaving age is less than the total number of occupied looms; that is, when  $TAGEW < OTOT$ , or  $A < 1$ . In this case, the proportion of looms occupied by non-residents will be the difference between  $OTOT$  and  $TAGEW$  expressed as a proportion of  $OTOT$ , or  $(OTOT - TAGEW)/OTOT$ . Algebraically, this is the same as  $1 - (TAGEW/OTOT)$ , or  $1 - A$ . This value, which shall be called  $B$  ( $B = 1 - A$ ) and defined as the value of  $I_e$  when  $A < 1$  ( $I_e = B$ ), will always be greater than 0. But it may be as close as possible to 0, close enough to coincide with the value of  $I_e$  for  $NORAGEW > OTOT$ , had we allowed  $I_e$  to rise above 0 in this case. So in order to preserve both a 'pure' quantitative difference between the two forms of entrepreneurship and the symmetry of arithmetical construction of  $I_e$  for each of the two forms on each side of the threshold value 0, we allow  $I_e$  to exceed 0 only when non-residents must be hired to occupy some of the active looms. Our index constructed in this manner also retains the 'proper' hierarchy between the two forms of entrepreneurship -- the 'lower' form, consisting of employment of residents alone and taking on lower values of  $I_e$  ( $I_e \leq 0$ ), the 'higher' form consisting of employment of non-residents as well and taking on higher values of  $I_e$  ( $I_e > 0$ ). However,  $I_e$  never

reaches the value 1, representing the highest level of entrepreneurship, because the head of the household is always assumed to occupy one of the active looms and is present, of course, in every household.

The construction of  $I_e$  may be summarized in the following manner:

<u>Given:</u>	TAGEW =	Total number of persons of weaving age residing in the household (residents aged 10 or above in 1847, residents aged 14 or above in 1866)
	NORAGEW =	Total number of non-relatives of weaving age residing in the household (not related to head of household or spouse, as determined by difference of surname)
	OTOT =	Total number of occupied (active) looms in the household
	A =	TAGEW/OTOT
	B =	1 - A
<u>Then:</u>	$I_e = - 1$	<u>if</u> $A \geq 1$ and $NORAGEW = 0$
	$I_e = (NORAGEW/OTOT) - 1$	<u>if</u> $A \geq 1$ and $0 < NORAGEW < OTOT$
	$I_e = 0$	<u>if</u> $A \geq 1$ and $NORAGEW \geq OTOT$
	$I_e = B$	<u>if</u> $A < 1$

Appendix VII:

Regression Study of Entrepreneurship

As indicated in the text of Chapter V, section I - D., regression of the six type variables against the entrepreneurial index Ie preserved all six variables -- PrOU, PrREL, PrSXF, PrAPP, PrOUV, AGE -- in 1847 and eliminated all but two -- PrREL and PrSXF -- in 1866. Several features of this reduction in significant type variables are worth noting. (See Table 32 and Key and Diagram 1, reprinted on the following pages.) The most striking is the elimination of the loom-type variable PrOU as a significant determinant of entrepreneurship. In 1847, fancy-loom households tended to be more entrepreneurial than plain-loom households, as the negative correlation between Ie and PrOU suggests. In 1866, the degree of entrepreneurship was, on the average, indifferent to the type of silk cloth woven. The main reason for this was the following: The residents of fancy-loom households had become familialized over the twenty-year interim to a level not very different from that of plain-loom households. Moreover, the relatively low state of activity of the more numerous fancy looms enabled fancy-cloth masters to occupy all or nearly all looms with this resident family labor, as plain-cloth weavers had always done in the past.

A second notable feature is the elimination of apprenticeship and journeymanship as determinants of entrepreneurship -- or of adolescence and adulthood, to use the type-variable names of the 1866 sample. In 1847 apprenticeship (PrAPP) and especially resident journeymanship (PrOUV) strongly influenced the degree of entrepreneurship. Both PrAPP and PrOUV strengthened Ie in the same sense as their own proportional representation in the group of working household residents. In 1866, the adolescent and

Table 32

Regression Study of Type-Variable Determinants of Entrepreneurial Index Ie.  
Croix-Rousse (1847, 1866)

1847

<u>Dependent Variable Ie Regressed With</u>					<u>Independent Variable Standardized Coefficients and F.Values</u>							
<u>Name</u>	<u>Description</u>	<u>R<sup>2</sup></u>	<u>F</u>	<u>d-f</u>	<u>Critical F</u>	<u>PrOU</u>	<u>PrREL</u>	<u>PrSXF</u>	<u>PrAPP</u>	<u>PrOUV</u>	<u>AGE</u>	
1.	PrOU OU/OTOTUF	.11	15.29	128	3.92	-.33						
				1		(15.29)						
2.	PrREL REL/HH	.35	68.85	128	3.92		-.59					
				1			(68.85)					
3.	PrSXF SXF/HH	0	.36	128	3.92			.05				
				1				(.36)				
4.	PrAPP APP/WOR	.04	4.74	104	3.94				.21			
				1					(4.74)			
5.	PrOUV OUV/WOR	.34	53.50	104	3.94					.58		
				1						(53.50)		
6.	AGE AGE	0	.05	128	3.92						.02	
				4							(.05)	
1,2,3,6		.42	22.49	125	2.45	-.24	-.56	.10			.12	
				5		(11.19)	(64.63)	(2.09)			(2.96)	
1,2,3,4,6		.53	22.29	100	2.32	-.19	-.74	.12	-.11		.15	
				5		(7.06)	(93.93)	(3.02)	(2.00)		(4.27)	
1,2,3,5,6		.57	26.07	100	2.32	-.19	-.53	.13		.28	.14	
				6		(7.41)	(38.93)	(3.95)		(11.10)	(4.28)	
1,2,3,4,5,6		.58	22.87	99	2.20	-.17	-.32	.11	.22	.48	.13	
				6		(6.41)	(5.09)	(2.66)	(3.55)	(12.70)	(3.74)	

1866

<u>Dependent Variable Ie Regressed With</u>				<u>Independent Variable Standardized Coefficients and F Values</u>							
<u>Name</u>	<u>Description</u>	<u>R<sup>2</sup></u>	<u>F</u>	<u>d-f</u>	<u>Critical F</u>	<u>PrTU</u>	<u>PrREL</u>	<u>PrSXF</u>	<u>PrTAG14</u>	<u>PrTAG21</u>	<u>AGE</u>
1.PrTU	TU/TOTUF	0	.36	80	3.97	-.07 (.36)					
2.PrREL	REL/HH	.43	61.40	80	3.97		-.66 (61.40)				
3.PrSXF	SXF/HH	.02	1.60	80	3.97			.14 (1.60)			
4.PrTAG14	TAG14/HH	0	.02	80	3.97				-.02 (.02)		
5.PrTAG21	TAG21/HH	.07	5.94	80	3.97					.26 (5.94)	
6.AGE	AGE	0	.01	80	3.97						-.01 (.01)
1,2,3,6		.46	16.50	77	2.51	-.07 (.65)	-.66 (62.39)	.15 (3.29)			-.03 (.14)
1,2,3,4,6		.47	13.75	76	2.35	-10 (1.24)	-.68 (64.99)	.14 (2.94)	-.12 (1.93)		-.03 (.17)
1,2,3,5,6		.47	13.33	76	2.35	-.08 (.85)	-.63 (51.29)	.14 (2.50)		.09 (.81)	-.07 (.57)
1,2,3,4,5,6		.47	11.31	75	2.23	-210 (1.23)	-.67 (42.23)	.14 (2.73)	-.12 (1.10)	.01 (0)	-.04 (.14)

Key to Symbols

Ie: Entreprenueurial index

PrOU: Proportion of occupied plain looms (unis) to total occupied plain (unis) and fancy (façonne) looms

OU: Number of occupied unis looms

OTOTUF: Total number of occupied unis and façonnes looms

PrREL: Proportion of relatives of the head of household living in the household (other than spouse) to total number of persons living in the household (other than head and spouse)

REL: Number of relatives of the head of household, by blood or by marriage, living in the household (other than spouse of head)

HH: Total number of persons living in the household other than head and spouse

PrSXF: Proportion of females living in the household (other than head and spouse) to total number of persons living in the household (other than head and spouse)

SXF: Number of females living in the household, other than head and spouse

HH: Total number of persons living in the household other than head and spouse

PrAPP: Proportion of apprentices living in the household to total number of silk workers living in the household other than head and spouse (apprentices + journeyworkers + children of head aged 10 or above)

APP: Number of apprentices living in the household

WOR: Number of apprentices + journeyworkers (OUV) + children of head aged 10 or above (i.e. weaving age group; including children of weaving age)

PrOUV: Proportion of journeyworkers living in the household to total number of silk workers living in the household other than head and spouse

OUV: Number of journeyworkers living in the household

WOR: Number of apprentices + journeyworkers (OUV) + children of head aged 10 or above

AGE: Age of head of the household

PrTU: Proportion of total (occupied and unoccupied) plain looms (unis) to total (occupied and unoccupied) plain (unis) and fancy (façonne) looms

TU: Total occupied and unoccupied plain looms

TOTUF: Total occupied and unoccupied plain and fancy looms

- PrTAG14: Proportion of persons living in the household, other than head and spouse, aged 14 - 20, to total number of persons living in the household, other than head and spouse  
 TAG14: Number of persons living in the household, other than head and spouse, aged 14 - 20  
 HH: Total number of persons living in the household other than head and spouse
- PrTAG21: Proportion of persons living in the household, other than head and spouse, aged 21 and above, to total number of persons living in the household, other than head and spouse  
 TAG21: Number of persons living in the household, other than head and spouse, aged 21 and above  
 HH: Total number of persons living in the household other than head and spouse
- $R^2$ : Correlation coefficient (the proportion of the variation in  $I_e$  explained by the variables against which it is regressed to the total variation in  $I_e$ )
- F: The computed F-statistic for the entire regression equation =  $(R^2/k)/((1-R^2)/(N-k-1))$ . The statistic measures the ratio of the proportional 'explained' variation of  $I_e$  ( $R^2$ ), to the proportional unexplained variation of  $I_e$  ( $1-R^2$ ), correcting for sample size (N) and number of independent variables in the regression equation (k).
- d-f: Degrees of freedom in the regression equation. The top figure gives the degrees of freedom in the numerator of the F-statistic (=k) and the bottom figure gives the degrees of freedom in the denominator of F (=N-k)
- Critical F: The F-statistic computed for a normally distributed random sample of size N in a regression against k independent variables, at 95% level of confidence
- F-Value for Each Independent Variable (in parentheses below each standardized coefficient for that variable):
- The computed F-statistic for the partial correlation of that independent variable with the dependent variable  $I_e$ , controlling for variation in the other independent variables. This F-statistic measures the ratio of the proportional explained variation of  $I_e$  for this partial regression ( $r_{ki}^2$ ) to the proportional unexplained variation of  $I_e$  for the entire regression ( $1-R^2$ ), correcting for sample size (N) and number of independent variables (k)

The statistical test using the F-statistic consists of rejecting the null hypothesis that  $R^2$  (or  $r_{ki}^2$ ) is zero only when the computed F-statistic is equal to or larger than the critical F-statistic for the given degrees of freedom. In this case, the variation in  $I_e$  explained by the independent variable (s) in the regression equation is due to actual correlation, between  $I_e$  and the variable (s), rather than to mere random error, in 95 out of 100 cases (95% level of confidence).

The symbol  $\beta$  is used in the text to indicate a standardized coefficient of an independent variable.

adult age-group variables (PrTAG14 and PrTAG21 respectively) had no apparent influence on entrepreneurship in the general structure of determination, and yet the adult variable PrTAG21, regressed separately with Ie, was significantly and positively associated with Ie. (See Table 32:  $\beta = .26$ ,  $F = 5.94$ ,  $R^2 = .07$ .) The different behavior of the age-group variables in the two periods was partly the result of statistical bias favoring the inclusion of PrAPP and PrOUV and the exclusion of PrTAG14 and PrTAG21. The type variables PrAPP and PrOUV exaggerate the actual proportion of apprentices and journeymen in the weavers' households in 1847, since these variables represent these proportions relative to working members of household only rather than to all members of the household. The type variables PrTAG14 and PrTAG21, however, represent the proportions of adolescents and adults relative to all members of the household (other than head and spouse) in 1866. Since apprentices and journeymen in 1847 were also classed automatically as non-relatives, and adolescents and adults in 1866 were classed as non-relatives only if their surname indicated them as such, the bias in favor of the former, as a determinant of Ie, was exaggerated further, for Ie measured in part the proportion of non-relatives sufficient to occupy active looms in the household. These biases were largely the result of census information which was not perfectly comparable in its details.

Another reason for the exclusion of the age-group variables in 1866 was the much stronger negative association of PrREL with Ie ( $R^2 = .43$ ,  $\beta = -.66$ ) than positive association of PrTAG21 with Ie ( $R^2 = .07$ ,  $\beta = .26$ ). The association of the two age-group variables with Ie was concentrated, so to speak, in PrTAG21, since Ie regressed bivariate with PrTAG14 was insignificant, and PrTAG21 was significantly and negatively associated with PrREL (Table 47:  $R^2 = .08$ ,  $\beta = -.28$ ). In regressing Ie with PrREL

Table 47

Regression Study of Determinants of State and Age-Group Variables.  
Croix-Rousse Samples (1847, 1866)

1847

All Households

Dependent Variable	Regressed With	R <sup>2</sup>	F	d-f	Critical F	Independent Variable Standardized Coefficients and F Values				
						PrOUV	PrREL	PrSXF	PrAPP	PrOUV AGE
PrOUV	1. PrOU	.00	.45	1-104	3.94	-.07 (.45)				
	2. PrREL	.38	63.89	1-104	3.94		-.62 (63.89)			
	3. PrSXF	.03	3.27	1-104	3.94			-.17 (3.27)		
	4. AGE	.01	.95	1-104	3.94					-.09 (.95)
	1,2,3,4	.39	16.40	4-101	2.48	.02 (.04)	-.61 (52.21)	-.12 (2.19)		.01 (0)
PrAPP	1,2,3,4	.20	6.12	4-101	2.48	-.08 (.71)	-.40 (19.81)	.21 (5.47)		.04 (.21)

1847

Plains Households

Dependent Variable	Regressed With	R <sup>2</sup>	F	d-f	Critical F	Independent Variable Standardized Coefficients and F Values					
						PrOU	PrREL	PrSXF	PrAPP	PrOUV	AGE
PrOUV	2. PrREL	.52	20.80	1-19	4.38		-.72 (20.80)				
	3. PrSXF	.02	.42	1-19	4.38			-.15 (.42)			
	4. AGE	0	.08	1-19	4.38						-.06 (.08)
	2,3,4	.58	7.89	3-17	3.20		-.75 (22.62)	-.23 (2.19)			-.07 (.22)
PrAPP	2,3,4	.31	2.50	3-17	3.20		-.41 (4.09)	.32 (2.41)			-.16 (.23)

Fancies Households

PrOUV	2. PrREL	.32	38.17	1-81	3.97		-.57 (38.17)				
	3. PrSXF	.02	1.99	1-81	3.97			-.15 (1.99)			
	4. AGE	.01	.52	1-81	3.97						-.08 (.52)
	2,3,4	.33	12.90	3-79	2.73		-.56 (35.26)	-.09 (.87)			.04 (.16)
PrAPP	2,3,4	.18	5.96	3-79	2.73		-.42 (15.95)	.19 (3.40)			.07 (.51)

1866

All Households

Dependent Variable	Regressed With	R <sup>2</sup>	F	d-f	Critical F	Independent Variable Standardized Coefficients and F Values					
						PrTU	PrRel	PrSXF	PrTAG14	PrTAG21	AGE
PrTAG21	1. PrTU	0	.09	1-80	3.97	.03 (.09)					
	2. PrREL	.08	7.07	1-80	3.97		-.28 (7.07)				
	3. PrSXF	.03	2.88	1-80	3.97			.19 (2.88)			
	4. AGE	.19	18.56	1-80	3.97					.43 (18.56)	
	1,2,3,4	.31	8.84	4-77	2.51	.12 (1.58)	-.29 (9.20)	.18 (3.56)		.45 (22.05)	
PrTAG14	1,2,3,4	.08	1.66	4-77	2.51	-.24 (4.52)	-.13 (1.48)	-.07 (.43)		-.02 (.04)	

1866

Plains Households

Dependent Variable	Regressed With	$R^2$	F	d-f	Critical F	Independent Variable Standardized Coefficients and F Values					
						PrTU	PrREL	PrSXF	PrTAG14	PrTAG21	AGE
PrTAG21	2.PrREL	.09	5.12	1-54	4.02		-.29 (5.12)				
	3.PrSXF	.08	4.39	1-54	4.02			.27 (4.39)			
	4.AGE	.21	14.19	1-54	4.02						.46 (14.19)
	2,3,4	.38	10.83	3-52	2.79		-.33 (9.02)	.25 (5.13)			.48 (19.48)
PrTAG14	2,3,4	.05	.86	3-52	2.79		-.17 (1.54)	-.12 (.82)			-.06 (.18)

Fancies Households

PrTAG21	2.PrREL	.07	1.87	1-24	4.26		-.27 (1.87)				
	3.PrSXF	0	0	1-24	4.26			.01 (0)			
	4.AGE	.19	5.75	1-24	4.26						.44 (5.75)
	2,3,4	.23	2.15	3-22	3.05		-.19 (.94)	.02 (.01)			.40 (4.31)
PrTAG14	2,3,4	.01	.07	3-22	3.05		-.07 (.11)	.02 (.01)			.05 (.06)

and PrTAG21 together, therefore, the weaker positive association of Ie with the latter was 'absorbed' into the stronger negative association of Ie with the former by the effect of multicollinearity between PrREL and PrTAG21. In 1847, the independent positive association of PROUV with Ie ( $R^2 = .34$ ,  $\beta = .58$ ) was not very different (not stronger or weaker) from the independent negative association of PrREL with Ie ( $R^2 = .35$ ,  $\beta = -.59$ ). Thus, although the association between PROUV and PrREL was strong (Table 47:  $R^2 = .38$ ,  $\beta = -.62$ ), neither absorbed the other entirely in the multivariate regression with Ie.

The major changes in the relationship between the age-group variables and the entrepreneurial index Ie, from 1847 to 1866, were the elimination of apprenticeship (or adolescence) and the elimination of journeymanship (or adulthood) as significant determinants of entrepreneurship. These changes took place differently in plain-loom households and in fancy-loom households. In 1847 only PrREL was significantly correlated with PROUV, and the correlation was strong and negative. This was true both in plain-loom households and in fancy-loom households. (See Table 47.) In 1866, however, PrTAG21 was strongly associated with two other type variables besides -- with the degree of feminization (PrSXF) and with the age of the head of the household (AGE). The correlation with AGE was positive ( $R^2 = .19$ ,  $\beta = .43$ ). The association with PrSXF was weaker but also positive when the effects of loom type (PrTU), familialization (PrREL), and age of the head (AGE) were controlled ( $\beta = .18$ ). Regression of these four type variables (PrSXF, PrTU, PrREL, AGE) with PrTAG21 separately for plain-loom households and for fancy-loom households demonstrates that the association of PrTAG21 with PrSXF (bivariately regressed) was exclusively a characteristic of plain-loom households. The positive association of PrTAG21 with AGE, however, was characteristic

of plain-loom households and fancy-loom households alike. Bivariate regression of Ie with PrTAG21 separately for the two loom-types of household demonstrates, moreover, that these were positively associated also in plain-loom households alone. (See Table 47 for these correlations.)

As we have already seen, feminization along with familialization together defined the structure of determination of entrepreneurship in 1866. (See Diagram 1.) As we shall see shortly, familialization alone (PrREL) remained significantly associated with Ie in plain-loom households in 1866. The correlation of Ie with PrSXF was insignificant. Through the positive, bivariate association of PrTAG21 with Ie in such households, however, the 'original' association of PrSXF and PrREL with Ie was preserved. For PrTAG21 was also significantly correlated with these two type variables in the same direction as they were respectively correlated with Ie in the 'original' structure (that is, undifferentiated by loom-type of household) of determination of entrepreneurship (negatively with PrREL, positively with PrSXF). In other words, the degree of entrepreneurship increased in plain-loom households with their de-familialization and with their feminization together, largely because the degree of entrepreneurship in such households tended to increase as the proportion of adults in them increased. The latter tended to accumulate more frequently, in turn, in the less familial, more feminized households of plain-cloth weavers.

A third feature of the structures of determination of entrepreneurship for both years was the entry of feminization as a significant determinant only after the effect of other significant type variables was controlled. Bivariate correlations of Ie with PrSXF were insignificant in both periods, but correlations of Ie with PrSXF became significant in the more general multivariate regressions. In particular, introduction

of control for apprenticeship (PrAPP) and for journeymanship (PrOUV) in 1847, and for familialization (PrREL) in 1866, made the association of Ie with PrSXF significant. (See Table 32.) Since controlling for PrAPP and PrOUV was largely the inverse of controlling for familialization (because of the high negative association between PrREL and PrAPP, PrOUV), the control factors in both periods were not very different. They suggested that for a given level of familialization, entrepreneurship increased with feminization. Since by definition entrepreneurship increased as familialization decreased, Ie was highest in highly non-familial, highly feminized households.

This suggests that the differences between the two periods concerning the effect of feminization upon entrepreneurship were trivial. In fact they were not. This can be seen by regressing the structural equation for each of the two years separately for plain-loom households and for fancy-loom households. Table 48 summarizes the results of such a regression. For 1847 the regression produced insignificant coefficients for PrSXF in both loom-types of household. In 1866 the coefficients of PrSXF were insignificant only for plain-loom households. For fancy-loom households, the coefficient was significant ( $\beta = .28$ ). (See Table 48, Regression Equation 15.) The apparent association between entrepreneurship and feminization in 1847, for the entire sample of households undistinguished by loom type, was largely the result of random variation, hence spurious. The association between the two variables in 1866, however, was not spurious, but this association derived exclusively from a relatively strong positive correlation between Ie and PrSXF in fancy-loom households alone. The higher proportion of plain-loom households in the 1866 sample, where feminization was not significantly correlated with entrepreneurship, reduced the overall association between Ie and

Table 48

Regression Study of Type-Variable Determinants of Entrepreneurial Index Ie  
 Separately for Plain-Loom Households and for Fancy-Loom Households.  
 Croix-Rousse Samples (1847, 1866)

1847

<u>Dependent Variable Ie Regressed With</u>					<u>Independent Variable Standardized Coefficients and F Values</u>				
<u>Plains Households</u>	<u>R<sup>2</sup></u>	<u>F</u>	<u>Degrees of Freedom</u>	<u>Critical F</u>	<u>PrREL</u>	<u>PrSXF</u>	<u>PrAPP</u>	<u>PrOUV</u>	<u>AGE</u>
1. PrREL	.36	19.53	1-34	4.13	-.60 (19.53)				
2. PrOUV	.61	29.82	1-19	4.38				.78 (29.82)	
3. PrREL, PrSXF, PrAPP, PrOUV, AGE	.82	13.69	5-15	2.90	-.30 (.88)	.10 (.73)	.21 (.83)	.63 (4.62)	.13 (1.30)
<u>Fancies Households</u>									
4. PrREL	.31	40.00	1-90	3.96	-.55 (40.00)				
5. PrOUV	.27	30.37	1-81	3.97				.52 (30.37)	
6. PrREL, PrSXF, PrAPP, PrOUV, AGE	.49	14.72	5-77	2.35	-.34 (4.09)	.10 (1.49)	.21 (2.02)	.44 (7.15)	.13 (2.45)

1866

<u>Dependent Variable Ie Regressed With</u>				<u>Independent Variable Standarized Coefficients and F Values</u>						
<u>Plains Households</u>				<u>Critical</u>	<u>PrRel</u>	<u>PrSXF</u>	<u>PrTAG14</u>	<u>PrTAG21</u>	<u>AGE</u>	
	<u>R<sup>2</sup></u>	<u>F</u>	<u>d-f</u>	<u>F</u>						
7.	PrREL	.42	38.79	1-54	4.02	-.65 (38.79)				
8.	PrTAG21	.08	4.49	1-54	4.02		.28 (4.49)			
9.	PrREL, PrSXF	.43	19.83	2-53	3.18	-.64 (38.04)	.10 (.92)			
10.	PrREL, PrSXF, AGE	.44	13.70	3-52	2.79	-.63 (36.52)	.10 (.99)		-.12 (1.26)	
11.	PrREL, PrSXF, PrTAG21, AGE	.46	11.02	4-51	2.57	-.57 (25.80)	.06 (.27)	.19 (.27)	-.21 (2.97)	
12.	PrREL, PrSXF, PrTAG14, PrTAG21, AGE	.46	8.66	5-50	2.41	-.56 (20.13)	.06 (.26)	.02 (.03)	.20 (1.71)	-.21 (2.87)

1866

<u>Dependent Variable Is Regressed With</u>					<u>Independent Variable Standardized Coefficients and F. Values</u>					
<u>Fancies Households</u>					<u>PrREL</u>	<u>PrSXF</u>	<u>PRTAG14</u>	<u>PrTAG21</u>	<u>AGE</u>	
	<u>R<sup>2</sup></u>	<u>F</u>	<u>d-f</u>	<u>Critical F</u>						
13.	PrREL	.48	21.88	1-24	4.26	-.69 (21.88)				
14.	PrTAG21	.06	1.59	1-24	4.26			.25 (1.59)		
15.	PrREL, PrSXF	.55	14.25	2-23	3.42	-.73 (27.11)	.28 (3.94)			
16.	PrREL, PrSXF, AGE	.56	9.28	3-22	3.05	-.72 (23.88)	.27 (3.63)		.07 (.26)	
17.	PrREL, PrSXF, PrTAG21, AGE	.56	6.66	4-21	2.84	-.71 (21.57)	.27 (3.46)	.03 (.03)	.06 (.15)	
18.	PrREL, PrSXF, PrTAG14, PrTAG21, AGE	.65	7.50	5-20	2.71	-.82 (30.96)	.29 (4.62)	-.45 (5.35)	-.34 (2.44)	.23 (2.02)

PrSXF to a level not very different from that of the 'spurious' association between the two variables in the 1847 sample.

The positive association of entrepreneurship with feminization in fancy-loom households in 1866 suggests that the master-weavers of fancy cloths who remained 'entrepreneurial' used female labor more than in the past. Cheaper, more docile, able to weave the less elegant fancy cloths demanded by the market, the labor of females prevented the total familialization of the households of these masters and saved them from returning to the purely paternal role of most of their fellow chefs d'atelier. It is important to note, however, that such female labor which preserved a certain entrepreneurial role for fancy-cloth masters was not necessarily young. In particular, it was not the labor of female adolescents (apprentices or young journeyworkers). In the regression of  $I_e$  against five type variables -- PrREL, PrSXF, PrTAG14, PrTAG21, AGE -- in 1866, for fancy-loom households alone (see Table 48), the statistically significant effects of feminization (PrSXF) and adolescence (PrTAG14) on entrepreneurship ( $I_e$ ) operated in opposite directions. Feminization, as expected, was positively associated with entrepreneurship in such households, but adolescence was negatively associated with  $I_e$ . The retention or increase of apprentices thus appeared more indicative of an 'artisanal' attitude than of 'entrepreneurial' behavior in fancy-loom households in 1866 -- contrary to our expectations based on analysis of the distribution tables in the text of Chapter V. Feminization in general, however, indicated greater rather than less entrepreneurship, regardless of the age of female residents or their relationship to the head of the household (relative or non-relative). Fancy-cloth masters who used female labor were therefore more likely than most other masters to have preserved an 'entrepreneurial' attitude toward their household economies.

The life-stage proxy AGE, finally, correlated with Ie in a manner quite similar to that of PrSXF. In 1847, AGE also became a significant determinant of entrepreneurship only with control for the effects of the other type variables. In particular, AGE entered the structural equation only with control for the effects of loom type (PrOU) and familialization (PrREL). PrREL and AGE were significant determinants of Ie, however, only in fancy-loom households, which formed the majority in the Croix-Rousse sample of that year. (See Table 48, Regression Equation 6.) Older masters weaving fancy cloths thus tended to use non-relative or non-resident labor more than younger masters weaving fancy cloths, but masters weaving plain cloths were more or less entrepreneurial regardless of their age. In 1866, the variable AGE appeared insignificant in all cases. Regression of Ie with PrREL, PrSXF and AGE separately for the two loom types of household confirm this result, with one exception. (See Table 48, Regression Equation 10, 16.) When the effects of the proportion of adults in the household (PrTAG21) are controlled in plain-loom households, AGE becomes significantly and negatively associated with entrepreneurship ( $\beta = -.21$ ,  $F = 2.87$ ). (See Table 48, Regression Equation 12.) In other words, younger master-weavers of plain cloths tended to be more entrepreneurial than older master-weavers of such cloths, for a given proportion of adults in the household. But adulthood (PrTAG21) in plain-loom households was positively associated with entrepreneurship (Ie) (Regression Equation 8:  $R^2 = .08$ ,  $\beta = .28$ ,  $F = 4.49$ ) and strongly and positively correlated with AGE ( $R^2 = .21$ ,  $\beta = .46$ ,  $F = 14.19$ , not indicated in Table). As a result, adulthood and AGE pulled in opposite directions in 'determining' entrepreneurship -- the former increasing Ie, the latter decreasing Ie, for each increase in proportion of adults in the household. This effect of mutual

cancellation, along with the negative collinearity of PrTAG21 and PrREL, also explained why neither PrTAG21 nor AGE was a significant determinant of  $I_e$  in the overall structural relation for 1866.

## BIBLIOGRAPHICAL ESSAY

This study has focused on the relationship between two topics: economic and social change in the silk industry and in the city of Lyons, and the social ideology of voluntary association among the Lyons silk weavers. To date very little literature has studied the relationship between economy and society, on the one hand, and movements of workers' association, on the other hand, in the Lyons region. Yves Lequin's "Monde ouvrier de la région lyonnaise dans la deuxième moitié du XIXème siècle, 1848 à 1914" (unpublished thesis for the Doctorat d'Etat, Université Lyon II, 1975), 4 volumes, to be published as Les ouvriers de la région lyonnaise dans la seconde moitié du XIXe siècle (1848-1914) (Lyon: Presses universitaires de Lyon, 1977), and Robert J. Bezucha's Lyon Uprising of 1834: Social and Political Conflict in the Early July Monarchy (Cambridge, Massachusetts: Harvard University Press, 1974) are the two most prominent examples of this literature. Both of these fine works make some effort to relate the development of workers' movements to social and economic change. In both, this effort is truncated somewhat by the separate treatment of each of the two topics in distinct chapters or volumes. Lequin's grand vision of patterns and tendencies in regional workers' movements, however, bears an affinity to the main lines of social and economic change as he interprets these in the first two volumes. Thus he transcends indirectly, almost subtly, this truncation. Bezucha's effort to relate one topic to the other is less ambitious and less grandiose than Lequin's. Bezucha nevertheless makes some valuable discoveries in his more modest enterprise, such as that of neighborhood

'polarization' explaining the strength of class solidarity and class consciousness among the silk weavers. Both of these works satisfied the present study's hunger for relevant information. Such relevancy was, to some extent, a product of the two authors' interest in the social and economic foundations of association. Both works will be discussed at greater length in sections of this essay concerning the specialized areas in which they contributed most of this information.

Most of the literature upon which this study has relied -- both primary and secondary, published and manuscript -- treats only one or the other topic (economy and society, movements of association) separately. For this reason, this essay, unlike the study itself, will review this literature in the same fashion. First, documents and works pertaining to structure and change in the economy and society of silk weaving, and to the urbanization of Lyons, will be discussed. Then sources concerning the history, ideology, organizational forms and patterns of behavior of voluntary associations -- especially associations among the weavers of Lyons -- will be examined.

This study has relied primarily on archival sources, including both manuscript and pamphlet literature, and on published 'primary' literature in libraries. Most of the archives and libraries housing these sources are located in the city of Lyons. They are listed below with corresponding abbreviations used in footnotes and bibliography. Some 'secondary' literature was also consulted, especially for the broader questions of this study, such as the history of the silk industry, the economic development and urbanization of Lyons, and the history of political movements in Lyons. Archival sources, primary

published literature and, to a lesser extent, some secondary literature include both quantitative and literary materials. In most cases, the latter are also separate from one another, but in a few important instances they derive from the same source. This essay will refer to these various distinguishing characteristics -- archival or published, primary or secondary, quantitative or literary -- where appropriate.

The following French archives and libraries were consulted:

#### Archives

ACCL, Archives de la Chambre de Commerce de Lyon  
 ADI, Archives Départementales de l'Isère  
 ADR, Archives Départementales du Rhône  
 AML, Archives Municipales de Lyon  
 AMTL, Archives du Musée des Tissus de Lyon  
 AN, Archives Nationales  
 AP, Archives du Progrès (Lyon)  
 ATCL, Archives du Tribunal de Commerce de Lyon

#### Libraries

AML (Bibliothèque), Bibliothèque des Archives Municipales de Lyon  
 BCCL, Bibliothèque de la Chambre de Commerce de Lyon  
 BCHRL, Bibliothèque du Centre d'histoire économique et sociale de la région lyonnaise  
 BML, Bibliothèque Municipale de Lyon  
 BMTL, Bibliothèque du Musée des Tissus de Lyon  
 BN, Bibliothèque Nationale  
 BUL, Bibliothèque de l'Université Lyon II

### I. Sources Concerning Economic and Social Structure and Change

Sources concerning economy and society will be discussed separately below. The economy will be considered somewhat arbitrarily as including only the technology of silk weaving and two (relatively) macroeconomic spheres of activity -- the development of the silk industry and the intensified urbanization of Lyons. Most of the sources for these two topics are published secondary works. 'Society' will include the microeconomic

sphere of the household economy, labor-related issues, such as wages and employment, and the institutional aspects of economic life, such as the Conseil des Prud'hommes. Sources for these social issues are primarily manuscript and primary pamphlet literature.

#### A. The Economy of the Silk Industry and of the City of Lyons

##### 1. Technology

Understanding the economic development of the Lyons silk industry first requires a knowledge of silk technology, especially weaving technique, including the development of weaving technology during the nineteenth century. E. Pariset's Industries de la soie (Lyon: Pitrat Aine, 1890) is the best introduction to the subject. Pariset describes the technology of all sectors of the industry, including spinning, throwing and weaving, with clarity and ample illustration. The book fails, however, to describe the history of silk technology adequately. A. Beauquis' Histoire économique de la soie (Grenoble: Grands Etablissements de l'Imprimerie Générale, 1910) undertakes this historical description more comprehensively and rather competently. Without sparing too much technical detail, Beauquis traces the various modifications in loom technology throughout the nineteenth century and discusses spinning and throwing technique besides.

Specialized aspects of silk technology are treated in several published and manuscript sources. Two imposing technical treatises, one by a Frenchman, Natalis Rondot, Les soies (Paris: Imprimerie nationale, 1885), 2 volumes, another by a German, Henri Silbermann, Die Seide: Ihre Geschichte, Gewinnung und Verarbeitung (Dresden: Gerhard Kuchtman, 1897), Vol. 2, analyze the biological aspects of sericulture and the physical

and chemical properties of silk fiber. These are among the best sources for information concerning silkworms, their habitats, their feeding, and the different kinds of fiber produced by each. Silk weaving technology is best learned by consulting the texts of professors of weaving theory in Lyons during the nineteenth century, explained and amplified, if possible, by present-day experts of weaving technique. The most accessible collection of such texts is that of the BMTL. Most of these are in manuscript form and are amply illustrated. This study relied on one of the few published texts of the Second Empire, F. Peyot's Cours complet de fabrique pour les étoffes de soie (Lyons: Louis Perrin, 1866) (BMTL, B.31) -- a standard work of the period -- and on one earlier manuscript, F. Bert's "Théorie de la fabrication des étoffes de soie enseignée par F. Bert de Lyon," 1842, BMTL, MSS.. Professor Jean Vial of the Ecole de Tissage de Lyon and also curator at the BMTL generously and patiently explained elementary principles and some finer aspects of silk-weaving technique from his wide-ranging knowledge of present-day weaving technique and of its historical antecedents. (Discussions with Professor Jean Vial, BMTL, April and May 1975)

## 2. The Silk Industry

General histories of the silk industry of nineteenth century are few, and none is both comprehensive (covering the entire period for all aspects of the industry) and analytically sophisticated. Michel Laferrère's section on the industry in Lyons: ville industrielle (Paris: Presses universitaires de France, 1960) is the best. Laferrère surveys the economic history of the industry from 1825 to 1960. His research is thorough, his knowledge of technical detail is refined, and his exposition

is not devoid of some useful analytical insights, although it is mostly descriptive. He traces especially well the evolution of fabric demand and the changes in dyes and dyeing technique in response to new product demands from 1850 to 1875. E. Pariset's old and still authoritative Histoire de la fabrique lyonnaise (Lyon: A. Rey, 1901) suffers from rambling style and lack of precision, but remains a necessary introduction to the subject, if only for the sake of its detailed information. A. Beauquis' Histoire économique de la soie fills some of the gaps in Pariset but unfortunately gives little attention to the economic history of the industry. Two maîtrise theses in the BCHRL are useful for additional general information on the period: Janine Boisson's "Fabrique lyonnaise de soierie: aperçu économique et social (1850-1873)," (unpublished mémoire de maîtrise under the direction of Pierre Leon, Faculté des Lettres et Sciences Humaines, Université de Lyon, June 1955) (BCHRL, Mémoire de maîtrise No. 16) and Yves Lequin's "Aspects économiques des industries lyonnaise de la soie (1870 - 1900)," (unpublished D.E.S. under the direction of Pierre Leon, Faculté des Lettres et Sciences Humaines, Université de Lyon, April 1958) (BCHRL, Mémoire de maîtrise No. 31). Boisson's thesis is best for a description of commercial institutions of the silk industry of the Second Empire and includes some useful commercial statistics. Lequin's much superior study provides ample quantitative detail and is insightful in parts besides. Lequin analyzes the organization and geography of silk manufacture, the evolution of demand, the business cycle in the industry and especially the development of commerce in raw silk and silk thread. He describes the latter very well, especially the rise and fall of Lyons as the center of

this commerce. The late Pierre Leon, professor at the University of Paris and founder of the Centre d'histoire économique et sociale de la région lyonnaise directed both of these theses.

More specialized treatments of the economic history of the silk industry are Louis Gueneau's Lyon et le commerce de la soie (Lyon: L. Bascou, 1923) and Tcheng Tse-Sio's Relations de Lyon avec la Chine (Paris: L. Rodstein, 1937), for the history and institutions of raw-silk and silk-thread commerce; Henriette Vanier's enjoyable and informative little book, La mode et ses métiers: frivolités et luttes des classes, 1830 - 1870 (Paris: Armand Colin, 1960), for the evolution of silk dress and ornament styles in Parisian fashion markets; and M. Coulesque, "La crise américain et la crise de la soierie lyonnaise (1860 - 1864)," Cahiers d'histoire, Vol. IX, No. 3 (1964), 261-278, for a description of the effects of the American Civil War on the Lyons silk industry. A few contemporary publications provide additionally useful information for specialized periods. The fabricant Leon Permezel's Industrie lyonnaise de la soie: son état actuel, son avenir (Lyon: Alf. Louis Perrin, 1883) includes valuable statistical tables and a description of foreign silk industries as well as a discussion of the industry of Lyons in the 1870's and early 1880's. Some mémoires and pamphlets by fabricants in the late 1820's, notably Guérin-Philippon et al., Mémoire présenté à Son Excellence le Ministre du Commerce et des Manufactures par les Fabricans d'étoffes de soie de la ville de Lyon (Lyon: Gabriel Rossary, 1829) (BMTL, C.1557), discuss causes for the crisis of 1829 in the fabrique and propose remedies for it. Most of these pamphlets are available in BMTL, series C.1557, C.1558 and C.1559.

Yves Lequin's thesis, "Le monde ouvrier de la région lyonnaise," Vol. I, traces the migration of the fabrique and of its auxiliary industries (especially throwing and spinning) throughout the région lyonnaise with clarity and authority. P. Cayez will investigate the economic development of Lyons and its region, including the fabrique, more thoroughly in his forthcoming thèse de doctorat. Three fine products of French university scholarship, all of them thèses de doctorat, provide useful and carefully-research detail concerning the dispersion of silk weaving in particular provinces of the région lyonnaise: Pierre Léon's Naissance de la grande industrie en Dauphiné (Paris: Presses universitaires de France, 1954), Vol. II, for the migration of the fabrique to the east of Lyons before 1870; Pierre Barral's Département de l'Isère sous la Troisième République, 1870 - 1940 (Paris: Armand Colin, 1962), for the spread of silk weaving in Isère after 1870; and Gilbert Garrier's Paysans du Beaujolais et du Lyonnais, 1800 - 1870 (Grenoble: Presses universitaires de Grenoble, 1973), 2 volumes, for the migration of the fabrique to the west of Lyons during the nineteenth century. Joseph Jouanny's even more specialized Tissage de la soie dans le Bas-Dauphiné (Grenoble: Allier Père et Fils, 1931) remains a valuable complement to Leon and Barral for studying the development of silk weaving in this sub-region, especially for statistical detail concerning this development. The ruralization of the fabrique of Lyons is discussed more generally but with insight, with quantitative specificity and within a French and European perspective in Maurice Lévy-Leboyer's justly acclaimed Banques européennes et l'industrialisation internationale dans la première moitié du XIXe siècle

(Paris, 1974). Unfortunately, Lévy-Leboyer's penetrating study is confined to the period before 1850.

The rise of competition by foreign silk industries and by other textile manufactures within France is discussed in a variety of specialized literature. Henri Silberman's Die Seide, Vol. I, describes the progression and sources of rising German competition during the second half of the nineteenth century, and Raton C. Rawlley's Economics of the Silk Industry: A Study in Industrial Organization (London: P.S. King and Sons, 1919) suggests possible reasons for the decline of the British industry during the same period. Leon Permezel's Industrie lyonnaise de la soie, mentioned earlier, traces the evolution and current situation of several foreign fabriques with competence but also with apprehension, warning the scholar against possible exaggeration in some of Permezel's conclusions. Claude Fohlen's Industrie textile au temps du Second Empire (Paris: Librairie Plon, 1956) unfortunately ignores silk manufacture but discusses the evolution of French cotton and woolen manufacture and commerce during the Second Empire with erudition.

Construction of tables and graphs of exports of silk cloth, prices and quantities of silk thread inputs, and location, concentration and mechanization of silk weaving required research in a variety of published and unpublished quantitative documents. Regular statistical data concerning growth, quality (cloth type) and destination of exports of French silk fabrics -- the only available indication of growth and quality of output in the fabrique lyonnaise -- were reported annually in Ministère des travaux publics, de l'agriculture et du commerce, Statistique de la France. Commerce extérieur (Paris: Imprimerie royale, 1838), for the

period 1815 - 1836 and in Administration des douanes, Tableau décennal du commerce de la France (Paris: Imprimerie nationale), 2e Partie, for the period 1837 - 1876 in separate volumes for each decade. Since the fabrique lyonnaise relied heavily on its export sector for most of its sales and since most silk exports (under the rubric Commerce spécial) were products of Lyons, these export data are adequate indicators of change in output for the general purposes of this study. The same publications trace the growth of imports of silk fabric from abroad and exports of other French textiles (woolens, cottons, mixed cloths), both of which are important for the analysis of competition by foreign fabriques and by other textiles. More precise specifications of exports (such as specifications of country of destination and not only region) are occasionally found in the annual reports on the fabrique in the Compte-rendus des travaux de la Chambre de Commerce de Lyon, BCCL. These reports provide precise data on raw silk and silk thread prices besides, as well as data concerning the number and type of looms in the fabrique. The value of this source for the study of the industry over a long period, however, is uneven. The publication of the Compte-rendus did not begin until 1864, and earlier reports are available only in the less accessible ACCL. The statistical reports of the Compte-rendus are not equally detailed, moreover, and some reports are not continued from one year to the next.

A more regular data series, often used as a proxy for output in studies of the silk industry, is that of silk thread passing through the Condition des Soies de Lyon -- the drying and weighing station instituted to prevent fraud in silk commerce. The Relevés du mouvement de la 35

Condition publique des Soies et des Laines de Lyon, available in BMTL, include all of these data from 1805, when the Condition was established. The Société d'agriculture, histoire naturelle et arts utiles de Lyon published most of these Condition data after 1870 in its Bulletin. Use of these data as indices of output of silk cloths, however, is hazardous, primarily because of the risk of double counting. From 1842 on, not only thrown silk (ouvré) but also raw silk (grège) passed through the Condition de Lyon.<sup>1</sup> It is impossible to determine how much of this grège passed through the Condition a second time in the form of ouvré, once it had been thrown in Lyon. The Relevés du mouvement de la Condition nevertheless remain a good source for tracing the origins of raw and thrown silk, since these are specified by country, and to some extent for determining the relative proportions of warp (organsins) and weft (trame) thread used in the fabrique besides, since these are also specified. These proportions are useful for tracing the evolution of cloth complexity. The Relevés, finally, have the special merit of completeness for the entire century from 1805 and also the merit of monthly reporting for most of the century.

Statistical data concerning the number and type of looms in the fabrique and their geographical distribution between Lyons and the countryside are to be found in several specialized quantitative sources complementing the tables in Bezucha, Lequin, Lévy-Leboyer and Jouanny.

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<sup>1</sup>Adrien Perret, Monographie de la Condition des Soies de Lyon (Lyon: Pitrat Aîné, 1878), pp. 76-77.

Among these sources, the fiscal recensements in AML for Lyons (1846) and for the Croix-Rousse (1844-1845); the Bureau de la Statistique Générale, Statistique de la France (Deuxième Série: Tome XIX): Industrie. Résultats généraux de l'enquête effectuée dans les années 1861 - 1865 (Nancy, 1873); and ACCL, Soieries Carton 21: Tissage de soieries (statistiques) are especially useful for information concerning number and type of looms in Lyons. The last two sources are also helpful for estimating the number of looms in the countryside of the Lyons region. ACCL, Soieries Carton 21 contains data on the geographical distribution of mechanical looms in factories of the Lyons region. Département de l'Isère, Arrondissement de la-Tour-du-Pin, "Situation industrielle au 31 Décembre 1857," ADI, 136M-17: Statistiques diverses relatives aux Centres industriels du département de l'Isère, 1855 - 1858 differentiates looms by commune and by organizational type (household or factory loom) in the arrondissement of La-Tour-du-Pin (Isère), an important countryside weaving area. Finally, the dossier on industrial conditions in the fabrique during the 1860's in AML, I2 - 47(A) and (B), Situation de l'industrie lyonnaise: ... rapports sur la soierie et les ouvriers en soie ... (1819 à 1870) contains useful statistical summaries of looms, distinguished by cloth type in 1856 and by fabricant in 1866.

### 3. The City of Lyons

The transformation of the city of Lyons under the Second Empire -- its industrialization, population growth and urban renewal -- is described clearly, concisely and accurately in F. Dutacq and A. Latreille's De 1814 à 1940, Vol. 3 of the Histoire de Lyon (Lyon;

Pierre Masson, 1952), edited by A. Kleinclausz. Particular aspects of that transformation are discussed with authority in three works: Michel Laferrère's Lyon: ville industrielle, mentioned earlier, for the industrialization of the city; Joseph Arminjon's Population du département du Rhône: Son évolution depuis le début du XIXe siècle (Lyon: Bosc Frères, M. et L. Riou, 1940), for population growth; and Charlene Marie Leonard's Lyon Transformed: Public Works of the Second Empire, 1853 - 1864 (Berkeley: University of California Press, 1961), for urban renewal. Laferrère describes the transformation of the industrial geography of Lyons, the evolution of technique for silk, chemical and machinery manufacture, and the institutional history of industrial development in Lyons -- the history of patents, of entrepreneurs, and of individual firms (for which he offers several illuminating case studies) -- with erudition, clarity and occasionally penetrating insight. His economic history nevertheless remains descriptive and narrative for the most part, and his economic analysis is rarely very sophisticated. Yves Lequin's discussion of the industrialization of Lyons and its region in Vol. I of his "Monde ouvrier de la région lyonnaise" and the "Situations industrielles" in AML, I2 - 47(B), Situation de l'industrie lyonnaise provide additional detail to supplement Laferrère's description of industrial development in the city.

Joseph Arminjon's population study is a competent analysis of the demographic sources of population growth in the Rhône during the nineteenth and early twentieth century. For the purposes of the present study, Arminjon's analysis was especially useful for distinguishing relative growth rates in 'Old Lyons' ~~from~~ those in 'New Lyons.' Most

of the population data is aggregated by place (department or departmental arrondissement) and by time (five- and ten-year periods). For this reason, this study is useful only as an introduction to the demographic history of the Rhône and of Lyons, and it is a very sketchy one at that. The subject needs more sophisticated treatment with methods of modern historical demography, such as family reconstitution wherever possible. For the general purposes of the present study, however, Arminjon was adequate. His conclusions can be placed best in a national perspective by comparing his growth tables with those of André Armengaud's Population française au XIXe siècle (Paris: Presses universitaires de France, 1971).

Charlene Marie Leonard's study of urban renewal is a thorough and competent description of all forms of public building in Lyons under the Second Empire. Leonard also elucidates well the sources of financing urban renewal and some of the internal conflicts between government and residents or contractors over compensation and bids. Leonard's discussion of the social and economic effects of urban renewal is meager, however. Her discussion of the politics and financing of urban renewal, moreover, is less astute than David Pinkney's discussion of similar matters in the Paris of Baron Haussmann in his Napoleon III and the Rebuilding of Paris (Princeton: Princeton University Press, 1958).

Construction of population series required reference to additional secondary works, notably Table I-7 in Vol. 4 of Lequin's "Monde ouvrier de la région lyonnaise" and population data published by the French government, such as Statistique de la France, Population, 2e Série, 1. Résultats généraux du dénombrement de 1861 comparée aux cinq dénombrements antérieurs (Strasbourg: Imprimerie administrative de Ve

Berger-Levrault, 1864(?)), Vol. XIII and Statistique de la France, Résultats généraux du dénombrement de 1872 (Paris, 1873). The unpublished results of the census of 1866 for Lyons, "1866: Dénombrement de la Population de la Ville de Lyon, 1er à 5e arrondissements," ADR, 5M, includes population data differentiated by arrondissement within the city for 1866 along with occupational distribution of this population for the same year.

#### B. The Society of the Silk Weavers

In the following review of literature concerning social structure and social change are included all sources describing material conditions of labor (such as wages, employment, costs of living); organization of work, economy of the household and social structure of households; distribution of wealth; industrial relations on all levels (master - subordinates; master - fabricant; government and the rest), including labor conflicts and their adjudication; workers' attitudes towards their trade and towards the household economy, their notions of class and their perceptions of the role of government in the economy; and institutions of the fabrique, in particular the Conseil des Prud'hommes. Such are the sources behind most of the present study, especially Chapters I, III - VI and VIII. Most of these sources illuminate several of these questions at once. To facilitate discussion of them and to elucidate their character in a different manner from their use in the text, they will be discussed by type of source rather than by problem or question for which the source was used in this study. The following types of sources will be reviewed: published secondary literature, published primary literature of a (primarily) non-quantitative sort (first, published observations by contemporary

'outsiders' written largely as sociological reports on the fabrique, and second, pamphlets and memoirs by 'insiders' written for polemical purposes), enquêtes and petitions, serial reports by government authorities on industrial and labor conditions, miscellaneous reports concerning the Conseil des Prud'hommes and strikes, and statistical sources. All except the last type include literary and quantitative documents together; the literary documents are most useful for the purposes of the present study. The last source is entirely quantitative, consisting primarily of population and loom censuses.

#### 1. Published Secondary Sources

Secondary literature on social conditions was consulted for both eighteenth and nineteenth centuries. Only literature concerning Lyons will be discussed here. For the Old Regime of the fabrique lyonnaise, Justin Godart's Ouvrier en soie. Monographie du tisseur lyonnais. Première partie: la réglementation du travail, 1466 - 1791 (Lyon: Bernoux et Cumin, 1899) and Maurice Garden's Lyon et les lyonnais au XVIIIe siècle (Paris: les Belles lettres, 1970) together provide a thorough survey and penetrating analysis. Godart focuses on the institutional structure and evolution of the Grande Fabrique under the Old Regime, while Garden analyzes demographic change and behavior, social structure, popular mentality and labor conflicts among the silk weavers. Godart's work is much older, but its minute description of the corporate institutions of the Communauté of the Fabrique, of their evolution since the fifteenth century, of the living conditions and work relations among masters, journeymen and apprentices and especially between masters and merchant-manufacturers is very fine indeed. Although based almost

entirely on règlements of the Communauté and on petitions to its master-guards, Godart's abundant documentation and careful analysis of these sources makes this study valuable both for its clear exposition of a difficult subject and for its citation from primary documents.

Garden's more recent study penetrates deeply and systematically into the demography, social structure, wealth distribution and mentalities behind institutions and formal petitions. Despite the wide scope of the study, concentrating on all classes and all crafts in eighteenth-century Lyons, silk weavers and fabricants are given ample attention throughout the work. Based on the author's thèse de doctorat, Lyon et les lyonnais uses family reconstitution, wills, tax rolls, apprenticeship contracts and abundant literary sources to trace changes in population growth and behavior, social structure, popular attitudes and class relations during the eighteenth century. Garden's discussion of the social evolution and social movements of the Grande Fabrique is perceptive, clear and concise. It is by far the best treatment of the subject.

Two good studies of social conditions in nineteenth-century Lyons, for the period preceding 1852, are products of American scholarship. These are chapters 1 and 2 of Robert Bezucha's Lyon Uprising of 1834 and the first half of Mary Lynn McDougall's doctoral dissertation "After the Insurrections: the Workers' Movement in Lyon, 1834 - 1852" (unpublished Ph.D. dissertation, Department of History, Columbia University, 1974). Both describe the vie intérieure of the fabrique with illuminating detail based on careful research. Bezucha is strongest in describing weavers' mentality and culture underlying their conception of class relations, status and community. Some of his tables and conclusions -- especially his discovery of the formation of silk-weaving

neighborhoods as a source of class consciousness -- were especially valuable for parts of the present study. Bezucha's earlier article, "The 'Preindustrial' Worker Movement: The Canuts of Lyon," in Modern European Social History, ed. Robert J. Bezucha (Lexington, Massachusetts: D.C. Heath, 1972), pp. 93-123, describes vividly the class position of silk weavers in their daily contacts with the fabricants and offers a concise 'statement' of the economic and social situation and mentality of the pre-industrial artisan. McDougall's dissertation explores the living and working conditions of weavers and other workers during the subsequent two decades in many areas of social life. Her well-documented, abundant detail are obviously the product of extensive research. Occasionally the dissertation evinces keen insight, but its main value is descriptive rather than analytical. Laura Sharon Struminger's doctoral dissertation "Les Canutes: Women Workers in the Lyonese Silk Industry, 1835 - 1848" (unpublished Ph.D. dissertation, Department of History, University of Rochester, 1974) illumines a specialized aspect of the social life of the weavers during the same period -- that of female workers in the fabrique.

For the period after 1850, there is no substitute for Yves Lequin's "Monde ouvrier de la région lyonnaise." This work is indeed the product of a master in the field of sociological labor history. The scope is vast (eight departments, many industries and towns discussed individually, for more than a half century, 1848 - 1914), the range of topics imposing (evolution of industry in city, town and country; population growth; occupational structure and geographical distribution of the labor force; occupational and geographical mobility; standards of living; patterns of strikes; political and social movements of voluntary association), the

research meticulous, including as sources both local and national, and public and private archives; and the analysis is sophisticated and intense in parts. The combination of these qualities in a single work of such scope is truly impressive. Although covering such a wide geographical area and workers in all industries in this area, Lequin's work gives much attention to Lyons, its fabrique and its silk weavers. It has the special merit of tracing changes of economy, society and association among the weavers in the context of the 'regionalization' of the silk industry. For the present study, Lequin's thèse served primarily as a source for illustration and quantitative data for the development of some specific arguments. The present study clearly needs to be situated within the context of the larger regional and temporal vision of the workers' movement and its sources as expressed by Lequin. Such a task awaits the publication of Lequin's forthcoming book based upon his thesis, Les ouvriers de la région lyonnaise dans la seconde moitié du XIXe siècle (1848 - 1914).

A useful monograph for the study of wealth distribution during the nineteenth century is Pierre Léon's Géographie de la fortune et structures sociales à Lyon au XIXe siècle (1815 - 1914) (Lyon: Université Lyon II, Centre d'histoire économique et sociale de la région lyonnaise, 1974). Relying primarily on the inventaires après décès, Léon traces the changes in distribution of wealth in Lyons among the different socio-professional 'classes' and in different sections of the city, as well as the changing character of wealth (type of investment, area of investment, and so forth) of residents of Lyons. Léon's study was especially useful in the present work for its statistical tables. Its analysis of these tables is careful

and expert but may need more econometric refinement before its conclusions are firm. The research for Léon's study was the joint effort of the staff of the Centre d'histoire économique et sociale de la région lyonnaise. Through its quarterly Bulletin, its seminars and its collection of thèses de maîtrise, the Centre offers abundant resources for studying the history of economic and social conditions and change in Lyons and its region.

## 2. Published Primary Literature (Non-Quantitative)

### a. Contemporary Sociological Observation

The voluminous studies of French workers by contemporary social observers during the nineteenth century, especially under the Second Empire, still form some of the most valuable sources for investigating the living and working conditions and mentalities of workers. Despite the class or party biases and 'moralizing' tone of many of these studies, they contain a wealth of reliable information derived from personal observation of workers in their daily habitats and from interviews with them, with their employers and with other individuals (such as clergy or police) close to them in their daily lives. Sometimes the perception of these observers is very keen. Georges Duveau relied heavily on this source in his monumental Vie ouvrière en France sous le Second Empire (Paris: Gallimard, 1946) to great advantage. Four such observers who examined the fabrique of Lyons first-hand during the Second Empire and earlier informed the social analyses of the present study. These were Louis-René Villermé, Tableau de l'état physique et moral des ouvriers employés dans les manufactures de coton, de laine et de soie (Paris: J. Renouard, 1840), especially Vol. 1; A. Audiganne, "Du mouvement intellectuel parmi les populations ouvrières -- Les ouvriers de Lyon en

1852," Revue des deux mondes, 22ème année -- nouvelle période, XV (August 1, 1852), pp. 508-545; Louis Reybaud, Etudes sur le régime des manufactures. Condition des ouvriers en soie (Paris, 1859); and Jules Simon, L'ouvrière (Paris: L. Hachette, 1861) and "L'apprentissage," Le Progrès (Lyon), February 13, 1865. Of these, Villermé and Reybaud produced the most extensive studies for their respective periods -- Villermé for the 1830's and Reybaud for the 1850's. Audiganne's report is shorter but exceptionally keen in perception of weavers' character and attitudes. Simon's study of female labor is more limited, somewhat general and of questionable reliability in parts. His article on apprenticeship is shorter but more illuminating, better informed and more precise.

Villermé examined primarily social and economic conditions rather than opinions. His description of weavers' budgets, wealth, economic crises and standards of living is useful. Villermé is sensitive to distinctions in some of these matters between plain and fancy cloth masters and between masters and journeymen. His portrait of the household economy aided in the reconstruction of the 'internal order' of the fabrique in Chapter I. The two letters from the master-weavers Charnier and Falconnet to John Bowring, published in Bowring's testimony to the Select Committee on the Silk Trade, June 18, 1832, in Great Britain, House of Commons, Report from Select Committee on the Silk Trade With the Minutes of Evidence, an Appendix and Index, ordered by the House of Commons to be printed 2 August 1832 (London, 1832), pp. 556-557, were also enlightening for this purpose.

Villermé's investigation was remarkably 'objective' for his period. Later studies, such as those by Audiganne, Reybaud and Simon, were overtly biased or opinionated in their evaluation of situations and events and in

their propositions for reform. Audiganne and Reybaud were more interested in weavers' attitudes than Villermé, and both evaluated such attitudes from the 'stance' of social conservatism; that is, as defenders of the established social order and class hierarchy but paternally solicitous for the weavers' welfare. Of these two, Audiganne was the more astute reader of weavers' mentality. Reybaud, however, provides some revealing examples of behavior and attitudes and some illuminating excerpts from interviews with weavers. Both Audiganne and Reybaud give ample attention to the household relations between masters and their subordinates and to class relations between masters and merchant-manufacturers. Both offer useful insights on the character and behavior of journeymen weavers and fabricants. Reybaud has scattered but helpful detail concerning wealth, effects of economic crises and charitable institutions. He describes vividly the factory dormitories of Bonnet at Jujurieux and of Martin at Tarare. Neither observes economic organization or conditions very well, however. Both ignore, for example, the important differences between situations of plain-cloth weavers and fancy-cloth weavers in matters such as distribution of wealth or attitudes towards work.

Jules Simon is the least satisfying of these four contemporary observers, except in his article on apprenticeship. His observation in many instances appears 'second-hand'; he relies often, it seems, on previous studies by Audiganne and Reybaud for most of his information and for justifying his own interpretations. His style and intent are also more polemical, although his enthusiasm for Gewerbefreiheit and the free market is tempered somewhat by his recognition of the virtues of industrial paternalism for saving the workers from the worst effects of mechanization and re-organization of industry in factories. Simon's special attention

to female labor -- to its role in silk manufacture, to its conditions of work and living, and to the behavior and attitudes of female silk workers -- nevertheless gives L'ouvrière a special utility for the period. Moreover, Simon's occasionally scintillating style portrays the female silk worker in a manner probably not too distant from 'reality.' His article on apprenticeship -- more precise, concrete and detailed -- 'fleshes out' the situation of females in the fabrique even more by focusing on apprenties dévideuses and tisseuses.

#### b. Pamphlets and Memoirs

Pamphlets and memoirs written by weavers or by local publicists familiar with their situation are another valuable source of information concerning conditions and social attitudes in the fabrique. Most of the pamphlets were written during periods of social or political activism and during periods of economic crisis. Consequently, they often have a strong polemical or argumentative tone. Despite their possible biases, in particular their possible tendency to exaggerate grievances in order to justify demands for change, they represent weavers' opinion, often in their own words, and provide useful information besides on a variety of social issues. They are, in effect, among the best expressions of weavers' mentality.

Most of this pamphlet literature was published around the time of the Second Republic. Pamphlets proposed solutions to the 'social question' or to the industrial 'chaos' of the fabrique, giving reasons to justify these remedies. They were motivated either by reformist ideology among the weavers of this period or by the Parliamentary Enquiry Concerning Industry and Agriculture. The latter provided a forum for the statement

of traditional grievances and of propositions to resolve these grievances. One of these 'responses' to the Enquiry, La vérité au sujet du malaise de la fabrique des étoffes de soie à Lyon. Moyens d'y remédier. Mémoire pour servir à l'enquête (Lyon: J.-M. Bajot, 1849) (BMTL, C.1559) by Vernay, master-weaver, proposes a traditional remedy to the current 'disorder' and 'demoralization' of the fabrique. Vernay calls for a restoration of regulations in the fabrique and rejects association as a solution to the social question. His statement reflects superbly, in effect, the 'mind' of the traditional master-weaver. More favorable to association but also hostile to unlimited competition are Xavier Pailley's Système de réforme industrielle ou projet d'association entre tous les citoyens qui concourent au commerce et à la fabrication des articles de soieries (Lyon: Chanoine, 1848) (BMTL, C.1558) and Philippe Thierrat's Du malaise de la classe ouvrière et de l'institution des prud'hommes appliquée à l'augmentation du travail dans la fabrique lyonnaise (Lyon: J. Nigon, 1848) (BMTL, C.1559). The publicist Kauffmann's De la fabrique lyonnaise (Lyon: Midan, 1846), written a few years earlier, is especially useful for attitudes relating household, craft pride and competitiveness of the Lyons fabrique with foreign manufactures. Kauffmann obviously knew the fabrique quite well, but it is difficult to tell how much of the attitude he describes was that of the weavers themselves and how much was simply that of sympathetic bourgeois observers like Kauffmann himself. (My guess is that his attitude in these matters was not very distant from the attitudes of the weavers themselves.)

One of the most valuable pamphlets for the present study was Pierre Dronier's Essai sur la décadence actuelle de la fabrique lyonnaise (Lyon: Nigon, 1860) (BMTL, C.1559). Dronier was a journeyman weaver, probably

a weaver of fancy silks. His description of the conditions and habits of journeymen, of the state of industry in 1860 and of the functions and status of the master-weaver reflects attitudes of the journeyman weaver at the entry into the crisis of the 1860's. The pamphlet is especially valuable for this rare view of the mind of a journeyman. Another useful pamphlet for an earlier period -- one of the hundreds that appeared then -- was written by a master weaver: J.A.B., chef d'atelier, De la nécessité d'une augmentation des prix de fabrication des étoffes, comme moyen d'assurer la prospérité du commerce (Lyon: Imprimerie de Charvin, 1832) (BMTL, C.1559).

Joseph Benoît's well-known memoir, Confessions d'un prolétaire (Lyon, 1871), ed. Maurice Moissonnier (Paris: Editions sociales, 1968), is even more replete with testimony concerning weavers' mentality -- that of the author, a master-weaver propelled into national politics in 1848, and that of the weavers he 'radicalized' and organized into clandestine associations in Lyons. Benoît is also useful for some interesting details concerning the social conditions of the fabrique lyonnaise during the 1830's, when most of his political activity was concentrated in Lyons.

### 3. Enquêtes and Petitions

Two of the most important nineteenth-century inquiries (enquêtes) concerning social and economic conditions in France -- that of 1848, concerning the situation of industry and agriculture, and that of 1872, concerning conditions of labor -- 'bracketed,' so to speak, the Second Empire, the period of focus of the present study. Unfortunately, most of the returns for the 1848 inquiry for Lyons were lost. Occasionally,

however, it is possible to find valuable sous-enquêtes (my term) serving as sources for responses to the more general questions of the national survey. With good fortune, I discovered one such sous-enquête focusing on the conditions of the silk weavers in Lyons. The document is located in the AN series on technology, AN, F12 - 2203(2): Machines à tisser (1844 à 1866), and includes several mémoires by master-weavers. The master-weaver Weichmann assembled these "Mémoires recueillis par le citoyen Weichmann, chef d'atelier, rue du sentier, no. 8 à la Croix-Rousse," April 2, 1850, and summarized their major conclusions and grievances. Despite the stilted language and bad spelling of these mémoires, they provide accurate, detailed information concerning all aspects of the weavers' shop management. Some of this is quantitative data of the most illuminating sort; namely, shop accounts of several different masters in Lyons for several years before 1850. The document is also a fine source for weavers' mentality. It iterates in passionate tones the grievances of masters, in the words of one of their number, concerning apprenticeship, free enterprise, wastes of silk thread and class relations in their trade.

The returns from the enquête of 1872 are preserved in their entirety for the department of the Rhône in AN, C 3021, Enquête sur les Conditions du Travail en France (1872 à 1875), Région du Sud-Est (Rhône). For the present study, this enquête was especially valuable for focusing on weavers' living and working conditions, and not only on industry and agriculture in general. The inquiry has specific questions in each of three areas -- material and economic situation (A), wages and worker-employer relations (B), and moral and intellectual situation (C). Responses to these questions are usually as specific as the questions themselves. Sometimes

responses for the fabrique volunteer additional information, explaining the presumed 'peculiarities' of the silk industry of Lyons as compared with other French industries. These additional comments abound in the 'Observations' following each set of questions A,B, and C. All responses for the fabrique are 'bourgeois.' None (apparently) were given by weavers themselves. This has obvious disadvantages for the investigator of conditions of labor at the time. But at least some of the 'bourgeois' who responded were intimately familiar with the fabrique. Among these were two prominent fabricants (Faye and Thevenin), the Chamber of Commerce, and the Chambre syndicale des soieries -- the professional association of fabricants. For understanding the organization of the industry and the vie intérieure of the putting-out enterprise -- including the relationship of fabricant with the weavers in his enterprise -- these responses are especially useful.

Both enquêtes -- that of 1848 and that of 1872 -- have been preserved in their entirety for the department of Isère. The ADI contains all responses to the enquête of 1848 in ADI, 162.M. Organisation du travail, 1.-2., and some of the response to the enquête of 1872 in ADI, 162.M. Organisation du travail, 3.. The AN has none of the former but all of the latter responses in AN, C 3021, Région du Sud-Est (Isère). Both enquêtes are useful for tracing the economic and social development of countryside weaving, including the establishment of factory-dormitories and the social services offered by the latter. The enquête of 1872 is especially valuable for this purpose, since fabricants operating such factories in Isère, such as Montessuy-Chomer of Renage and Perrigaux of Bourgoin, responded individually to the enquête, and these individual reports are preserved

in the archives. These reports elaborate in detail the 'paternal' expenditures of fabricants on their factory workers. Their perspective is obviously 'bourgeois,' so that in these reports, as in those for Lyons, the views of weavers themselves are under-represented.

The Second Empire was a time of much petitioning by the workers to the Emperor and to his administrators. The latter advertised their concern for the working classes, and the workers often 'tested' this concern by bringing their traditional grievances to the government for satisfaction 'from above.' In Lyons, the silk weavers hastened to present such demands for a new industrial court, for stronger regulation of industry, for control of unruly subordinates and for a mercuriale of piece-rates in 1852 and 1853, soon after the proclamation of Empire. Most of these early petitions are located in manuscript form, with responses by local police and other officials, in AML, F2 - Fabrique de soies - Règlement - Tarif - Affaires diverses (1810 à 1874). These were largely petitions by individuals or by small groups of master-weavers. In 1860, on the occasion of a visit by the Emperor to Lyons, the silk weavers petitioned on a larger scale and in more organized fashion. About 550 weavers signed the statement of grievances, and the master-weaver prud'hommes presented the petition to the Emperor. Unlike the petitions of 1852-1853, which focused each on one or two grievances, that of 1860 combined several different grievances and underlined their common origin in a lack of rules in the fabrique or in a failure to enforce existing rules. The petition provoked an extensive, unfavorable response by a commission composed largely of silk merchants and fabricants of the Chamber of Commerce. The petition and the response to it are preserved in ACCL, Soieries

Carton 41 - I - Législation - Usages (an 8 à 1936), 13. - Pétition remise à l'Empereur, à son passage à Lyon, par les ouvriers en soie. One of the major grievances concerned the measuring of silk cloth to determine the earnings for each piece. It was the subject of continued petitioning to the prefect of the Rhône by individuals, by small, independent groups of weavers and by weaver prud'hommes throughout the 1860's. These and other earlier petitions concerning métrage are available in ACCL, Soieries Carton 22 - II - Mesurage des soieries (an 13 à 1899), along with responses to each request by the prefect, by the Chamber of Commerce or by the Conseil des Prud'hommes.

In October 1866, the silk weavers made their most dramatic statement of demands to the prefect by threatening to demonstrate en masse and then agreeing to present their demands through their delegates. A description of these demands, of the events surrounding the petition, and the response of government and public opinion to the demands and events are found in several sources, the most important of which are the articles in Le Progrès (Lyon), October-November 1866, on the petition; the dossier "Ouvriers de Lyon" in AN, Fic III Rhône 10, Correspondance et divers (1816 à 1870), especially valuable for the rationale behind the government's 'gesture of benevolence' to the weavers' producers' cooperative, in response to their demands; and the dossier concerning the threatened demonstration of October 1866 in AML, I2 - 47(B), Corporations: ouvriers en soie (1819 à 1870), especially pieces 877 and 878, for the weavers' attitudes towards government intervention in the economy, as expressed in their demands.

#### 4. Serial Reports Concerning Industry and Working Conditions

Of a very different nature and use than enquêtes and petitions are the reports concerning the situation of industry and the conditions of labor by the Prefect of the Rhône to the Minister of the Interior, by the Special Police Commissioner to the Prefect of the Rhône, and by police agents to the Commissioner. Each of these reports was compiled from the one following, in succession. Two of these, the reports of the Special Police Commissioner and the notes of the police agents from which these notes were written, are described and 'evaluated' in Appendix IV. They are the best sources for industrial and working conditions for the period 1859 - 1870. Both are located in AML, I2 - 47 (B), Situation de l'industrie lyonnaise: ... rapports sur la soierie et les ouvriers en soie ... (1819 à 1870).

For the 1850's, the more general reports by the Prefect of the Rhône to the Minister of the Interior are alone available in the archives. These (usually) bi-monthly reports on the political, economic and moral situation of the department are located in AN, Fic III Rhône 5, Compte-rendus administratifs (An III à 1870). These reports are especially enlightening for the role of the government in the economy and for the political rationale motivating government intervention. After 1860 the extant reports are fewer and generally less useful than the police reports in AML, I2 - 47(B) for tracing the conditions of industry. They continue to reveal, however, the attitudes of government towards the cooperative movement, which evolve with the realization that cooperation served as a strong antidote for political activism among the workers. The prefect's reports need to be supplemented with dossiers on specific

issues and events in AN, Fic III Rhône 10, Correspondance et divers (1816 à 1870), for elaboration of these attitudes.

##### 5. Miscellaneous Sources

Certain archival sources concerning the Conseil des Prud'hommes and strikes contain useful quantitative data and literary observation on social conditions among the weavers. Most useful are the annual reports of the president of the Conseil des Prud'hommes de Lyon concerning hearings of the Council and the general situation of the fabrique. These reports are located in ADR, U - Prud'hommes de Lyon, Correspondance relative aux elections (1806 à 1870). Reports of the years 1854, 1856, 1858, and 1866 include both quantitative data concerning number and type of cases presented to the Council and analyses of reasons for recurrent conflicts. These analyses clarify the nature of relations within the household, between master-weavers and subordinate workers, and outside, between masters and merchant-manufacturers. In AML, F - Prud'hommes - Elections (1806 à 1871), there are several useful decrees, reports and posters concerning the institution of the Council itself, including elections to it. The Usages du Conseil des Prud'hommes de la ville de Lyon pour les industries de la soierie (Lyon: L. A. Bonnaviat, 1872) (BMTL, C.1558) and the "Extrait des Minutes de la Secretaire d'Etat, au Palais de St. Cloud le 3 juillet 1806 ... Conseil des Prud'hommes," AML, F2 - Fabrique de soies - Règlement - Tarif - Affaires diverses (1810 à 1874) (brought to my attention by Monsieur Berthelon) together provide the best information on the legal structure and precedents governing the industrial relations in the fabrique and used as a

basis for adjudication by the Council during the nineteenth century.

Dossiers concerning strikes among weavers of Lyons in AML, I2 - 47(B), Corporations: ouvriers en soie (1819 à 1870) and I2 - 48, Délits de coalition ouvrière et grèves. Grèves hors Lyon (1803 à 1870), and among weavers of Isère in ADI, 166M - 1, Grèves (1858 à 1877), occasionally contain information on social conditions, wages, employment, or apprenticeship. ADI, 166M - 1, for example, has useful information on the organization of industry in the countryside -- in particular, the distribution of manufacturing tasks between factory and domestic labor in this area.

#### 6. Statistical Sources

Most of the quantitative sources for analyses of social structure of households and for distribution of looms and workers by neighborhood are fiscal, population and loom censuses. The household samples described in Appendix V were taken from censuses in register (that is, household listing) form. These were the fiscal census of the Croix-Rousse in 1847, in AML, Recensement, Croix-Rousse, 1847; the population census of the Croix-Rousse in 1851, in ADR, 6M - Dénombrement, Croix-Rousse, volumes 23 and 24; and the population census of the Fourth Arrondissement in 1866, in ADR, 6M - Dénombrement, 1866, Lyon, 4ème arrondissement, volumes 16 and 17. Data used integrally, rather than sampled, were taken from census summaries. For the Croix-Rousse in 1833, 1842, and 1844-1845, and for Lyon in 1846, these summaries are located in the back of the household registers of the Recensements in AML. The summary of the census of 1866 of Lyons is located in ADR, 5M, "1866:

Dénombrement de la population de la ville de Lyon, 1er à 5e arrondissements." All of these censuses and census summaries except the summary of 1866 provide information concerning number, type, and activity of looms.

Other sources for information concerning workers and looms in the fabrique are AML, F2 - Fabrique de soieries -- Inventeurs - Statistiques, 1811 - 1854; ACCL, Soieries Carton 21, Tissage de soieries (statistiques), Statistique des métiers de tissage avant 1900 - divers; and M. Robin, "Situation de Fabrique," June 1, 1866, presented to the Chamber of Commerce of Lyons in June 1870, in Compte-rendu des travaux de la Chambre de Commerce de Lyon, années 1869, 1870, 1871, p. 101. The first two liasses include abundant loom and worker data for 1820 - 1829. The data for 1825 in ACCL and for 1829 in AML are specified by quarter of the city, and the former includes data on the few rural looms of the fabrique lyonnaise as well. Robin's data distinguish workers and looms by neighborhood as well but, unlike the AML and ACCL data, make no distinctions of loom type. For this reason, the membership list of the Société civile des tisseurs, July 5, 1873, in ADR, 10M-2, Associations des tisseurs had to be consulted for constructing some tables. (See Appendix III.)

A final document, needed for constructing indices of food costs in Chapter III, was the mercuriale of bread, meat, potato and coal prices on the market of Lyons. Monthly averages of these prices are readily accessible in AN, F11\* - 2848 à 2849, for 1825 - 1836, and in F11\* - 2850 à 2857, for 1860 - 1878. For 1837 - 1859, only the bi-weekly reports in monthly registers are available in AN, F11 - 1924\* à 2187\*. The use and limitations of this source are

discussed in Appendix II.

## II. Sources Concerning Movements of Association

### a. General

The general literature on movements of voluntary association in France and in Lyons in particular is sparse and of uneven quality. The older labor histories, such as Edouard Dolléans, Histoire du mouvement ouvrier (Paris: A. Colin, 1936-1939), 3 volumes, Jean Jaurès, gen. ed., Histoire socialiste (1789 - 1900) (Paris: J. Rouff, 1907), Vol. 10: Le second empire (1852 - 1870) by Albert Thomas, and E. Levasseur, Histoire des classes ouvrières et de l'industrie en France de 1789 à 1870 (Paris: A. Rousseau, 1903-1904), 2 volumes, usually discussed these movements in general terms for France as a whole. In most cases, this meant focusing on the labor movement in Paris. All except Levasseur were institutional histories written in narrative form. The few studies of movements of association in Lyons from 1830 to 1870 (or later) are fortunately based on extensive research in local archives, and some of these extend beyond institutional history to the history of social change and popular culture besides.

Fernand Rude's Insurrection lyonnaise de novembre 1831: Le mouvement ouvrier à Lyon de 1827 - 1832 (Paris: Editions Anthropos, 1969) and Robert J. Bezucha's Lyon Uprising of 1834 together offer an excellent introduction to the movement of workers' association during the early July monarchy. Both are ambitiously researched and thoroughly documented. Rude's history is older and narrative in form. It abounds in illuminating detail and extensive quotation, and therefore serves as a compendium of source material as well as a story of events

leading to and following the November insurrection of 1831. Bezucha's discussion of the workers' movement in Lyons from November 1831 to 1834 is more analytical. Bezucha's sense of the political dynamics of that movement is superb. He traces carefully and with interesting anecdote the separate development of a silk-weavers' movement of association for industrial resistance and of a Republican political movement in Lyons. He explains how the government's misguided search for a social policy in the interests of the industrialists provoked a convergence of these two separate movements into common protest and then rebellion against the law on associations. Bezucha describes the social and economic background to the workers' movement clearly and informatively but does not relate this background very rigorously or 'deeply' to the movement or to its ideology. The only exception is his perceptive identification of settlement among the masters and of neighborhood 'polarization' among the weavers in general as sources of class consciousness and class solidarity dominated by the master-weavers. Bezucha also fails to give much attention to that 'silent' source of all workers' association (the paradigm of association among them, one might say) in this period -- the mutual aid society. Rude is also less than adequate in this respect, but he recognizes, at least, the importance of mutual aid as a forerunner of mutuellisme and expresses that recognition by describing some mutual aid societies in detail.

For the period 1834 - 1852, Mary Lynn McDougall's dissertation, "After the Insurrections: the Workers' Movement in Lyon, 1834 - 1852," is the best survey. McDougall discusses nearly all aspects of that movement thoroughly and intelligently, including cooperation, strikes,

secret societies, political clubs, workers' press, and utopian socialism. She too fails, however, to relate this movement to the social and economic change discussed in the first half of her thesis in any rigorous fashion. She also fails to discuss mutual aid at least to the extent of its importance in the workers' movement of this period.

For the period after 1848, the best survey is Yves Lequin's "Monde ouvrier de la région lyonnaise," Vol. 4. Lequin's discussion of the workers' movement in a separate volume from the first two concerning economic and social change might suggest the same failure to relate the latter to the former in a rigorous fashion. To some extent, this problem remains 'untackled' even in Lequin's work, since the relationship is not explored systematically. But the careful reader will discover in Lequin a vision of the whole process of the workers' movement that corresponds to the process of economic and social change as described in the first two volumes. This vision captures subtly and with insight the flux of 'solidarities' underlying the workers' movement in the Lyons region -- solidarities that shift among industrial, sub-regional or urban, and class identities. There is a sense of striving among the workers to achieve unity on the basis of one of these -- class -- but which always fails. This failure suggests that the dissemination of industry throughout the région lyonnaise acted as a force for decentralization in social movements by providing local 'orbits' of class formation and class consciousness within which relatively independent workers' movements could thrive. Lequin's opus merits close and frequent readings to penetrate and to elucidate such perspectives on the workers' movements. Lequin's third

volume also is a mine of information concerning all aspects and 'phases' of the workers' movement in the Lyons region, from compagnonnage and mutual aid to organized party politics.

In 1899 the Labor Office of the Ministry of Commerce and Industry began publishing an extremely useful survey of workers' associations in France during the nineteenth century. The *Republique Francaise, Ministère du Commerce, de l'Industrie, des Postes et de Telegraphes, Office du Travail, Les associations professionnelles ouvrières* (Paris: Imprimerie Nationale, 1899 - 1904) discusses major forms, periods, regions and industries of workers' association with illuminating detail. Sometimes the information is incomplete or (less frequently) inaccurate, but much of the information is not available elsewhere and therefore useful. The section "Tisseurs de Lyon" in Vol. 2, pp. 241-340 is replete with valuable detail, especially for the period after 1860, and generally reliable. The authors of this survey profited from memories of living participants and probably also from private archives of existing workers' associations in gathering this information -- two sources which are lost or unknown to us today.

#### B. Period Movements

This study has referred to three periods of militant association among the weavers of Lyons in its discussion of workers' ideology and organization. These were the early 1830's (1831 - 1834), the Second Republic and its preceding three years (1845 - 1851), and the Second Empire (1852 - 1870), on which this study has focused. Movements of association are treated separately for each of these periods in the

available literature. Some of this literature has been discussed, but a few additional works need to be mentioned.

For the 1830's, the books by Rude and Bezucha should be supplemented by their articles on the same period. Fernand Rude's "Insurrection ouvrière de Lyon en 1831 et le rôle de Pierre Charnier," Révolution de 1848, 35, No. 164 (March 1938) is enlightening on the personal background and beliefs of Pierre Charnier, founder of mutuellisme in Lyons. Robert J. Bezucha's "Aspects du conflit des classes à Lyon, 1831 - 1834," Le Mouvement Social, No. 76 (July - September 1971), 5-24, destroys the old conservative argument that the insurrection of 1834 was the result of a Republican plot among the weavers. Bezucha thus preserves the autonomy of the weavers' movement during this period. Rude and Bezucha both relied on three sources primarily in their articles and books, and these three are in fact the most important documents for studying weavers' ideology and association during the early 1830's. These were the Documents Gasparin in AML, the dossier Mutuellisme in AN, CC 558: Cour des Pairs: Evénements d'avril 1834, Lyon, and L'echo de la fabrique, the 'house organ' of the Society of Mutual Duty, preserved in its entirety in BML, Journaux 5707.

For the period 1845 - 1852, Mary Lynn McDougall's dissertation, already discussed, is the best survey. McDougall examines the Revolution of 1848 in Lyons quite thoroughly in this survey from the workers' perspective. A closer look at the Revolution as a whole during its first six months is Francois Dutacq's erudite Histoire politique de Lyon pendant la Revolution de 1848 (Paris: Edouard Cornely, 1910). Dutacq analyzes quite well the

role of different political forces and groups in first making and then 'undoing' the Revolution of February. Dutacq gives fair attention to workers' clubs in this political process, especially to the Voraces in the silk-weavers' quarters. For closer examination of workers' associations in this period and later in the Second Republic, however, Dutacq must be supplemented by McDougall, to be sure, and especially by one of her sources, A. Gilardin, Procureur Général, to M. le Garde des Sceaux, "Rapport sur les associations ayant un caractère politique à Lyon. Vues législatives sur la matière," January 23, 1850, AN, BB18 - 1474(B): Clubs et associations: Cours de Lyon. Christopher Johnson's very fine Utopian Communism in France: Cabet and the Icarians, 1839 - 1851 (Ithaca: Cornell University Press, 1974), finally, is well-informed on the silk weavers of Lyons, among whom Cabet won many converts during the 1840's. Johnson's book offers keen insight into important dimensions of the 'social meaning' of utopian association among the silk weavers during this pre-Republican period.

The 'social movement' of voluntary association under the Second Empire in Lyons is the subject of Sreten Maritch's Histoire du mouvement social sous le Second Empire à Lyon (Paris: Rousseau, 1930). This first survey of the (entire) workers' movement has only recently been superseded by Yves Lequin's "Monde ouvrier de la région lyonnaise." Lequin's treatment is by far the more satisfactory in all respects, although Maritch is still worth consulting for details concerning workers' participation in political affairs. Jacques Rougerie questioned Maritch's interpretation of the International Workingman's Association in Lyons and proposed an alternative

view in "La première Internationale à Lyon (1865 - 1870)," Problèmes d'histoire du mouvement ouvrier français (Annali dell' Istituto Giangiacomo Feltrinelli, 1961), pp. 126-193. Rougerie's well-argued interpretation restores cooperation to the ideology of the militants of the Lyons International and thus undermines Maritch's effort to denigrate the cooperative movement in favor of the International. Maurice Moissonnier took account of this re-interpretation and other recent work on the late Empire in Lyons in writing his history of the First International in Lyons, including its role in the Commune of Lyons. Moissonnier's Première internationale et la commune à Lyon (Paris: Editions sociales, 1972) still offers a Marxist interpretation of political events of the late Empire, early Republic in Lyons but one that is more refined than that of Maritch. Moissonnier's own experience of political organization as a Communist militant make him more aware of the complexities of interaction between mass movements and party leadership. This awareness enables him to understand the reasons for the failure of the Bakuninist International in September 1870. Although his social analysis is rather weak (as compared with his political analysis), his book is the best on the subject, based on careful and extensive archival research. Louis M. Greenberg's Sisters of Liberty: Marseilles, Lyon, Paris and the reaction to a centralized state, 1868 - 1871 (Cambridge, Massachusetts: Harvard University Press, 1971), finally, describes the political and ideological evolution of the Commune of Lyons in a national perspective. Greenberg is a necessary supplement to Moissonnier for understanding the political evolution of the Commune as a whole. It is well done, and its argument that the Commune was a 'decentralist'

reaction to the centralized state as such merits consideration.

### C. Movement Types

Many books, articles and archives focus on one type of workers' movement only. These formed the most useful sources for the research of the present study. Sources for four of these types will be discussed here: mutual aid, cooperation and clubs, industrial resistance and the International - political movement.

#### 1. Mutual Aid

The best published introduction to the history of mutual aid societies in Lyons is J.-C. Paul Rougier's Associations ouvrières. Etude sur leur passé, leur présent, leurs conditions de progrès (Paris and Lyon, 1864). Rougier describes best the operation of these societies under the Second Empire and the nature of the government's policy of 'approval.' His assessment of attitudes of silk-worker members of the Silk Workers' Society for Mutual Aid towards this Society, as compared with attitudes of members of the smaller societies towards their associations, is instructive and probably accurate. Rougier describes the first as distant, formal and 'contractual' and the second as intimate, affective and 'fraternal.' Emile Laurent's Pauperisme et les associations de prévoyance (Paris, 1865) is a necessary supplement to Rougier for situating the mutual aid movement in Lyons in a national perspective.

The most important sources for the history of mutual aid in Lyons are archival. The series ADR, 5X - 1954 - Sociétés de secours mutuels contains most of these sources. This series includes separate liasses for individual societies, with statutes, membership lists,

financial accounts, petitions by individuals to the prefect, reports on meetings and so forth. These liasses were the product of police surveillance before 1852 and of surveillance along with administration of 'approved' societies after 1852. Documents for the latter period are therefore most voluminous. Statutes for some societies which are missing from the ADR liasses can be found in AML (Bibliothèque). Membership lists for a few societies of silk weavers, which are also not available in ADR, can be found in ACCL, Petites sociétés de secours mutuels, Carton 4, Subventions accordées, Demandes de subventions, for the period 1867 - 1876. These societies submitted these lists to the Chamber of Commerce to justify requests for subsidies on the same basis as those granted to the Silk Workers' Society; namely, the large proportion of silk workers in each society. Of course, the ACCL includes many more documents on the Silk Workers' Society, which the Chamber sponsored and funded, than on the small weavers' societies. ACCL, Société de Secours Mutuels et Caisse de Retraites des Ouvriers en Soie de la Ville de Lyon, Cartons 1 and 2, contain statutes of the Society, lists of administrators, one list of members, copies of some deliberations of the Society and of the Chamber of Commerce concerning its establishment, and various other documents besides. Carton 7 of this same series includes many useful statistical tables concerning the mutual aid movement in Lyons as a whole, including number of 'approved' societies, membership size and financial resources of each. In AML (Bibliothèque), 702.068, there is a small collection of published annual reports of the Silk Workers' Society. These are especially useful sources of 'ideology' fostered by the leaders of the Society. Each report publishes the president's annual address to the

members, in which 'moral' themes are especially prominent.

## 2. Cooperation and Educational - Recreational - Professional

### Clubs

Jean Gaumont's monumental Histoire générale de la coopération en France (Paris: Fédération nationale des coopératives de consommation, 1923-1924), 2 volumes, is the best introduction to the cooperative movement in Lyons. This work examines the ideologies, institutions, personalities and political tendencies of the cooperative movement in several different regions of France throughout the nineteenth century. Volume 1 includes the history of cooperation in Lyons from 1830 - 1870 and focuses on the role of the silk weavers in the movement there. Gaumont is more favorable to 'utopian' cooperation of the 1830's and 1840's in Lyons than to 'positive' cooperation of the 1860's. According to Gaumont -- a cooperative activist himself -- the latter movement betrayed the grand vision and mass appeal of Rochdale and Fourierist cooperation by accepting government aid and by giving more attention to simple material needs and profits than to the transformation of economic and social relations. Despite his reservations about the movement of the Second Empire, Gaumont is fair and thorough in his treatment. His book is valuable both for its detailed information and for its identification of cooperative movements in each period with particular ideological trends, such as Fourierism, Saint-Simonism, and liberalism. Gaumont's shorter Mouvement ouvrier d'association et de coopération à Lyon (Lyon: Avenir régional, n.d.) summarizes the history of cooperation in Lyon without sacrificing pertinent detail. It is the best brief

introduction to the subject.

One of Gaumont's sources was Eugène Flotard's Mouvement coopératif à Lyon et dans le Midi de la France (Paris, 1867). Although rather disorganized, rambling and biased towards liberalism, this little book has some useful information concerning finances, membership and history of individual cooperative societies in the Lyons region as well as a transcript of the inquiry concerning cooperative societies by the Imperial government, on January 12, 1866, with testimony by some prominent cooperators of Lyons, including Jean Monet, a master silk weaver. Flotard's own expressions of cooperative aims and his perceptions of tendencies in the cooperative movement are valuable statements of cooperative 'ideology' by one of the movement's foremost advocates, very influential among the workers of Lyons besides. Le mouvement coopératif is, in effect, a valuable primary document as well as a survey of the local movement to date.

Flotard wrote his book largely from notes he wrote weekly for Le Progrès (Lyon), the "Bulletins coopératifs," from 1865 to 1869. These "Bulletins" provide, by far, the best regular reporting on the the movement during this period. Through them and through occasional publication of 'position papers' by cooperative activists, Le Progrès served as a cooperative press. The "Bulletins" and 'position papers' are useful not only for detailed information concerning meetings, finances, and activities of individual societies but also for statements of cooperative aims and ambitions by the activists themselves. Cooperative 'ideology' of this sort is also found in abundance in the reports by the Lyons workers' delegates to the universal exposition of 1862 (London), in Commission ouvrière, Rapports des

délégués lyonnais envoyés à l'Exposition universelle de Londres  
 (Lyon: Commission ouvrière, 1862), and to the exposition of 1867  
 (Paris), in Eugène Tartaret, ed., Exposition universelle de 1867.  
Commission ouvrière de 1867. Procès-verbaux, Vol. 2 (BCCL,L1 - 284)

For understanding the cooperative movement in any depth, two series of archives are indispensable. These are AML, I2 - 45, Sociétés coopératives de production et de consommation (1849 à 1870) and ADR, 4M - Police administrative - Associations, coops. Documents on the cooperative movement in the AML series concern only the Second Empire; those in the ADR series focus more extensively on the movement of the Third Republic. All of these documents are police reports or the products of close police surveillance. They include statutes of individual societies, membership lists, balance sheets, minutes of meetings, reports concerning elections within the societies and biographical data on the leaders. Classification of documents by individual society permits a study of the movement on a microscopic level. Most reports concern consumers' cooperatives, but the AML series also has a lengthy dossier on the Association of Weavers (producers' cooperative). The AML series includes police reports and tabular data on the movement as a whole in Lyons and a transcript of another inquiry concerning the movement, this time by the Chambre de Commerce de Lyon, Commission des Manufactures, "Enquête sur les sociétés coopératives, délibérations," December 7, 1865. Dossiers on individual clubs in Lyons, with documents similar to those of cooperative societies, are located in the same AML series, I2 - 45, for the Second Empire, and in ADR, 4M - Police administrative - Associations, cercles ouvriers

non-catholiques, for the period after 1870.

For the purpose of tracing leaders and members of cooperative societies in population censuses, membership lists in the AML and ADR series had to be supplemented by lists submitted to the Tribunal of Commerce of Lyons at the time of incorporation of these societies. (Such tracing was required for determining, for example, the proportion of leaders of the Association of Weavers who had fancy-cloth looms in their households.) Complete membership lists are available in the archives of the Tribunal only for sociétés à responsabilité limitée and for sociétés anonymes, but this caused no serious problems for the analytical purposes of the present study. The lists for such sociétés incorporated before July 1, 1867, are located in ADR, 9U - Sociétés: Constitutions et modifications, dissolutions, and those incorporated after this date are available in ATCL, Actes des Sociétés. Use of these lists for determining social and economic characteristics of members of associations is described more fully in George J. Sheridan, Jr., "Idéologies et structures sociales dans les associations ouvrières à Lyon, de 1848 à 1877," Bulletin du Centre d'Histoire économique et sociale de la Région lyonnaise, 1976, No. 2, 1-47. The same article presents preliminary results of analysis of the social and economic foundations of association ideology by this method of tracing.

### 3. Industrial Resistance

The resistance movement of the late Second Empire is best described for the Lyons region by Yves Lequin's "Monde ouvrier de la région lyonnaise," Vol. 3. The Office du Travail, Associations

professionnelles ouvrières, Vol. 2, pp. 269-285, surveys the movement among the silk weavers of Lyons rather well. Mathe aîné's Tisseurs en soie de Lyon (1900) (BN,4 V 5056) does the same in more sketchy fashion. The movement of 1869 - 1870 is best reconstructed, however, from the police archives, especially AML, I2 - 47(B), Corporations: ouvriers en soie ... (1819 à 1870), and from the "Chroniques locales" of Le Progrès (Lyon). The AML liasse has minutes of meetings, reports on leaders, statutes and proposed statutes for the Société civile des tisseurs, and copies of tarifs of piece-rates proposed or accepted in negotiations with the fabricants, for each of the cloth categories. The articles in Le Progrès include notices of meetings, agendas and minutes of meetings, reports concerning tarif negotiations and responses to the fabricants. Le Progrès thus served as a press for the resistance movement as it had served as a cooperative press earlier in the decade.

The resistance movement after 1870 among the silk weavers is well documented in ADR, 10M - 1, 2, 3, Associations des tisseurs. As in the AML series for the movement of 1869 - 1870, the ADR series includes minutes of meetings, reports on leaders, and so forth for each of the cloth categories composing the Société civile des tisseurs and also for the plain-velvet weavers of the Corporation des tisseurs de velours unis, ville et campagne. ADI, 166M - 1: Grèves (1858 - 1877) and AML, I2 - 48, Délits de coalition ouvrière et grèves. Grèves hors Lyon (1802 - 1870) document the extension of resistance in the silk industry to the countryside. The first source traces the 'mission' of the weavers of Lyons to the rural weavers of Isère, supporting the latter in their strike of April - May

1870. The second source examines the extension of resistance to other areas of the department of the Rhône and to other departments nearby, especially to Ain.

#### 4. The International Workingmen's Association and the Political Movement

The history of the Lyons branch of the International is the subject of chapters in Sreten Maritch, Histoire du mouvement social à Lyon, of the article by Jacques Rougerie, "La première Internationale à Lyon," and especially of the book by Maurice Moissonnier, La première internationale et la commune à Lyon. All three studies have been discussed under 'Period Movements.' Among the important archives on the International in Lyons is AML, I2 - 55, Papiers d'Albert Richard: Pièces relatives à l'Association Internationale des Travailleurs. Piece No. 27, a police report entitled "Association Internationale des Travailleurs," February 1870, by Faure, was especially useful for the present study. In addition to summarizing the history of the International in Lyons from 1864 to 1870, the report identifies leaders of each 'tendency' within the Association and provides extensive biographical, occupational and political information about each leader. The overt hostility of the author of the report to the International does not lessen its reliability for occupational and residential information concerning each leader. The present study used the report only for this information.

Yves Lequin, "Le monde ouvrier de la région lyonnaise," Vol. 3, Louis Greenberg, Sisters of Liberty, and Maritch and Moissonnier,

mentioned above, are the best secondary studies of the political movement among workers in Lyons during the late Empire, early Republic. More thorough investigation of political affairs requires consultation of the extensive police reports on political activities in AML. The police remained active and powerful during the 1860's, despite the liberalization of imperial social policy, and they left many detailed reports to testify to their vigilance. None of these sources was consulted for the present study. They remain on the horizon for future work.