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LAND AND LABOR AT SALT RIVER: HOUSEHOLD ORGANIZATION IN A CHANGING ECONOMY

by

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A THESIS

Presented to the Department of Anthropology
and the Graduate School of the University of Oregon
in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

June 1967

APPROVED David F. Aberle

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ACKNOWLEDGEMENTS

Although it is impossible for me to individually thank the many hundreds of Salt River people for their assistance, I do wish to thank them collectively and express my hope that none are offended by the use I have made of the information they made available. Without their continued cooperation and help, the research on which this work is based would have been impossible.

To a few individuals, whose assistance was especially important or continuous, I owe an incalculable debt. My most keenly felt obligation is to William S. King, the Agency Superintendent. I comment on a few of his more notable contributions to the progress of my work at appropriate points in the text. Hal Booher (Bureau of Indian Affairs, Projects Development Officer), Narcissa Espinoza (B.I.A. welfare caseworker), Noel Scott (Principal, Salt River Day School), and Enoch Walkingstick (Salt River Day School teacher) were of continuing support throughout the research period. Filmore Carlos (Tribal Council President), Billman Hayes, Jr. (Tribal Council Secretary), and Billy Rivers, Jr. (Tribal Council Community Worker) provided assistance in making initial contacts and critical suggestions on how to phrase the Work Force Survey questionnaire. They were also important to me as people with whom I was able to relax, enjoy myself, and unload some of my frustrations over a glass of beer.

Alfretta Antone, Leonard Carlos, Vivian Clark, Charlotte Coops, Hollis Cough, Percy and Lucy Enos, Joe Gibson Manuel, Betty Pablo, Evans Ray, Ross and Anna Shaw, and Ben and Claudina Wood (community members) were particularly helpful in getting to know people and in locating people who remembered "traditional Pima ways." The Clarks, Shaws, and Woods were themselves of direct assistance in obtaining information about traditional Pima culture.

Jim Arden and Bertha Parkhurst, of the Public Health Service, provided maps and assisted in completing the mapping and photography. Dr. Lull, of the Phoenix Indian Hospital, made vital statistics records, equipment, and clerical assistance available to me.

Dr. Robert Hackenberg and Dr. William Kelly provided access to their file data at the Bureau of Ethnic Research, University of Arizona. Dr. Hackenberg also brought to my attention several manuscripts he had prepared and those of early explorers held by the University library at Tucson. Dr. Kelly helped me cross-check my data with that on file at the Bureau of Ethnic Research and hired me as a temporary staff member during this final period of collating my research results.

Throughout the research period my wife, Judy, worked, serving as the "financial aid" that the early June development of final research plans made inaccessible.

Compilation and tabulation of the data and the computer analysis of the results were possible only with the help of Everett Cook, Dr. Larry Havlicek, and the Digital Computing Center staff of Wichita State University. I benefited also from discussions about statistical techniques and problems of causality with Dr. Melverne Klingsporn, psychology department, Wichita State University.

My committee chairman, Dr. David Aberle, and the chairman of the anthropology department, Dr. Vernon Dorjahn, proof-read each chapter as it was completed, provided essential suggestions at virtually every stage of preparing the manuscript, and were of unflagging assistance for its sixteen month gestation period. Discussion with Dr. Aberle, by letter, of the problems of statistical analysis and overall interpretations was perhaps the most critical single factor in bringing this work to a focus.

Nevertheless, all decisions about and methods of handling this material were my own responsibility; as is the following text.

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CHAPTER I. INTRODUCTION

A. Origin and Development of the Problem

Economic change is one of the more visible effects of culture contact. This high visibility may well feature in its apparent primacy. Although culture change may result solely from the interplay of internal forces, few if any cultures have ever been free of external influence. Contact between groups, or their more adventurous representatives, must be reckoned with in analysis of change. It has, of course, been the focus of much anthropological research. But whereas Anglo-Europeans have been the dominant party in most culture contacts of recent centuries, they have not always had this role. Attempts to assess the effects of culture contact where non-Western peoples have been dominant have been limited by the difficulties of securing information about such situations. Expanding Asian, Islamic, or Bantu-speaking peoples undoubtedly brought about changes, in those cultural groups pushed aside or engulfed, quite unlike those wrought by Anglo-Europeans. These different courses of change, if they were known, would presumably reflect the distinctive cultural patterns of the non-Western dominant party. Unfortunately, information about such non-Western induced change processes is virtually non-existent. Most change studies have been concerned only with culture change brought about by Anglo-European expansion. Furthermore, these studies have focused on the people in the path of that expansion.

Ideally we should have data on the full range of cultures participating in the process of culture change, in the "dominant" as well as in the "subordinate" role. Distinguishing those features of culture change that are functions of particular cultures from those that are common to the process wherever it occurs, would be facilitated by having fuller information on those non-Western groups which were dominant in contact situations. Delineation of specific and general courses of cultural evolution would also be placed on firmer bases. Unhappily, this ideal is not presently attainable. The term "culture change" should be amended to "Anglo-European induced culture change" more often than not.

Despite these limitations, patterns of change regularities can be sought. They can be found by identifying their context of occurrence with sufficient precision to isolate that context from its cultural matrix.

Although Anglo-European contacts can be said to lead to the introduction of wage-labor, cash-cropping, the market, and a monetary economy, their effects may well differ depending on the content of the cultures contacted. This consideration receives too little emphasis in the general conclusion that "disruption" of traditional structures results from Anglo-European influence (Linton 1952:87). Clearly, the nature of these traditional structures has much to do with whether and in what manner they may undergo alteration. Also, the intensity, perceived importance in the culture of origin, sequence of presentation, and agents of introduction, of new cultural features, may affect the nature and extent of their influence. Even the implied causality -- that change is the cause and "disruption" the result -- is suspect.

Largely in the past decade, many scholars have helped to clarify the nature of Anglo-European influence, the kinds of change taking place in specific societies, and to pinpoint the relevance of particular traditional structures to both change and resistance to change.

Three such works have shown that wage-labor (Strickon 1962) and cash-cropping (Sahlins 1962 and Watson 1958) can serve to maintain extended kin groupings. That cash-cropping may be associated with continued viability of extended kin groups has been observed by a number of other persons (Bee 1963, Lystad 1958, Manoukian 1950, Ottenberg 1959, and Southall 1961). But while these studies are discussed in some detail below, it is sufficient to note here that conflicting views concerning the effects of Anglo-European economic influence are to be found in the literature. Some report this influence as disruptive or destructive (Linton 1952:83-87 and Mead 1953:210) while others report the continued viability of traditional structures (Sahlins 1962:124 and Southall 1961:4). This paradox was the genesis of my study.

One aim of the study was to resolve the conflict by delineating those features of Anglo-European economy operative in a given situation and investigating their relationship to household and family organization in that situation. My view is that further analysis of Anglo-European economic features can help to resolve the conflict and contribute to culture change theory. Particularistic explanations, invoking features unique to a specific situation, may "solve" the problem in that situation. But they contribute little to culture change theory. I do not question the validity of such explanations or the accuracy of the data on which they rest; I am unsatisfied with the unintegrated "bits and pieces" status of change theory. My questioning takes the following form. Do aspects of Anglo-European economy favor the nuclear family? What ones? Why? Do aspects of that economy favor extended families? What ones? Under what conditions do they occur? Why?

As this took the form of a specific research problem, the Pima and Papago of southern Arizona attracted my attention as people who had received little study by anthropologists. They also appeared, from the literature, to exhibit a wide range of Anglo-European features. Indications were that the Pima and Papago practiced subsistence cropping, cash-cropping, wage-labor, land leasing, and some handicraft activities. Field work quickly revealed that the existing information was quite out of date for the Pima. Commitment of these people to wage-labor and other aspects of a monetary economy was greater, and this area was more suited to my purposes, than had been anticipated.

B. Selection of the Study Community

The criteria employed in selecting a specific locus of study developed from tentative hypotheses about ways to resolve the conflict outlined above. The pre-study derivation of these criteria may be summarized as follows. 1. Cash-cropping seemed to permit maintenance of extended kin groups *where cropped land was under the control of such groups*. 2. The only case where wage-labor was *clearly* associated with viable extended kinship patterns was one in which a *newly emergent* network of lateral and affinal kin comprised the locus of hiring control. Possibilities of getting a job were maximized by this horizontal extension of one's kin contacts, for certain mature men in this network were the foremen within the wage-labor arena, and influential in hiring practices. 3. Many cases of migratory wage-labor are associated with occurrence of matrifocal, grandparental, and other "fragmented" families. 4. Family and household organization of these "fragmented" types are also reported for societies and minority segments of Western society involved in irregular wage-labor and/or relying on welfare sources for income. 5. Where cash-cropping occurs on land not under the control of those working it (or of some kin group of which they are a part) the extended family appears to be absent or on the wane. 6. In those cases where stable, non-seasonal, non-migratory, wage-labor is dominant, the nuclear family -- as both the kinship entity and the residential unit -- also appears dominant.

The above suggested that so far as cropping is concerned the important distinction is not whether it is done for cash or for subsistence (although the distinction is certainly important in other contexts), but whether the locus of land control is internal or external to whatever traditional kin groups are present. Where this control is within the traditional group, cropping of either sort will tend to support the viability of that group. Where this control is, or becomes, external to the traditional grouping, that grouping will decline in importance. New groupings, based on new criteria of membership, may emerge as control of the land (resource of production) shifts. Change in concepts about the land, patterns of tenure, land usage, and its salability, may alter relationships between the controlling group and the land. Size and composition of the group may change as these relationships change, even if the locus of land control does not shift.

It also appears that wage-labor may be associated with the "fragmented" types of family where it is migratory, seasonal, or irregular -- especially if hiring decisions are made outside the reference group. But where hiring decisions are made within a traditional structure or a new kinship grouping (as in Strickon's study) that grouping may gain support from the presence of wage-labor. This can be summarized: the stability, seasonality, and regularity of wage-labor, and the locus of control of hiring, interact as factors that may diminish or enhance the importance of traditional structures. Three final points must be mentioned. These are: (1) wage-labor distinctively emphasizes individual abilities and gives a direct personal return for the labor performed, (2) the amount of income, in terms of its contextual adequacy, is a prime factor in the viability of any socio-economic unit, and (3) the reliability of income is a prime factor in the stability of any such unit. This income may be in cash or kind, and may come from any activity. But the important point here is that any family or household dependent solely on wage-labor for income simply cannot survive (no matter how stable, non-seasonal, non-migratory, or regular that wage-labor may be -- no matter whether kinsmen or aliens control hiring), if that income is insufficient to put food on the table. The matter of individual labor and an individual return for that labor introduces individual independence. That wage-labor <u>can</u> make the individual independent of an extended kin group is enough to insure that a few individuals <u>will</u> choose independence through wage-labor. For no society or human institution is perfectly satisfactory to all. Furthermore, sharing of wage-labor income and performance of extended kin group obligations will decline as the benefits of kin group membership (such as use of land) are overshadowed by the benefits of wage-labor. This will be the case even among those to whom the group had been satisfactory, although some benefits realized by some members (such as the power or prestige of elders) may outweigh any wage-labor benefits. Nevertheless, this overshadowing does not occur overnight. Traditional structures may co-exist with wage-labor (or other aspects of a monetary economy) for decades. New functions may emerge to enhance the viability of traditional structures. Wage-labor participation, for example, may be channeled through kin-based groups (Strickon 1962) or through kin-like groups (as in West Africa, Little 1962:209). Wage-labor alone does not account for widespread decline of extended kin groupings. Even the sum of aspects of a monetary economy are not sufficient to explain it. Changes in relative benefits from support of such groupings as opposed to benefits from involvement in a monetary economy and non-support of extended groupings, constitute the crucial mediating factor.

The resulting criteria for selection of a study locale were: (1) land under the control of a kin-based grouping and land not under such control should be present; (2) wage-labor of seasonal, migratory, irregular, non-seasonal, non-migratory, and regular types should be present; (3) welfare and similar types of income should be represented. Other manifestations of involvement in a monetary economy were regarded as desirable but not requisite. The Salt River Pima satisfy these criteria in the following respects: (1) the allotment of ten acres of land per person (between 1912 and 1914), and since that time inherited along kinship lines, provided land under the control of a kin grouping; (2) some two-thirds of the total land area of the reservation are held as tribal lands (although legally under the control of the Tribal Council, their handling is influenced by administrative policies of the Bureau of Indian Affairs); this land is outside the control of any kin grouping; (3) all types of wage-labor outlined are present with the exception of migratory wage-labor; (4) welfare, social security, retirement, and G.I. compensation incomes are present and provide the bulk of income for a small number of persons; (5) a few small businesses and handicraft activities are carried on by these people; and (6) establishment of an electronics parts and manufacturing company on reservation, potentially employing several hundred persons, has been under negotiation for the past few years.

The deciding factor in dealing with the Salt River Pima rather than some other group in this area (and for taking the reservation as a whole rather than some single village) was the matter of size. Selecting any other reservation satisfying the criteria would have meant collecting data on some 15,000 people. But limiting the research to any one village would have reduced the available population to only a few hundred persons. At Salt River, the inhabited area of the reservation and the "community" are one. The population of 1,793 was large enough to fully justify statistical handling of the data, and small enough to permit gathering all necessary information within the thirteen month research period.

The study took place within the Salt River Pima Maricopa Community (this is the formal designation given by the Tribal Council), from July 1964 through August 1965. Apart from its formal designation as a community, a number of community activities and institutions are present which lend credence to the use of this label. A newspaper, Police Force, community ball teams, community activity centers, a band group, an active P.T.A. and many church and service clubs are present and solely within the hands of community members. Residence is within two coherent and mutually contiguous areas. These residence areas are located in the irrigated southwestern third of the reservation. This region shares a common boundary with metropolitan Mesa, Scottsdale, and Tempe, Arizona. Major highways, a few other paved roads, access to electricity and water, and availability of telephone and mail service characterize this section of the reservation. These characteristics are factors in the siting of residences and bases for lines of community interaction. The Salt River Pima Maricopa Community is thus regarded as a community and hereafter will be referred to as "the community." Specific features of the community, levels of integration within it, and the criteria used in defining the community and its various components, are set forth in Chapter V. Nevertheless, it should be stressed here that although the study was conducted within a community, its focus was on the interrelation of income patterns and household organization. This is not a comprehensive community study, but a problem oriented one.

The study encompasses the defined population rather than some "random" sample of it. The data obtained apply to the resident population of the Salt River Reservation as it existed from July 1964 through August 1965. Certain qualifications of this basic definition are necessary. First, persons who died during the study are included within the population if they were resident four months or more prior to their death. Second, infants born through December 31, 1964, are included within the population, but those born after that date are excluded. Third, those persons who were resident for six months or more of the study period are included, while those who were resident less than six months are excluded. This third qualification does not apply, however, to those who began or ended their residence by birth or death. Fourth, a few persons who were transient between the community and a neighboring metropolitan area, or whose residence was "just over the line," but who were actively involved in community affairs, are included within the population. This fourth qualification adds twelve people to the population who technically resided "off reservation" or whose residence defied identification. People in the Armed Forces or away at boarding school, but whose residence was reported as "normally" on reservation, are included as community members. Lastly, resident, non-Indian employees of the Bureau of Indian Affairs and of leasors of reservation land, are excluded from the population, but resident non-Indians who were functioning, integral members of an Indian household are included. Although this excludes some people who might "belong" on the tribal roll, the majority of them were scattered from Chicago to Australia. Obtaining information about these people was not possible. Attempts to use relatives and other secondary informants proved unsatisfactory. For example, a resident with a brother living in Los Angeles had not been in contact with his brother for several years, did not know how many children he now had, and could not recall whom his brother had married.

As defined, the Salt River Pima Maricopa Community population is 1,793. Of this total, 883 are male and 910 female. The 315 households average 5.7 persons each.

C. Initial Contacts and Role

My first contacts were with a community clergy member, the Tribal Council President, and the Agency Superintendent, in that order. A seven page presentation of my research plans was submitted to the Tribal Council following these first contacts. Protracted discussions with the Tribal Council President and the Agency Superintendent allowed me to more fully explain my intended research and what pursuit of it would entail for the community. Through these discussions it became clear that the particular information comprising the focus of my research was of paramount interest to the Tribal Council and the Bureau of Indian Affairs.

As my true status and intentions had been presented in detail, the role of fledgling anthropologist doing dissertation research was both assigned and assumed. Consequently, Tribal Council evaluation of my research plans, subsequent approval of those plans, and the first stages of their execution, took place with myself in the role of an anthropologist. My investigation of income, work histories, household composition and location, and family histories, was backed by the Tribal Council and the B.I.A. The Tribal Council President furnished me a letter of introduction (explaining what I was doing and that I had his approval to do it) that proved particularly helpful in convincing some of my early contacts that I was not a salesman. Community members were soon introducing me as "our anthropologist." While it would be naive to assume "their" interpretation of this role coincided with mine, or that there was consensus about it among "them," the cooperation I received from all quarters suggests the role carried favorable connotations.

D. Later Development of Contacts and Role

Whatever differences in attitude toward me and my work may have existed during the early weeks of the study, certain clear divergences of attitude became apparent after the first month. These attitudes, as indices of my role, may be categorized on the basis of the groupings of people who gave them manifestation. These categories are: (1) volunteer workers on the Public Health Service water project, and on the

International Basic Economy Corporation (hereafter simply IBEC) Cinva-Ram housing project; (2) welfare and juvenile authorities from federal to community (Tribal Council) levels; (3) Tribal Council members and employees; (4) administrative and supervisory personnel of all offices of the Bureau of Indian Affairs and the Public Health Service; (5) community members having a common interest in preserving "our Indian heritage;" (6) leaders and active members of dominant church congregations; and (7) the remainder of the population, with whom my contacts were less frequent and whose attitudes cannot be judged adequately here. Persons in the first six categories may be identified, respectively, as exhibiting the attitudes outlined below.

The first group seemed to regard me largely as another worker. Due to my "participant" activities on the water and housing projects, my association with these people was more nearly that of an equal than was true for any other purely Indian grouping. For a total of some four months we dug ditches, hauled and laid pipes, mixed concrete, built retaining frames, hammered our thumbs, sweated and swore profusely. On beginning work at the IBEC house site, several new people greeted me, mentioning that they had seen me working on the water project. In all, these people seemed to accept me simply as someone there to help get a job done, and there was surprisingly little indication that any wondered what I was "really" doing there. Their cooperation and friendship were not only a great help in research but very likely my salvation in a few awkward situations.

The welfare and juvenile authorities -- county, Tribal Council, and B.I.A. -- for the most part appreciated both the immediate practical results, and the longer term theoretical possibilities, of the study. The bulk of my mapping and census data plus a file of photographs of all inhabited dwellings were left with various of these people. The B.I.A. had set up these data as a permanent working file. In return I was given access to the bulk of their materials. Certain activities which came within the purview of Tribal Council welfare and juvenile personnel (for example, problem drinking) made use of a mailing address listing I had collected. Although these people had little data of direct relevance to my study, the level of response to these mailings provided a very useful index of intra-community interest level and lines of communication. Individual relationships varied from ones on a primarily professional level to those in which social activities far outweighed all others. Relations with all people in this category were most amiable.

Tribal Council personnel were generally most helpful and cordial. Nevertheless, personal relationships ranged from friendly to distant. The secretary was one of the three best friends acquired in Arizona. But the community worker was one of the few community members whose attitude was a veiled hostility. This person was outstanding both in his attitude toward me and in his talents. As community worker, he was widely conceded to be the only person who had close and continuing contact with every member of the community. He had participated in a census survey conducted in 1962 (see Chapter II), and performed an assessment of community members' income in 1963 (he relied largely on secondary informants and file data). Much of the information I was collecting was that which he had long insisted was needed. Consequently, he appeared to regard me as a threat to the unique position he had in the community; that of being virtually an "indispensible man." I was no such threat and could not have become one, but it is easy to see why he felt I was "stealing his thunder." Since he was heavily involved in coordinating and staffing a varying myriad of programs, projects, and activities, data collection was something he had no time for. My activities then made his attitude quite understandable. He never, to my knowledge, actually worked against me and we got along quite cordially on the surface, but he did manage to avoid working with me effectively in obtaining the needed information. Had he given his cooperation as fully as others did, the time required to gather that information would have been much shorter. Also, more intensive interaction with the "hidden" part of the population iceberg (those in category seven) would have been possible. With all other Tribal Council personnel, from the President to the receptionist, relationships were quite friendly and singularly lacking in awkwardness. Full access to Tribal Council files was granted and use of tribal duplicating equipment was provided without charge.

The council sponsored application for a grant from the Office of Economic Opportunity (a Title II, Community Action Program) which would have employed myself, two field assistants, and a secretary for the purpose of conducting a more intensive assessment of the employment situation than was possible for me working alone. Unfortunately, the program was not funded until four months after I completed my research.

The fourth category, governmental administrators and staff, could be subdivided. There was, nevertheless, a broad similarity in apparent attitudes among people in this category. But it would be inexcusable not to stress my appreciation of the assistance, in the form of time and materiel, received from these people. The B.I.A., and Superintendent William S. King especially, exhibited a willingness to help and an awareness of the possible detrimental effects that too close association between the Bureau and myself might bring. In general, these people looked on me as a source of needed information, which staffing limitations and other commitments barred them from obtaining at the time. Duplicate sets of parts of my material were left with a number of governmental agencies (Public Health Service, Salt River Day School, Phoenix Indian Hospital). But the "master" set of duplicate data was retained by the Salt River Agency, Bureau of Indian Affairs, for Tribal Council use. Interrelations here were amicable and mutually profitable.

The fifth category, people sharing an interest in preserving "our Indian heritage," consists mostly of older people. To a lesser extent, they were generally the better educated, wealthier, leaders of the community.

But there were many exceptions to this last generalization. Two notables within this category had never completed primary schooling, fell well below the $750 per annum individual income level, and were not community leaders. But these people did value education (even those who had little themselves), and I symbolized education for them. In this capacity, I was also a means of assistance in preserving the heritage. It was possible to elicit information on aspects of Pima culture which long ago fell into disuse, from a few of these people. In truth, they were the only people who appeared to know about the "old ways." Kinship terminology, traditional technology, and subsistence patterns, for example, were simply unknown to the bulk of community members. Since some persons (both of this category and others) seemed sincerely interested in learning about the "old ways" from myself or from others during the few "group" sessions of data elicitation, it seems unlikely that those professing ignorance were simply unwilling to discuss such things. Also, the one area about which no one appeared to have any knowledge was that of religion. And in this respect there were indications that some persons knew more than they wished to say. One older woman as much as said that people felt talking about pre-Christian, "pagan," beliefs (except to relate folk-tales and "silly" myths) would make a bad impression on non-Indians. It was evident that few younger persons were at all aware of most of the traditional beliefs, and that some adults felt too much interest in tradition (especially where religion is concerned) would mark them as "backward" in the judgment of their community peers.

Undeniably, I received more information than I gave with this group. Yet my position was such that it was as if I were doing them a service. One might say that my contribution was to reinforce, by my interest, their views that "our Indian heritage" has value. It is one of the few things they can feel is truly their own.

The sixth category, active church congregation members, consists primarily of people whose common interest is "community improvement." Presbyterians especially sought to achieve this through education. Latter Day Saints undertook and sponsored community activity programs. Together, these approaches seemed promising. Either one, by itself, would have been of limited, but real, value. Unfortunately, these approaches were not seen (or practiced) as complementary ones as often as might have been desired. Each group seemed to view its approach to "community improvement" as the better one and competition was more common than cooperation.

Their evaluations of me seemed to parallel the above orientations. The Presbyterians appeared to value my presence as an example of the worth of education. They asked me to address youth groups on the rewards of staying in school, and on "traditional Pima culture." The Latter Day Saints sought information about individual genealogies and asked that I address workshop groups on techniques of collecting genealogical information and of displaying the results. This developed out of my earlier willingness to assist a few people in working out their genealogies. Here, I gave more information than I received. Religion was not within the scope of my research plans and it was an area of some community friction. I avoided involvement in inter-congregational factions as this might have threatened my access to research information necessary for the study. Overt investigation into religion was shunned and I specifically disclaimed any intent to engage in such investigations in the research proposal presented to the Tribal Council. Nevertheless, some of my more intensive interaction was with people in this category.

Relationships with people in the seventh category and the roles I may have been assigned by them, defy any categorical description. Interaction was not intensive nor, with some exceptions, extensive. Some people were coolly distant, some indicated a hesitancy to talk with me before fully satisfying themselves about who I was and what I was doing. A few were very hard to satisfy. Many wanted to know what I was going to do with the information and some remained suspicious of my explanation. Others were cooperative in the extreme, appeared very outgoing, and showed no reluctance to discuss even the more personal aspects of information that I sought. A few asked my help in filling out income tax reports, providing an unexpected source of income information. A few were simply hostile, but adequately cooperative to provide the desired information. Only one family refused to provide even the necessary minimum of data. This did not create a data gap though, as the household composition was observable during the three visits I made to their home, and the remaining information was obtained from relatives, neighbors, and record material. Generally speaking, data collecting and interviewing went somewhat more smoothly than I had anticipated, and personal relationships were satisfactory.

In all, the role of fledgling anthropologist, and those roles developed during the course of the study, appeared to be generally acceptable ones. They seemed to be understandable and favorably interpreted by most community members, productive and useful from the viewpoint of various administrative agencies, and rewarding to me.

E. Major Stages of the Study

Implementation of research plans took place in four relatively discrete stages. These consisted of the following activities: (1) familiarization, observation, and work participation; (2) census taking, genealogy collection, and mapping; (3) income and work history information gathering; and (4) re-checking, collating, and cross-checking data.

During the first stage contacts were initiated, Tribal Council approval of the research was obtained, and the basic outlines of my work were tightened by my increasing knowledge of the situation. Photographs of community activities were taken and prints were given to people desiring them (Superintendent King had made darkroom facilities and supplies available). I participated in the Public Health Service water project and built up acquaintance with people outside the "power structure" -- laborers on the water project. When the IBEC house building began, I took part in the work on it, expanding my range of acquaintance with "rank and file" community members (including inmates of the Salt River jail).

There were a number of days when I had to be away from these projects, developing and printing photographs and checking out leads to possible informants on "traditional" culture. But an average of four days per week was spent working on these two community projects. These both operated on a six day week, and progress on the IBEC house was accelerated further by addition of an eight hour night shift working under floodlights. Although I continued, with decreasing consistency, work on both projects until December 1964, the period from July 1964 to October of that year encompassed the major portion of work participation.

Stage two required the most time, and much of it was spent traveling, following false leads, and waiting for people who forgot appointments or remembered them hours late. The initial census interview could be done in half an hour or less. But many days were spent with only two or three contacts. Some interviews stretched over six to eight hours and a few people were rarely at home except between 11:00 P.M. and 6:00 A.M. (or so it seemed). Well over half of the time devoted to trying to get the census information was spent driving or walking. The three activities outlined above for this stage generally proceeded hand-in-hand, but census taking was the focal point of stage two.

Wherever possible, I insisted on securing census information from the individual concerned. For only seven households (of 315) was it necessary to fall back on relatives or other secondary informants. Reference to neighbors and records was necessary only for one household. On the other hand, mapping was conducted without use of informants. They were required, however, for securing histories of occupancy and for the later re-checking of precise locations. Photographing the residences did not <u>require</u> informant contact, but permission to photograph was requested during the census interview. Photography was most often done immediately after that interview.

This stage of research began informally in July of 1964, but became the dominant activity only in late October of that year. By this time I was known to enough people and was well enough acquainted with reservation geography to effectively conduct the census by myself. Stage two continued as the primary activity from October 1964 to April 1965. Mapping, genealogy collection, and increasingly intensive interviewing -- aimed at broadening and securing a base from which to do the collection of economic data -- occupied much of the time from February through April of 1965.

Preparation for the third stage also began in July 1964. Throughout stages one and two much information about income and work histories was volunteered during informal talks with a few people. Especially during census interviews, much economic information and a wide range of attitudes about the economic situation, were freely given. Development of techniques for eliciting income data was based on experience gained in stage two. What facets of income to investigate, what to stress and to avoid, to accept as given and to suspect, was clarified by informant comments during my census work. Orderly collection of information related to economy began in January of 1965. At that time most lease income was being paid to individuals. But it was not until late March of 1965 that I began formal preparation of data collection forms for recording information secured from individuals; lease income pay schedules were a more efficient (and far more accurate) source of lease income data than individuals. In early April of 1965, a work history and attitude evaluation questionnaire was developed with the help of Tribal Council personnel. Application for an Office of Economic Opportunity grant to help in this stage of research was initiated by the Tribal Council. It was unanimously approved by the Tribal Council April 20, 1965, and forwarded to O.E.O. (Washington office) with B.I.A. endorsement. Although this project was not funded for eight months (after my work was completed), the questionnaire was employed. Other income information was obtained from pay records, interviews during census data re-checks, lease income pay schedules, notes taken during informal conversation (or immediately afterward), and from secondary informants. One of the most important of these last sources was the Tribal Council community worker. Particularly helpful was his employment and income survey completed in March of 1963. This provided a base-line against which to evaluate the accuracy of data given by informants and for assessing change in employment and income levels.

By mid-July virtually all required information had been obtained. Collation of census data for the B.I.A., Public Health Service, and the Tribal Council, became a pressing concern. Tabulation and collation of material to provide basic income data for a B.I.A. report was performed. Field notes, photographs, census and income data, genealogies, and individual work histories, were cross-checked and cross-referenced and unrealized lacunae were brought to light. These were re-checked, data inconsistencies resolved, and missing information collected. Information desired by various agencies was tabulated, duplicated, and transferred to those agencies. By mid-August of 1965 both research requirements and paper work commitments had been satisfied. The latter part of August was spent at the Bureau of Ethnic Research, University of Arizona. Dr. William Kelly provided access to the bureau census records based on state vital statistics reports and -- for Salt River Pima -- a 1962 census survey supervised by Dr. Robert Hackenberg. My census data were microfilmed, and household location maps cross-checked with the 1962 information. Residency status of persons appearing in Bureau of Ethnic Research records (dated 1962) was cross-checked and cross-referenced with that of persons appearing in my material. The "father number" (a genealogical index number employed by the B.E.R. for reference to each person in their files) was recorded on my individual cards, and persons in my census material not in the B.E.R. files were assigned a number. Completion of this final cross-checking terminated both my accumulation of new data and my 58 weeks residence in Arizona.

CHAPTER II. PROBLEM, THEORY, AND HYPOTHESES

A. The Problem

I presented the problem as one of reconciling conflicting views about the effects of a monetary economy on "traditional" extended kinship groups. In its simplest form the problem is one of clarification. What are the effects of a monetary economy on family form and household organization?

Three categories of family and household form have come under investigation as reflecting these effects. They are: (1) the extended family household, (2) the nuclear family household, and (3) the consanguineal household. After clearing up some terminological matters, I will examine some recent theories concerning the ways in which certain aspects of a monetary economy may be related to these categories of households. Finally I will summarize the hypotheses to be examined in this work and outline the ways in which these hypotheses will be tested.

Societies sufficiently changed so that descriptive ethnographic studies of them are replaced by "problem" oriented studies of acculturation, are rarely "traditional" ones in a strict sense. Since most societies throughout the world are rapidly becoming less "traditional," it becomes increasingly necessary to have some term to refer to societies no longer traditional, not peasant societies, and not yet full participants in a larger, monetary-industrial society. The term "neoteric" coined by Nancie Solien (1959:25) fills this need admirably. Neoteric societies are those "whose traditional culture" has undergone change due to Western contacts; those composed of "... mixed bloods who have found themselves occupying a position between the two cultures from which they derived ..." with "... characteristics different from those of the larger society within which they are living" (Solien 1959:25). A neoteric society is "... in the position of having to adapt to an economy dependent upon Western industrialization through the mechanism of wage-labor, while being denied admission to the industrial society as a whole, both as a class and as individuals" (Solien 1959:25). The Salt River Pima are a neoteric society.

Distinctions between "household" and "family" are presented more fully later (see Chapter VI). It is enough to note here that a "family" is defined as a kinship unit (including at least one affinal tie and two generations), but the household is strictly a residence unit. The two may or may not be co-terminous. Any family consisting of three or more generations, or of two or more generations with an affinal tie in each generation is termed here an "extended family." Where it constitutes a residence unit it is called an "extended family household." Any family consisting of a husband and wife and the unmarried children of either or both conjugal partners is termed a "nuclear family." As a residential unit, such a group is a "nuclear family household." A kinship unit including two or more generations, but lacking any affinal tie (and thus not a family), is labeled a "consanguineal core." Where such a group is also a residential unit, it is called a "consanguineal household." These last two definitions are essentially those proposed by Solien (1959:17-18). It is desirable to identify two sub-types of the consanguineal household here. One in which the head is a female is termed a "matrifocal household;" one in which the head is a male is termed a "patrifocal household." The head of a household is defined here as that person so identified by members of the household. Although the bulk of the literature concerning the consanguineal household applies only to the matrifocal variety (including Solien's 1959:28, 87A), patrifocal families have been identified. They exist among the Mescalero Apache (Boyer 1964:595 and Kunstadter 1963:61) and the Salt River Pima. I use the term "consanguineal household" as a generic one, encompassing both matrifocal and patrifocal varieties.

B. The Extended Family

Throughout the development of human social institutions, the extended family and the entire spectrum of large kinship-based entities appear to be associated with the presence of cultivation. Extended kinship groups linking households and bands are found among some hunting and gathering peoples (see Warner 1958:45-93 on the Murngin and Turnbull 1960:318 on the Bambuti). But large kinship groupings are more often of greater importance, more complex, and exhibit a wider range of functions among cultivators. Most importantly, the extended family -- as the residence unit of production and consumption -- is primarily found within societies practicing cultivation. And, as I elaborate later, it is the residence unit that constitutes the focus of this work. Nuclear families are found as residence units among hunting and gathering and industrial societies. But the extended family, as the primary residential and economic unit, seems to have become important with the neolithic revolution and to have begun fading in importance since the industrial revolution.

Those "exceptions" to the position that a "... shift from a subsistence to a monetary economy, ... tends to reduce the size of functional family and the strength of extended family relationships" (Foster 1958:12), seem to be where use of land (for subsistence _or_ for cash-cropping) or access to jobs depends on an extended kinship group. The extended kinship group may be of a "traditional" sort where cash-cropping is the basis of involvement in a monetary economy (Watson 1958:193 and Sahlins 1962:124). Or it may be an extended kinship network of a newly emergent sort, as among the _criollo_ of Argentina (Strickon 1962:505). In both cases the relevant consideration is that access to the essential resource (land or wage-labor) is under the control of an extended kinship group. These conditions seem to be associated with the existence of extended families as functioning residential units. In a sense this is a paraphrasing of the commonplace that kinship groups exist because they have meaningful functions to perform; they wane as they are deprived of such functions (Wolf 1966:69-71). The productive advantages of an extended family in the context of farming activities give that unit meaningful functions in terms of securing a dependable food supply (Nimkoff and Middleton 1960:215-225). I concur with Sahlins that "The market per se does not seem enough to destroy the extended family ..." (1962:124). For if an extended kinship group is in control of access to jobs or of the resources of production, the extended family may prove viable even within the context of a monetary economy. But if the economic functions manifest in such control are lost, the extended family would be expected to dwindle in importance. Goode emphasizes that among those in upper socio-economic levels of a monetary economic system, effective kinship networks are maintained because "control" of the means of production and capital is in the hands of that network (1963:12-13).

Thus the first primary hypothesis emerges: _extended family residence units will be found where income is derived primarily from a resource controlled by an extended kinship group or network_. It follows that such residence units will parallel in structure, the structure of the economically relevant extended kinship network. Several distinct kinship networks (matrilineal, patrilineal, etc.) may co-exist within a society, but if a patrilineal network controls the resource, patrilineal extended family residence units would be expected. This is not stated as an hypothesis, although it could be regarded as one, because the data on the study community do not permit testing it. I present it only as a presumptive corollary of an hypothesis that will be tested.

C. The Nuclear Family

Two features of the nuclear family are particularly relevant to this discussion. First, the nuclear family, as a residence unit, seems to be predominant where the technological level of a society and the nature of its environment permit or make profitable individual economic activities -- or preclude cooperative ones. Not all hunters and gatherers are limited to nuclear family organization. The Indians of the Northwest Coast of North America are a prime example of the societal complexity that may result from cooperative exploitation of an environment abundant in natural food resources. But Gardner notes, specifically for hunters and gatherers, "The same peoples characterized as individualistic usually also have the nuclear family as the basic (if not exclusive) economic unit" (1966:401). This seems to apply also to the nuclear family within a monetary economic context. "In Itaperica, Brazil, the extended family is rapidly giving way to the conjugal one, family ties grow weaker, and the trend is toward 'individuation'" (Foster 1962:32-33, citing Hamburger 1954:287). Gough expresses a similar view with regard to the Nayar: "It appears that the stage of disintegration of the traditional lineage system and of the development of the modern bilateral system depends on the degree of absorption of the inhabitants into the modern economy of cash crops, cash wages, and urban occupations, and on the consequent degree of social and spatial mobility" (1952:86). Goode stresses that a central feature of current economic change is an increasing "... freedom to use one's talents and skills in improving one's job" (1963:169). Thus the nuclear family and skilled wage-labor contrast with the extended family and traditional economic activities in that "individuation," free exercise of individual skills, and "social and spatial mobility" characterize the former but not the latter.

A second feature of the nuclear family concerns the distribution of the income from those individual economic activities. Here a distinction must be made between the nuclear family in hunting and gathering societies and in neoteric societies. Among hunters and gatherers, some game is frequently distributed to people within the band through a complex set of reciprocal economic obligations (Service 1966:19-20). It appears that the marginal level of subsistence common among such peoples precludes complete individuation of income. The "catch" of any one person must be potentially available to others within the band -- particularly during times of semi-starvation -- if the band is to survive. In the context of a monetary economy, the nuclear family is characterized by individual economic activities and much more nearly complete individual retention of the return on those activities. It is this individuation of activities and income that I suggest accounts for attenuated participation in the extended kinship group within neoteric societies. "To the extent that the new job opportunities are not under the control of either tribal or family elders, they cannot sanction the younger generation for failure to meet their expectations, as they once could by refusing to give support, rewards, or even concrete assistance (such as helping to obtain cattle for marriage)" (Goode 1963:171). Employing Kunkel's behavioral model, I would suggest that as an extended kinship group becomes less important as the focus of economic activity, the individual feels fewer obligations to it (1965: 259-261, 275-276). The relevant consideration is that economic dependency shifts from the extended kinship group to the individual's skills and abilities as the monetary economic system becomes the source of a major portion of income.

The second primary hypothesis may be stated: nuclear family residence units will be found where income (wages or walruses) primarily derives from the individual's skills and abilities.

D. The Consanguineal Household

Many theories have been advanced to explain the matrifocal domestic group; none to explain the patri-focal one. Solien (1959:19-22) has summarized Smith's economic explanation (1956), the "slavery condition" theory of Frazier (1939) and other sociologists, and the "African heritage" theory of Herskovits (1941) and his students. Kunstadter (1963) examined Solien's "male absenteeism" hypothesis (the result of migratory wage-labor) against "crucial" cases including non-Negro societies (done also by Smith and Solien). He decided that migrant wage-labor in itself is not requisite for the formation of matrifocal groups (I agree), but that they can be expected where a "money economy" has come into existence (Kunstadter 1963:62). But, as will be examined further in a moment, he also specifies that the "... physical separation of the sexes due to division of labor is the primary factor -- money economies are complex ones that result in the division of labor" (1963:62). An article by Solien identified five types of migrant wage-labor and identified wage-labor of the "recurrent migration" type as the cause of consanguineal (matrifocal) households (1961:1268-1269). The presence of consanguineal households at Salt River despite the utter absence of migratory wage-labor lends special significance to the data obtained.

Smith's earlier work, noting the low economic position of men in societies where the matrifocal household is significant (1956:221), seems not to have been used as profitably as it might. In emendation of Kunstadter's "money economy" explanation, it should at least be pointed out that it is the _marginal position_ of neoteric societies _relative_ to a "money economy" that accounts for both the low economic position of men and the sometime sexual division of labor that may cause the physical separation of the sexes. In fact, the division of labor within the dominant society of a "money economy" seems to trend toward complex specialization with _blurring_ of sexual considerations as criteria for hiring. A sexual basis for division of labor in complex industrial societies is of decreasing importance (and is technically illegal in the United States). Certainly some "division of labor separating adult males and adult females in a community" does exist in any society (Kunstadter 1963:63). But of what distance and of what duration must this separation be, to account for consanguineal households? The distance may be reckoned in thousands of miles and the duration in weeks and months (or even years) among families of maritime merchantmen, traveling salesmen, and armed forces personnel. Are such families matrifocal ones? I wish to suggest only that Kunstadter's proposed causal factor is rather vague as an operational basis for deciding whether to expect matrifocal households in a given societal context. In any case, the sexual division of labor within neoteric societies may well reflect the marginal position of such societies and the low level of its members' skills and abilities as evaluated within the dominant economic system.

Clarke added another noteworthy consideration in observing that conditions exist "... which make it impossible for men to perform the roles of father and husband as these roles are defined in the society to which they belong ..." and that into these conditions "... we shall most profitably look for the explanation of the 'unstable' features of family life to which such prominence is being given" (1957:21). The importance of role is stressed also by Goode. In discussing the "impact point" of current economic change he says, "The specific point of impact can, I believe, be located. It is best understood by reference to current role theory, most clearly in the notion of 'role strain'" (1963:170). Boyer very concisely describes inadequate role fulfillment, in disagreeing with Kunstadter's view of the cause of matrifocal households. She finds, "Among the Mescalero Apache the husband-father is almost always home. But his role is often weak and ambivalent ..." (Boyer 1964:602). Low socio-economic status (relative to the dominant, external society), irregular or seasonal and low income, and incomplete fulfillment of husband-father role expectations appear to be factors in the existence of the matrifocal household.

What I believe to be another paramount consideration has not been explicitly identified, to my knowledge, in the literature to date. This is that the consanguineal household seems to exist where income depends neither on a resource controlled by a kinship network nor on the individual's skills and abilities. An individual's income as a welfare recipient or as an unskilled wage-laborer is influenced neither by his extended kinship network nor by those skills and abilities that were valued in his "traditional" culture. That income must appear inexplicable and capricious to those relying upon it. People in these economic circumstances are continually made aware that performance of extended kin group obligations counts for nothing in the labor market. They are similarly made aware that "traditional" skills and abilities are not in demand; that they can obtain employment only as unskilled workers unless they have developed skills valued within the job market. Even those who have managed to obtain valued skills find that their ethnic (and sometimes racial) traits may be barriers to their employment in positions that their skills actually merit. Income derived from unskilled wage-labor or welfare constitutes the kind of income that I suggest is associated with the consanguineal household. Features of this kind of income, such as low pay, irregularity of employment, separation of the sexes, and migration are undeniably important. But these features are secondary, and often particularistic, results of the nature of the income.

I suggest that "male absenteeism" due to migratory wage-labor (Solien 1959:224), a "surplus of females" (Otterbein 1965:75 and Solien 1959:224), and the "physical separation of adult males and adult females" (Kunstadter 1963:62) are inadequate explanations of the consanguineal (matrifocal) household. Such explanations do little more than "explain" a phenomenon by paraphrasing its more obvious characteristics -- absence of adult males, presence of adult females, and an associated sexual imbalance among adults.

Kunstadter admits that migratory wage-labor among some Caribbean peoples is associated with matrifocal groups (1963:60-61), but stresses that migratory wage-labor among Anglo-Europeans fails to produce matrifocal units (1963:61, 63). He sees this as support for the position that physical separation due to sexual division of labor accounts for the matrifocal group, noting that "... the matrifocal family will not develop when families migrate as wholes" (Kunstadter 1963:63). But he fails to investigate differences between Caribbean and Anglo-European kinds of migratory wage-labor. I am unsatisfied that pointing out the physical separation of men and women in one instance and their co-residence in another, tells me anything not implicit in the definitions of matrifocal and nuclear domestic groups. I am far more interested in knowing <u>why</u> "families migrate as wholes" among Anglo-European farm laborers but <u>not</u> among the Caribbean societies studied. Perhaps migratory wage-laborers within Caribbean societies are unskilled and Anglo-European migratory wage-laborers are semi-skilled or skilled.

Data gathered by Padfield and Martin on migrant farm workers in Arizona reveal that "Anglo-aggregates" (whole families) "... represent the skilled Anglo-American family workers" (Padfield and Martin 1965: 180-181, 277-280). They also identify an "Anglo-isolate" group differing "... sharply from Anglo-aggregate in that they generally occupy the lowest positions. They are social isolates ... They are old and middle-aged men who are social and vocational rejects" (Padfield and Martin 1965:181). They are men of whom one foreman said, "All these guys are running away from their wives" (Padfield and Martin 1965:220). In doing so some of these men undoubtedly left matrifocal households in their wake (however briefly such households existed).

In summary, I concur with Kunstadter (1963:61) in rejecting migrant wage-labor as <u>requisite</u> for the matrifocal household and with Kunstadter (1963:60) and Solien (1959:22) in rejecting "slavery conditions" and "African antecedent" explanations. Moreover, Solien seems to have been approaching the position advanced here. At one point she notes, "In any system where the man is unable to achieve job security with an adequate minimum wage we would expect to find consanguineal cores with a series of unstable, temporary relationships between women of this household and outside men ..." (Solien 1959:192). She later observes, "Black Carib society shows that the consanguineal household may give way to the affinal (especially the nuclear family) household only when the social and economic conditions in the larger, external, or Western world offer to the males an opportunity to obtain those skills and develop those abilities necessary for the individual to exercise control over his income possibilities. Within a monetary economic system, extended family ties may be weakened by the practice of wage-labor and the associated individuation and by the income possibilities afforded through impersonal institutions of the external society -- welfare organizations.

The suggested hypothesis is: consanguineal residence units will be found where income primarily derives from welfare and/or unskilled wage-labor. Undeniably, any distinction between skilled and unskilled income is both arbitrary and applicable only to a certain society at a specific time level. Yesterday's blacksmith may be today's welfare recipient. Skills in great demand today may go begging in the job market of tomorrow. Consequently the matter of change in economy and in household organization is crucial to an understanding of their interrelations.

E. Transitions, Composites, and Multiple Dependencies

Three kinds of income have been identified. These were income derived from: (1) a resource controlled by an extended kinship network, (2) the individual's skills and abilities, and (3) welfare and unskilled wage-labor. Nevertheless, a residual category of income may also be identified. Annuities, retirement income, veterans compensation, and similar kinds of income all fall within this residual category. They are not derived from a kinship network resource, are not necessarily derived from employment of skills or abilities, and are neither welfare nor income from unskilled wage-labor. Such residual income is not dealt with here because it constitutes a minute fraction of community income.

Three categories of household organization (extended family households, nuclear family households, and consanguineal households) have been examined. But they were dealt with separately, with little attention to interrelations among them. It is doubtful that any society consists solely of any one of these categories of household organization. Household development is a matter that must be taken into account in assessing associations between changes in income and household organization.

For example, if I claim that matrifocal households come into being -- in part -- because the male has failed to fulfill the father-husband role expected of him, two operational problems arise. I cannot assess role fulfillment failure within the matrifocal household, because the role may not be occupied in such a household. If I examine those households in which the husband-father is doing poorly as bread-winner, I find myself examining nuclear family households. The crux of both problems is that a presumed precondition (role fulfillment failure) can exist only in households <u>other than</u> the kind those pre-conditions presumably create (the matrifocal household). The problem could be resolved by identifying those households that are going to become matrifocal ones. This is one reason for employing household developmental cycle analysis (see Chapter VI). Transition from one household type to another may stem from a number of factors (such as death of a spouse, securing a reliable job, destruction of the residence). Nevertheless, the emphasis here is on income patterns and household types. I do discuss other factors where they are clearly germane. But they are not a part of the theoretical position I am now presenting.

Related to the above qualification is the consider-ation that I use change in income or household organization as a means of clarifying interrelations between income patterns and household types. Income changes, household organizational changes, and the derived household developmental cycles, are not presented as variables or as bases for explaining the interrelations specified in the hypotheses. These change matters are investigated as considerations that serve to qualify, expand, limit, or otherwise refine those interrelations.

Just as all three household types examined may exist in any society, so may the three kinds of income exist in any household. This "compositeness" of income can be examined in two forms. The first, which will be examined now, is composite income resulting from any one individual having income from a combination of the kinds of income outlined. The second, which will be examined a little later, has been called "multiple dependency." This is the income situation resulting when several persons within a given household contribute to the total income of that household. One distinguishing feature of these two categories stands out. Whereas composite income can exist within any type of household, multiple dependency can exist <u>only</u> within those households having multiple contributors to the total income. A one person household (see Chapter VI) may exhibit a composite income; it cannot have income of a multiple dependency sort.

A household may receive income deriving equally (or nearly so) from any combination of the three kinds of income noted. This means that the three hypotheses already presented apply only to those households with single income patterns, income derived primarily from only one of the three sources identified. Although four combinations of these kinds of income are theoretically possible, none are adequately represented within the study community. Therefore, although recognizing the composite nature of some income patterns, I will refrain from introducing hypotheses that cannot be tested.

Multiple dependency is the second form of income "compositeness." Here it is the income providers, not the kinds of income, that are plural. But I believe it is important to note two sub-varieties of multiple dependency. The first results from periodic variations in income. In this case the household income <u>at any one point in time</u> is not strictly one of multiple dependency. An individual may support the household for a week, month, or season. But due to the instability of some income and the seasonal nature of other income, different individuals will support the household at various times throughout the annual cycle. Only by assessing the annual household income does the multiple dependency become evident. The second kind of multiple dependency reflects the inadequacy of an individual's income for the separate survival of the earner and his own dependents. Through the pooling of income and the sharing of expenses, several earners and their respective dependents can realize a higher effective income with a relatively smaller increase in expenses. In this case true multiple dependency exists for the household throughout the entire annual cycle.

These two varieties of multiple dependency also reflect two aspects of income that are later examined in greater detail. These are the reliability and amount of income. The first variety primarily reflects income seasonality and irregularity. The second variety reflects the low level of pay and relatively small amounts of income generally realized by unskilled workers. In both cases the pooling of income (and expenses) may be regarded as a means of stretching otherwise inadequate individual incomes.

It might be assumed that multiple dependency is <u>associated</u> with extended family households simply because such households (and very few others) contain the necessary plurality of potential earners. And within the study community, the economic necessity of pooling income seems to account for the existence of the extended family residence units to an extent. But such a simplified view of the matter raises two serious problems. First, many non-extended households exhibit multiple dependency. Second, if a person participates in such a household only because of economic necessity, extended family households should be as unstable as the economic conditions. If a person continues as a participant in an extended family household only because he is unable to support himself and his dependents apart from it (with his low level income), presumably he would leave and set up a separate household as soon as his income permitted. It is possible that in some contexts that income would never permit establishment of a separate household. But under conditions of rapid acculturation (and within the study community), the likelihood of income improvement must be admitted. <u>Some</u> extended family household members who did obtain better paying jobs (among the Salt River Pima) did leave the extended family household when the first large paycheck was received. But other people who had such income improvement continued participation in the extended family household, even though this meant their income went largely to support under-paid or under-employed members of that household. What appears to be the distinction between those who left and those who remained in an extended family household is the amount of income realized on land held by members of those households. Those who left were members of residence units with small total lease incomes. Those who remained were members of residence units with larger total lease incomes. This suggests that the monetary importance of the land held by these residential kinship networks is a major factor in the stability of such residence units. It may be significant that the unstable extended family households (those that individuals tend to leave when their incomes permit) exhibit histories of development placing them within one household developmental cycle, whereas the stable households (in which individuals remain after income increases) exhibit histories placing them within a different developmental cycle (see Chapter VI).

Three hypotheses are indicated: (1) *where several persons jointly contribute to the income of a household, the residence unit is expected to be of an extended family type*, (2) *where primary household dependence is on* lease income, multiple dependency is expected, and 3) where multiple dependency exists within an extended family residence unit, those with economically significant kinship resources will be stable; those without such resources will be unstable. What constitutes an economically "significant" resource must be determined for each societal context. And identification of the kinship network controlling such a resource is similarly dependent upon specific conditions in the society under investigation. These conditions at Salt River are examined in Chapter VII. Since the associations predicted by the three primary hypotheses rest on presumed characteristics of the economic variables (income amount and income reliability), the hypotheses presented below introduce the possibility of identifying *why* households constituting exceptions to the primary hypotheses, do so.

The secondary hypotheses are:

1. *High total income is directly associated with extended family residence units.*
2. *High total income is directly associated with nuclear family residence units.*
3. *High total income is inversely associated with consanguineal residence units.*

4. _Income reliability is directly associated with nuclear family residence units._
5. _Income reliability is inversely associated with consanguineal residence units._
6. _Income reliability is directly associated with households primarily dependent on skilled wage-labor._
7. _Income reliability is inversely associated with households primarily dependent on unskilled wage-labor and/or welfare._
8. _High total income is directly associated with households primarily dependent on lease income._
9. _High total income is directly associated with households primarily dependent on skilled wage-labor._
10. _High total income is inversely associated with households primarily dependent on unskilled wage-labor and/or welfare._

F. _Summary of Hypotheses and Testing Operations_

Two variables are under investigation, income patterns and household organization. The income pattern variable was divided into three types of income.

The household organization variable was initially discussed with emphasis on three basic forms (extended family household, nuclear family household, and consanguineal household). Additional household types were mentioned briefly (for such a discussion see Chapter VI). Three primary hypotheses were presented, concerning specific associations of sub-divisions of the prime variables.

I introduced change in income and in household organization as a means of further clarifying the interrelations between two prime variables. But no hypotheses explicitly relate to change. Two hypotheses, concerning multiple dependency, were presented. Two intervening variables, amount and reliability, followed them and ten secondary hypotheses were outlined.

The household variable of each primary hypothesis is expressed in terms that are operational ones. Household organization is effectively determined by examination of the census data collected for each household and structural diagrams of them prepared in the field.

The "unstable" household is indistinguishable from the "stable" kind on purely structural grounds. Instability is determined by reference to the developmental histories obtained for each household. Another kind of "instability," not usable as the basis of categorization because it is highly inferential, is role fulfillment. Even on an inferential basis, it is possible to identify only two tangible expressions of role fulfillment failure; one for each sex. Within the study community, the role expectations are that a man occupying the position of husband-father should provide economic support for his wife and children. A husband-father is expected to be <u>the</u> breadwinner (it appeared that the extent to which a man's wife was contributing to the household income was an index of his failure, but I cannot satisfactorily document this). A woman occupying the position of wife-mother, within the study community, is expected to care for her own children, comfort them, nurse them for at least the first few months of infancy (although much variation is apparently accepted here), and prepare meals for them. It is possible to infer that a husband-father who is <u>not</u> the breadwinner is not adequately fulfilling his societally defined role expectations. Similarly, a wife-mother who is not adequately caring for her children, is "failing" in her role. This also suggests that at Salt River and among neoteric societies with similar role expectations, economic factors impinge more directly on the husband-father (Rodman 1966:682). This may explain the reported predominance of matrifocal households and the apparent scarcity of patrifocal households.

Detailed examination of the household forms present at Salt River and the numbers of each type are presented later (see Chapter VI). Household developmental cycles and their relevance to the problem are also examined later. Outlining how the economic variable of each primary hypothesis is made operational will complete the task of relating the preceding theory to the specific body of data obtained.

For reasons presented later (see Chapter VII) the following features of Salt River economy serve to operationalize the income patterns. The primary economic terms are: (1) income derived from a resource controlled by a kinship network, (2) income derived from individual skills and abilities, and (3) income derived from welfare sources and/or unskilled wage-labor (the residual category, as noted earlier, is not examined because it is inadequately represented). At Salt River, lease income constitutes income derived from a resource controlled by an extended kinship network. Although land is "owned" by individuals rather than by some corporate kinship group (no such group exists), it is inherited within a kinship network. Since the amount of "owned" land was fixed at the time of allotment, and can be obtained (for instance, by a young person wanting to build a house) only through "inheritance," effective possession of land is controlled by "elders" of a kinship network. How this works is detailed later (see Chapter VII). But it may be noted here that "inheritance" can take place before (as a gift) or after death of the land owner. Inheritance after the death of the owner depends on either a will or distribution of an estate among all consanguineal kinsmen. The latter is in fact heavily influenced by a judgment made by more distant and generally elder survivors of the dead man. A man's survivors will have discussed the potential heirs, in terms of "deserving" the estate, prior to his death. Heirs who left the reservation will be "remembered" or "forgotten" depending on whether they visited frequently or rarely. Heirs living on reservation will "be" full or half siblings, older or younger siblings, legal or illegal offspring, depending on whether they assisted or ignored the "old man" in his later years. In this manner, the extent to which each potential heir has maintained functional relations with kinsmen becomes the basis for assessing the kinship claim each heir has to the estate. In the absence of adequate record maintenance by either the Tribal Council or the B.I.A., heirship claims are frequently decided on the basis of the statements of those survivors who are not heirs. As can be imagined, some heirs who have perfectly valid kinship claims to the estate are thus cut off from inheritance. Their complaints appear to be a major reason the B.I.A. has been encouraging the writing of wills and is attempting to work out the actual relationships that form the technical basis for inheritance of an estate. Nevertheless, the B.I.A. authorities do not seem to be fully aware of the extent to which "manipulation" of kinship claims is practiced by non-heir survivors of a person who has died without leaving a will. Because of these practices, households for which land-leasing is the major source of income are regarded as having income derived from a kinship network controlled resource.

Income derived from skilled work (skilled wage-labor, enteprenurial activities, professions, etc.)

is regarded as being derived from application of individual skills and abilities. Here the relation between the variable and its "operational index," is extremely close; holding a "skilled" job is presumably dependent upon individual skills and abilities. Nevertheless, two biasing considerations may be noted. People without skills may secure "skilled" jobs through nepotism and those <u>with</u> skills may be unable to obtain appropriate jobs because of ill-health, racial or ethnic discrimination, etc. These considerations cannot be ignored, but neither can they be effectively evaluated so as to correct for their influence. It can be argued that performance, whether on a job or on a test, is the only practicable way of assessing skills. I make note of these considerations because they will presumably depress correlational values below the expectable levels.

Income derived from welfare sources and unskilled wage-labor is stated in terms that are themselves operational ones. My placing these two kinds of income together in one category does not mean that I am unaware of the differences between them. Rather it means that I am primarily concerned with the similarities that link them. Some of these were indicated in the secondary hypotheses stated above -- low amount of income, variability and "capriciousness" in reliability of income. But the paramount similarity (the one that constitutes the prime reason for placing them in one category) is that both are beyond the control of the individual (through his skills and abilities) and of his kinship network. Both welfare and the market for unskilled labor are controlled, almost completely, by forces originating outside the social milieu of the "neoteric individual."

Income amount is one of those characteristics dealt with among the secondary hypotheses. Amount of income can be evaluated, within a household, in two ways: (1) total household income and (2) per capita income for a household. I consider it both ways. The full range of household income levels within the community constitutes the basis for this evaluation. Actual income totals are scaled and divisions of "high," "average," and "low" income determined with reference to the community distribution of household income levels. Similarly, per capita income for all households are scaled, and "high," "average," and "low" per capita income levels determined with reference to the study community range. In both cases, the basis for assessing income is one calendar year (1964).

Another characteristic of income examined is its reliability. The number of months of the year that an individual actually received income from any source is taken as the basis for evaluating the reliability of that income. The divisions indicated by conditions at Salt River are: (1) income for nine to twelve months -- high reliability, (2) income for three to nine months -- average reliability, and (3) income for less than three months -- low reliability. These categories would be inapplicable to a "typical" Anglo-American community; income for four or five months per year would not be average there. This in itself is an index of the marginality of the Salt River community. Seasonal or migratory wage-labor would seem to create problems in such a simple categorization. For, it might be argued, even if a person is only working two months per year at seasonal wage-labor, this might still be very reliable as a source of income. Such is not the case at Salt River. First, community members do not engage in _migratory_ wage-labor. They reside on the edge of the most important center of employment in Arizona. The distinction between work on or off reservation, or commuting between home and work, is not a significant one either. Second, virtually all workers _do_ "commute."

Distances as small as three blocks or as great as thirty miles are generally traveled by automobile. Persons working off reservation may travel shorter distances to their job than those working on reservation. Parts of the reservation are as far as thirty miles from the inhabited portion of it; and reservation roads are poorly maintained. From downtown Phoenix to the Salt River community is a distance of fourteen to sixteen miles, all of it over well-maintained all-weather streets and highways. Downtown Phoenix is less than thirty minutes driving time from the most distant portion of the community (Western Management Consultants 1965: 294-297). Driving from the northwestern corner of the community to its southeastern corner (Lehi sub-community) generally took me three-quarters of an hour (in good weather over twenty-three miles of reservation roads). Farm labor, moreover, is not strictly seasonal. Unskilled farm work is more often seasonal than semi-skilled or skilled work (heavy equipment operation, crop dusting, irrigation maintenance). But the seasonal unskilled work is not reliable. Lessees preferred to hire bracero laborers and did so whenever possible. In the summer of 1965, when braceros were not available, high school and college students were widely hired (and generally cursed).

One of the commonest complaints from community members who were involved in farm work was that the lessees did not hire them as regularly or in as great numbers as they thought lessees should.

The reliability of individual incomes is evaluated above. Reliability of household incomes is determined by compiling the income reliability of the individual incomes of each household. This compilation is also weighted in terms of the annual distribution of the component individual incomes. A household with three individual incomes, all of low reliability, would have low <u>household</u> income reliability if those incomes were coming in at the same time. It would have average reliability if those same incomes were distributed throughout the entire year. A household would be assessed as having high income reliability only if one or more incomes capable of supporting that entire household were themselves of high reliability.

One exception to this method of assessing household income reliability concerns lease income. Although such income is generally <u>paid</u> on an annual basis (thus providing income <u>in</u> only one month), I classify it as having high reliability for two reasons. First, the income is <u>for</u> leasing over the period of an entire year.

Second, and perhaps more important, lease income is absolutely certain to come in. Its reliability (for the term of the lease -- from five to twenty-five years) is assured by the U.S. Government and by the bond each lessee must have in order to secure necessary governmental approval of the lease contract.

CHAPTER III. METHODS

A. Data Collection

Before outlining methods proper, two related matters warrant mention. I conducted virtually all interviews in English. About one fourth of the community members still in school were fluent in English, but not in Pima. Generally only people of Papago and/or Mexican ancestry spoke Spanish. A bare majority of the community spoke Pima as their primary language, but all spoke either English or Spanish. A few people whose first language had been Apache, Hopi, Maidu, Yuma, Navaho, Papago, or Maricopa were also present. Two interviews were conducted in Spanish; a Pima interpreter was used only once. This use of an interpreter proved not strictly necessary; a woman who allegedly could not speak English on my first visit, revealed later that she could do so. Since my activities held an implicit promise of aid in economic development and were supported by the Tribal Council, I felt that payment for information might have created suspicion as to my "real" motives. B.I.A. personnel queried the desirability of informant payments, but neither the Tribal Council nor any informants indicated any expectation of payment. As these people had little previous contact with researchers, the absence of payment expectations was not surprising.

Methods of data collection included: (1) participant observation, (2) informal interviews, (3) data retrieval from records, (4) community mapping, (5) recording genealogies, (6) formal interviews with use of questionnaires, and (7) photography. These categories are presented in order of their initial implementation.

Participant observation was primarily a means of establishing contacts and familiarizing myself with attitudes of community members (see Section D, Chapter I). This led naturally to some informal interviewing. Participation first consisted of my laboring with the P.H.S. water project crew. Activities included juggling water pipe, driving trucks, digging and filling trenches, and sneaking smoke and pop breaks whenever possible. During this time there were two to fifteen people per crew, jointly avoiding exertion in 117 degree temperatures. Supervision was provided by an Anglo-American P.H.S. field director and a Gila River Pima foreman. My later participation in building the IBEC houses involved similar activities, with cinva-ram blocks in place of pipe. It was rarely possible to take notes, nor would it have been appropriate. Information gained during this period contributed to my daily journal but little else in the form of tangible records. I could not overstate the value of this period in providing insight into the "mood" of the community and in smoothing the way for getting to know the people. This participation led to my providing rides, supplying beverages, speaking with church groups and taking "pot luck" in reward.

Informal interviewing began immediately after initial work participation. It also contributed to my daily journal and to a pile of random field notes. But informal interviewing continued throughout the entire study period and proved highly profitable. Although I used various approaches, non-directive question asking and interested listening were most effective. Relatively more structured (but still informal) interviewing focused on specific points of information such as kin terms, work histories, social organization (traditional), legends, songs, and singing groups. During these interviews I supplemented pencil and paper with a tape recorder. Two important applications of informal interview data were cross-checking information from other sources and supplementing information for completion of questionnaires.

I found retrieving data from records most exacting and tedious, but record files were a very productive source of information. Since I outline the specific record sources used in the following section, only the techniques of recording need be noted here. I transferred record data to the relevant questionnaire sheet (work history or household census, see Appendix A), or to three by five index cards and ultimately Royal McBee and IBM cards. Record data that I could not transcribe were electronically duplicated. Transfer to either of the questionnaires required only writing the original data in the appropriate spaces. Index cards were compiled to cross-reference household numbers, allotment numbers, mailing addresses, and lease income data. Some cross-checking and collating of data were necessary for these index cards, and in a few instances field verification of information was required. Royal McBee cards were a repository for both data from file records and all information collected through use of questionnaires. Coding schedules employed for individual and household IBM cards are presented in Appendix B. The McBee card permitted both textual and punch code recording of data. We consistently entered text data first in order to minimize error in coding or punching that information.

Presence of information in textual form also facilitated verification of the punching.

I began mapping the community when I finished compiling household location data from old maps and records. These included a map compiled for Hackenberg's census survey of 1962 and "working" maps prepared for use by the P.H.S. water projects in the Lehi sub-community and "Phase I" of the Salt River sub-community. My mapping first centered on checking the road system depicted on existing maps, adding secondary "roads" and trails, and correcting for changes in building locations. I next focused on recording building locations as accurately as possible on the overlay map resulting from my first compilations. I also noted those changes taking place <u>during</u> the study through December, 1964 (primarily construction of the P.H.S. and IBEC houses). I did not attempt to indicate construction begun after that date on my maps. Also, no construction begun after that date was completed during my study. In taking the household census, I noted household composition of each building or building complex and drew a map showing residence units rather than physical structures. I prepared an additional map showing households that were part of larger interacting units such as compounds and neighborhoods. All of these -- the "road system" map, the building location map, the household location map, and the compound and neighborhood location map -- were done on base maps derived from the B.I.A. and P.H.S. maps first noted. The household location map was later reduced in size and reproduced by the P.H.S. The multiple copies that resulted enabled me to leave household location maps with several agencies that had requested them. This also provided copies used in preparing the maps included here and made possible having them at the same scale. I did not include topographic, floral, or other ecological features on any maps prepared. B.I.A. maps presenting land usage, irrigation lines, electric lines, and completed plumbing works were already available. The "working" map provided by the P.H.S. for the "Phase I" area depicted water lines under construction (but not completed within the study period).

Aerial photographs of the community were available, and useful for verification of the location of those buildings appearing on the photographs and still in existence at the time of the study. It was impossible and I deemed it unnecessary for me to conduct aerial photography. Since the bulk of such photographs had been taken between 1953 and 1957, their usefulness was limited.

Recording genealogies began with my analyzing allotment records and outdated tribal rolls. This information provided me a "genealogical base line" from which to work backward in time and enabled me to fill the "memory gaps" common among informants. This base line consisted of those people alive and allotted lands in 1912-1914, plus their descendents through 1935. Except for those who followed the Latter Day Saint activity of tracing their genealogies, few people could recall kinsmen more than three generations distant; roughly the same generational depth provided by file data on allottees. The majority of people, even a few Latter Day Saints, were unaware of some kinship linkages indicated by allottee records. Genealogical work consisted, therefore, of cross-checking the prepared base line genealogies, extending genealogical depth of this information where possible, verifying lateral kinship ties, and collecting information on those people identified in genealogies but no longer living on the reservation. Some Latter Day Saints provided me with genealogies five to eight generations deep. But this depth was not matched by comparable lateral extension of the kinship universe. Siblings were generally identified only for the informant's and his parents' generations; beyond this the prime interest was in establishing relations with named lineal antecedents. Since such generational depth was rare and centered primarily on lineal rather than collateral ties, it was more of a curiosity than a significant aid to genealogical reconstruction. Genealogical information from informants was of little help in expanding the base line genealogies, but was essential in verifying those genealogies. The contacts made and the information I was able to give people interested in their own genealogies, helped win the cooperation and friendship essential to getting the information needed for my study.

Formal interviews were most often conducted in the homes of informants, although a few people were interviewed on chance meetings if conditions were otherwise appropriate. Formal interviews centered on two questionnaires, the "Household Survey Sheet" and the "Work Force Survey Questionnaire" (see Appendix A). Usually after completion of the household survey, but sometimes during it, I encouraged conversation concerning household development. The household survey sheets were keyed to allotment numbers, the photographic log, and a mailing address file; and were assigned an accession number which became the household number. This household number became the basic cross-referent for all other information pertaining to households.

The work force survey was not begun until the household census was completed. I had identified the "potential" work force as less than half the total population (from my census work). But the work force survey was much more difficult to conduct than was the census. Responses were widely varied both in the amount of information given and with respect to the attitudes expressed toward giving information. Perhaps after eight months I had ceased to be a novelty. Or the absence of any tangible results from my several months work may have contributed to a lessened interest in continued cooperation. But most importantly, information sought in the work force survey was more sensitive and personal than the census data. This was undoubtedly a major factor behind the decline in cooperation.

A community member who had worked on Hackenberg's 1962 census had been saying for months that I would not get the kind of information asked for on the work force survey. He and two other community members had helped in phrasing the questionnaire and agreed that the manner of seeking the information was not likely to arouse any resistance. Moreover, this man had himself conducted a survey of income and work habits in 1963 (sponsored by the B.I.A.). Despite his being a community member acquainted with virtually everyone in the community, a lifelong reservation resident, and a son of an original allottee, he had unsatisfactory results in getting income and work history information. Inasmuch as he was also the person who appeared to resent my doing "his" work, he may have been trying to discourage me and may have influenced informants not to cooperate on the work force survey. But his own lack of success in getting work force information and my successes in obtaining good information on the census survey make this questionable.

Tribal Council members' reactions to the questionnaire are illustrative. Several of them had a hand in designing the questionnaire, and the council vote approving its use was unanimous. Yet some were clearly reluctant to tell me their income for the year, and several managed, tactfully, to avoid giving complete work histories. Although it might seem that this kind of information was simply not divulged, work and income information had been <u>volunteered</u> during the household census survey and in informal interviewing. One man, in a reflective mood during an informal conversation, confided that he "couldn't hold a job" because of a drinking problem. That same man was less frank (though cooperative) in giving similar information during the work force survey interview.

In consequence of the relatively unsatisfactory response level, about forty percent of the work force survey sheets required further work. I undertook additional informal interviewing and used secondary informant sources. File records and my earlier notes were carefully re-studied. With joint use of such data I was able to bring nearly all work force survey sheets up to an adequate level of completion.

Photography was done with a 35 mm. camera. Black and white film was used for all file photographs. Color film was employed only for scenic and general interest photography. I developed and printed the black and white film, using darkroom facilities provided by the B.I.A. Photographs for file were printed on three by five stock. A few prints were made up on five by seven stock for use in work progress displays prepared by the B.I.A. I retained a full set of all prints, but the negatives and a set of duplicate prints were left with the Salt River Agency B.I.A. office.

B. Sources

The data actually recorded and utilized were but a fraction of those available to me. I could not have exploited all available file data within the research period. All available sources deemed directly relevant to the research problem were surveyed. Of those marginally relevant, the sole extensive source I did not use was related to problems of heirship. I scanned over this material and noted general patterns of ownership and inheritance among reservation residents. But data on non-residents (encompassing a population estimated in excess of 7,000) were not recorded.

Data from informants were recorded on household census sheets, work force survey sheets, and in the form of a field journal, notes, and tape recordings. Much of the information was later transferred to other forms, such as Royal McBee cards, in the field. Informants included Salt River Day School administrators, teachers, and students; B.I.A. employees (both Indian and non-Indian); non-resident Indians of diverse tribal backgrounds; land leasors; P.H.S. and Arizona State Employment Service personnel; and several persons associated with the University of Arizona, Arizona State University, and the Office of Economic Opportunity. But Salt River community members comprised the overwhelming majority of informants.

File information ranged from reports conducted or sponsored by the B.I.A. or Tribal Council, through the monthly newspaper published by the Tribal Council, loan records maintained by the Tribal Council, case records of the Maricopa county welfare agency and B.I.A. general assistance records, to the lease payment schedules filed with the B.I.A. and pay records of both the B.I.A. and Tribal Council. Two very helpful record sources were a census supervised by Dr. Hackenberg in 1962 (permitting preliminary delineation of the population and scheduling of research work so as to get the most information within the time available) and an income survey conducted by William Rivers, Jr. in 1963. Records of the Bureau of Ethnic Research made available by Dr. William H. Kelly, helped me organize and assess my data on the 1964-1965 population, with reference to the 1962 population. The first record source made available to me was a card file listing allottees, allotment numbers, and all known allottee ascendents and descendents, compiled by Salt River Agency Superintendent, William S. King.

Mapping and photography, activities producing information on the physical environment, were conducted with relatively little recourse to other sources of data. Although many maps of the reservation were available, only one had been prepared that presented all house locations. This was the key map to spatial distribution of households as defined in Hackenberg's 1962 census. The mapping was done, however, by a community member and the delineation of households appeared to reflect an assumption that each occupied building was a separate "household." Moreover, both households and buildings had been moved and undergone reorganization during the intervening years. This map expedited my work, but change, and my mapping of housing units and household units separately, resulted in my maps being markedly unlike those of 1962.

Photography was begun -- encouraged and assisted by the B.I.A. -- with the goal of providing a photographic record of occupied buildings and their condition. This was accomplished and various work activities, including a weekly record of construction of the IBEC house, were also recorded. A total of 900-1,000 black and white photographs were taken for file. These documented major phases of housing construction projects, some community activities, and the full range of house types.

C. Outline of Data Obtained

Although much information was obtained that was not recorded, and many specific bits of information were recorded that do not warrant inclusion here, the items outlined below comprise the bulk of data collected (see also Appendix A).

1. Household Census sheets

Each sheet provides birth, death, and marital data; kinship ties; mailing address; land ownership; education and tribal affiliations for each person within a household.

2. Work Force Survey sheets

Each sheet provides information on work history, job skills, income levels, regularity of employment, and attitudes toward jobs attempted for each individual in the work force.

3. Royal McBee individual cards

Each card provides a synopsis of census, land holding, kinship, residence, and income data for an individual.

4. Royal McBee household cards

Each card provides a synopsis of household composition, kinship ties, organizational history, income pattern, and economic history for a household.

5. Photograph file

This includes one or more prints of each inhabited building, representative photographs of major work stages on the P.H.S. water project, construction of the IBEC house, and progress of the Mutual Help housing program.

6. Photographic log

A listing of technical data, location, and date for each photograph, keys each photograph to related data sources.

7. Mailing address index file

This card file provides mailing addresses, household organization summaries, identification of household head, and household number for each household.

8. Allottee and heir list

This forty-one page outline of allottees, allotments, heirship patterns, and kinship relations among allottees and heirs provided the starting point for genealogical investigations.

9. Genealogical file

This compilation of genealogical information confirmed by informants comprises the basis for the genealogical charts prepared.

10. Genealogical charts

Twenty-five charts present the relationships among some twenty-five percent of the community members.

11. Lease income file

All lease income payment schedules submitted by lessees to the B.I.A. were duplicated and collated to provide this basic source of lease income information.

12. Loan status file

This is a card file presenting data on the outstanding indebtedness of each person having a Tribal Council loan.

13. Welfare status list

This is a listing of welfare monies paid from the B.I.A. general assistance fund and those paid by the Maricopa county welfare agency to Salt River residents in 1964. It is the definitive basis of welfare income statements and provided a cross-check on the accuracy of informant reporting on such income.

14. B.I.A. employee file

All Salt River B.I.A. employees for 1964 and their salaries are presented in this compilation of one wage-labor income source.

15. Tribal Council employee file

Employees of the Tribal Council and their salaries for 1964 are tabulated in this file of another wage-labor income source.

16. Household location map key list

This listing of residence numbers, household heads, and mailing addresses is the key to the household location map.

17. Household location map

Each household, identified by an assigned number, is shown on this map (numbers are omitted from Map IV).

18. Father number list

This listing of each community resident presents the father number (a patrilineal genealogical key number assigned by the Bureau of Ethnic Research to each member of the total Pima-Papago population), household membership, and name of each person within the Salt River population. This number identifies each person of the Salt River population within the larger Bureau of Ethnic Research population and permits positive identification of any individual.

19. Awawthm Awawhan file

Copies of each issue of the monthly Salt River Pima Maricopa Community newspaper, from its beginning in October 1963 through August 1965, provide a chronological index of events during and prior to my study period.

20. Field journal

This daily record of my research activities provides an overview of the work progress, information in depth from some of the more generous informants, and a chronology of my research.

21. IBM individual card file

This set of data cards repeats the information recorded on Royal McBee individual cards for more effective data handling (see Appendix B).

22. IBM household summary card file

The information recorded on Royal McBee household cards was also replicated for efficient data handling.

D. Data Processing

Data handling can be presented in terms of the seven categories outlined for data collection. Information obtained in the course of participant observation, informal interviewing, and much of that from file records, was initially recorded in the form of pencil and paper notes. Genealogies were initially worked out from file sources. My genealogical work with informants consisted of verifying, correcting, and supplementing these "pilot" genealogies. Community mapping was initially done in pencil on overlay outlines derived from B.I.A. and P.H.S. maps. The resulting household location map was transcribed onto an area base map provided by the B.I.A., then reduced in size and duplicated by the P.H.S. I did my own photography of houses. I was helped by a Salt River Day School teacher in developing and printing the negatives. Information elicited by formal interviewing was recorded on questionnaires. Information not specifically solicited by the questionnaire was either written on the backs of questionnaires or in the field journal. All data resulting from these activities -- excepting that derived from file sources -- will be referred to as "raw" data to distinguish it from "processed" data.

The first stage of data processing was the transcription, coding, and punching of census, kinship, household, education, land-holding, and income onto the Royal McBee individual cards. Two Neighborhood Youth Corps workers, the B.I.A. Projects Development Officer -- Hal Booher, and I typed text information on the face of the card. Hal Booher helped me cross-check information going on the McBee cards with the raw data sources and file materials. We also completed the punching and verification of these cards. Superintendent King, Booher, and I jointly prepared the coding schedule employed. I handled all other aspects of data processing begun or completed in the field. My wife and I cross-checked the Salt River population against the population files maintained by the Bureau of Ethnic Research. Dr. Kelly and the Bureau staff were invaluable in making possible completion of this final portion of data collection.

Coding schedules for transferring data to IBM cards were prepared by myself; punching and verifying were completed with the assistance of the computer staff of Wichita State University. Free computer time and use of auxiliary equipment were also made available by Wichita State University. Everett L. Cook and Dr. Larry L. Havlicek provided assistance in using prepared programs for the statistical analyses conducted. I benefited from discussing statistical techniques with Dr. David F. Aberle and Dr. Joseph G. Jorgensen (University of Oregon), Dr. Larry L. Havlicek (Midcontinent Regional Educational Laboratory), and Dr. Melverne J. Klingsporn (Wichita State University), but both the final decisions and the results are my responsibility.

E. Data Collection Problems

The major problem lay in getting accurate and complete data from informants, specifically in the area of income and work history. Fortunately, I was given access to ample record files and was able to cross-check and complete most of this material.

To summarize briefly within the seven categories of data noted, it can be said that virtually no problems were encountered in gaining access to file data, in mapping the community, or in photographing households. Genealogies posed a problem only in one sense -- genealogical depth was quite shallow, rarely exceeding three generations, except among Latter Day Saints. No reluctance to give this information was apparent. Even those lacking the Latter Day Saints' interest in genealogical reconstructions, were concerned with kinship in relation to inheritance.

Participant observation was a mode of establishing contacts rather than a formal method of data collection. No problems (other than the heat and my being out of condition for hard labor) were encountered.

Informal interviewing was influenced by the generally preceding activity of interviewing for the household census sheet. Attitudes established during collection of household census data were more conducive to informal interviewing than were those associated with collection of the work histories. For this reason, I will discuss problems of informal interviewing associated with work histories as part of the problems of formal interviewing. Although wide variation existed with respect to individual responses in informal interviewing, the most common problem was the non-specificity of much information. Many informants were unable to give specific dates, figures, locations, etc. for events they discussed. It might be assumed that this apparent inability masked an unwillingness to discuss certain topics. I cannot categorically deny the possibility, but the context of conversations and nature of topics make it an unlikely explanation. First, informants themselves generally brought up the topics discussed during informal interviews. Second, the information concerned such presumably non-sensitive matters as ages of children, dates of military service, and wife's maiden name. Third, some informants who had given me specific figures on amount of welfare income and asked my assistance in interpreting income tax filing instructions, were as unable to recall specific dates, names, places, etc. as those who were less cooperative. Such "memory gaps" did make for unevenness in data obtained through informal interviewing. But information on file permitted adequate supplementation of those data. File data also enabled me to extensively cross-check informant comments. This cross-checking, together with the fact that no one was required to tell me anything, permits me to say that little false information was given. Certainly many opinions were given that might be viewed as "erroneous." And judgments were given that cannot be evaluated as "true" or "false." So far as information that could be verified is concerned, the frequency and extent of error in informant data were well within expectable bounds of "honest error."

I had similar problems of informant vagueness during formal interviewing. But household census information was given freely. Several times when an informant could not recall birth dates, he located the family Bible and found them in it. The work force survey questionnaire, however, often evoked a degree of non-cooperation. Although the "I don't know" responses increased sharply in relation to those encountered with the census sheets, there was an even greater increase in failure to note certain sources of income. There was a lesser, but significant, increase in people giving information that conflicted with file data. It is noteworthy that my access to sources of verification data was not known to informants. Only in the course of genealogical work did I indicate that I had other sources of information.

informal interviewing that was done immediately after use of the work force survey sheet was also characterized by non-cooperation. During later visits with these people, a more open and cooperative attitude was evident.

F. Evaluation of Data

Reliability of the data is indicated by the problems encountered in collecting them. Work histories and income data from informants are least reliable. The corroborative data pertaining to work histories and income (obtained from file sources) make this information far more reliable (and complete) than would have been the case if I had been forced to rely only on informant statements. Census and household composition data are significantly more reliable. But less "corroborative" information was available. The remaining information is virtually as reliable as possible given human fallability in recording, transcribing, and processing. Apart from the reliability of census and household information, one limiting consideration must be noted. This is not a matter of data collection nor data reliability proper, but a problem in data interpretation. Because of the rate of household re-organization, chronological definition of households is somewhat arbitrary. Three households underwent re-organization within the week following completion of the census work for those households. Re-organization does not refer here to simple changes wrought by death or birth of an individual, but to those structural changes brought about by divorce, marriage, elimination of a generation, addition of a new generation, fission or fusion of existing households. The month of December 1964, was selected as the "base line," and the structures defined for each household refer to some point of time within that month. Even within this single month there was re-organization. And consequently the base line period does not imply that household structures were all contemporaneous. Nevertheless, the majority of households were stable over the entire study period. Approximately sixty-five percent of those "households" delineated in the 1962 census appeared to have been stable throughout a three year period. This has clear implications for any attempt to correlate household organization with income patterns, because the latter are defined on the basis of _annual_ incomes. By collating household histories and household organization, I was able to delineate cycles of household development. These cycles of development provide a major tool for taking into account the dynamic aspect of households. For purposes of coding and transcribing the household information onto Royal McBee and IBM cards, however, it was necessary to regard structure, composition, and location of households as static phenomena.

IV. BACKGROUND

A. Location, Geography, and Climate

The community consists of the inhabited portion of the Salt River Reservation. The reservation, roughly triangular in shape, is located in south central Arizona, below the Mogollon Rim. Less than a third, or some 14,590 acres of the total reservation area of 46,626 acres, is irrigated. This irrigated area is a coherent one situated in the southwestern third of the reservation. It is coextensive with the study community.

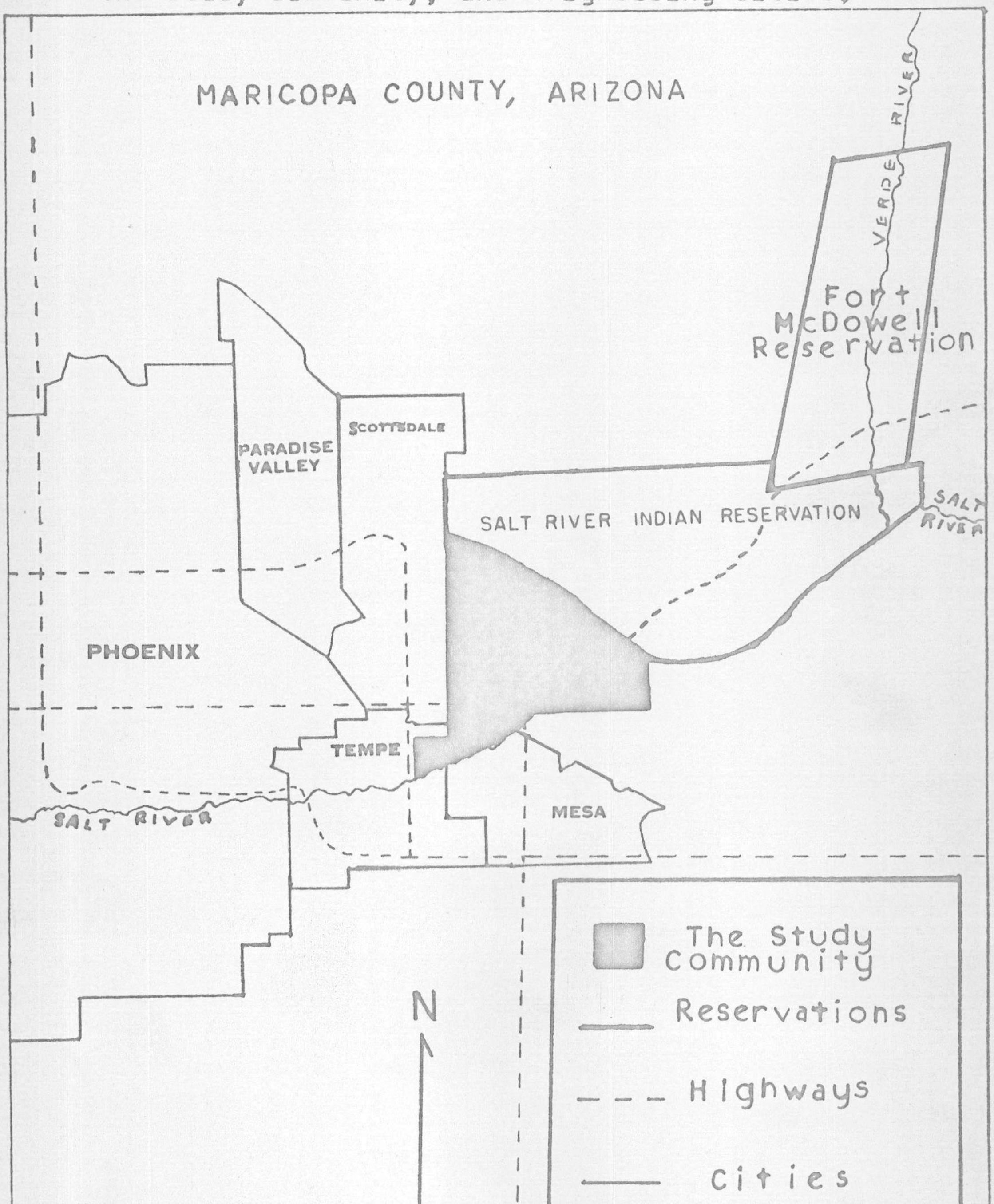
The cities of Mesa, Paradise Valley, Scottsdale, and Tempe, Arizona, are contiguous with the reservation to the south, northwest, west, and southwest, respectively. These cities are adjacent to one another in a manner forming an unbroken metropolitan belt between the reservation and Phoenix, Arizona. The Salt River Pima Maricopa community is thus within the outer fringe of the Greater Phoenix megapolis (see Map I).

Access to the community from the north or south is provided by Arizona State Highway 87, which traverses the reservation from its northern to southern boundaries. McDowell Road, a primary traffic artery beginning in Phoenix, extends through Scottsdale and the reservation. It joins Highway 87 at the eastern edge of the study community. This all-weather road system provides the community with easy access to all surrounding towns and to the complex interstate highway system converging on Phoenix. Weekend traffic counts "of more than 20,000 cars per day" were recorded passing the Tribal Council office, on McDowell Road, in 1961 (Salt River Pima Maricopa Community Council 1961:5). Other major roads and the location of the study community relative to other components of the Greater Phoenix area are shown on Map I.

The community lies entirely in an area of little local relief, the Salt River Basin. Two small areas of eroded buttes lie within a ten mile radius of the community. One of these straddles the intersection of McDowell Road with the Phoenix-Scottsdale city limits. The other lies along the far northern reservation boundary. The McDowell Mountains and the Superstition Mountains, to the northeast and east of the reservation, are visible from the community on a clear day. Southwest of the reservation, the South Mountains are generally

MAP I.

Salt River Reservation,
the Study Community, and Neighboring Cities.



visible. Elevations within the community range from 1,200 to 1,260 feet above sea level, but they fall along a gradual and consistent slope from the Arizona Grand Canal in the north to the dry bed of the Salt River in the south.

The territory drained by the Gila and Salt rivers is physiographically part of the Basin-and-Range Province (Ezell 1961:7 and Walker 1944:51-52). Typical Sonoran Desert ecology prevails. Although alluvial gravels exist along the south boundary of the reservation adjacent to the dry Salt River bed, unconsolidated detrital soils of both alluvial and aeolian deposition occur elsewhere. In scattered zones where differential deposition occurred in the past, caliche strata are present as secondary deposits. These strata exhibit markedly greater resistance to water percolation than do the unconsolidated soils. Due to the generally low humidity, low rainfall, high temperatures, and intense sunlight, upper soil zones are subject to deposition of soluble salts carried upward by hygroscopic capillary action. Such salts must be removed or their alkalinity chemically countered if the fertility of these soils is to be maintained. Periodic leaching was done and acidic fertilizers are now employed, but both increase production costs. Together with a continuing drop in the water table and rise in labor prices, the above considerations make prospects for continued agricultural use of this land somewhat problematical.

Since the Salt River was dammed and its natural flow eliminated, cottonwood, willow, and other flora that flourished along the river have become rare on the reservation. Except for water released from capacity reservoirs in July 1965, and January 1966, the river has not flowed since 1945. The absence of water in the river bed has aggravated the problem of a low water table regionally and indirectly contributed to the soil problems noted above.

Rainfall averages from eight to thirteen inches per year are reported for the Gila and Salt river basins. Slightly under eight inches of rain were recorded on the reservation during 1964. To the south, there are often two periods of peak rainfall: one in the summer and another in early "winter." But for the study region, the bulk of rainfall occurs in a single peak period, from mid-July to early September. Maximum daily temperatures range from 120 degrees in July and August, to 45 degrees in February. Minimum night-time lows range from 75 degrees to 25 degrees in these same months.

Throughout the study period, a maximum of 117 degrees and a minimum of 29 degrees were recorded within the inhabited portion of the reservation. Daily highs most frequently occurred between 3:30 and 4:00 P.M., and nightly lows were not reached until the hours from 4:00 to 6:00 A.M.

B. History

The history of the Pima may be divided into four stages: (1) prehistory, (2) Hispanic acculturation, from 1694 to 1848, (3) early Anglo-American acculturation, from 1848 to 1934, and (4) recent Anglo-American acculturation, from 1934 to the present. The first three of these stages are briefly outlined in this chapter. Events of the last stage are presented later (see Chapter V, Section B). First, it is necessary to note certain variations in usage of the term "Pima" and to clarify the usage to be employed here.

Early Spanish missionaries and explorers applied the term "Pima" to those Piman speaking peoples south of the Salt River Basin, east of the Colorado River Yuman speaking groups, and west of the Athapaskan speaking Apache. Thus, "Pima" referred to all Piman speaking peoples in what is now the state of Arizona, as well as related groups extending into the Mexican state of Sonora. Within Arizona, this included Papago, Sobaipuris, Kwahatk, and "Pima" proper. As the Kwahatk and Sobaipuris ceased to exist as identifiable groups in the 18th century (Ezell 1961:21-22), the Papago and Pima were the only Piman peoples encountered by Anglo-Americans in the 19th and 20th centuries. During the latter half of the 19th century, Pima groups residing along the Gila River came to be distinguished from those living on the Salt River. This distinction was formalized with the establishment of a separate reservation for those 800 Pima on the Salt River in 1879 (Stout 1879).

The Salt River Pima are, therefore, a group which formally came into existence only in 1879. Prior to that time, the unqualified term "Pima" will be used to refer to those Piman speaking groups living along the Gila and Salt rivers. Consequently, I will use the term Gila River Pima only to specify those living along the Gila River after 1879. In prehistory, the term Pima will refer to all presumed Piman speaking peoples. It is important to stress that Piman speakers, now and throughout historical times, comprise a single language group, possess a single physical type, and share a common culture. Distinctions among various groupings of Piman speakers largely reflect differences in residence areas, ecological variations within these areas, and consequent variations in subsistence and cultural emphases.

The prehistory of the Pima has not been clearly delineated at present; nevertheless, as Ezell notes, "The general opinion has been that irrigation on the Gila goes back to the 15th century Hohokam" (1961:37). Continuous occupation of the region by farming peoples for as long as thirteen to twenty centuries is suggested (Fontana, et. al. 1962:84-91). Results of Haury's 1965 excavations at Snaketown should further clarify the picture. Present evidence strongly supports the view that Pima groups had been practicing irrigation-based farming in their present habitat for at least several centuries prior to the first European contacts. Father Kino's visit in 1694 constitutes the first recorded contact with Pima peoples in the Gila-Salt area (Spicer 1962:87). Continuing interaction with the Spanish developed out of the first contacts, and according to Ezell, "non-directed acculturation" (1961:3) characterized Pima-Spanish relations. He contrasts this with the "usual" state of affairs in which "The contact between Europeans and peoples of simpler technologies and different belief systems has usually been disruptive, if not destructive, for the latter" (1961:5). Throughout this period, many new cultigens, especially wheat, were accepted by the Pima (Castetter and Bell 1942:74). Pima use of the plow and techniques of fencing also began during this period (Castetter and Bell 1942:131 and Ezell 1961:28). Adoption of these techniques was influenced by the introduction of cattle, horses, and oxen. These domestic animals made possible effective use of the plow and made necessary protection of the crops. Although commodities other than foodstuffs were traded in pre-Hispanic times, increased trade activity was a function of the availability of European goods (Ezell 1961:28-29). Food became a commodity during this period, but the raising of foodstuffs for the express purpose of trade did not take place until later (Ezell 1961:33). The earliest incidence of wage-labor occurred in this period, for according to Manje, Pima men were hired as soldiers at the rate of 12 reales per day, by Xironza in 1701 (Karns 1954:153). Also, Castetter and Bell note that "In lean years among the desert Papago the bulk of the harvesting on Pima farms was done by the Papago . . . . the custom of such labor for hire was continued until quite recent times" (1942:47).

Throughout the 18th century, Pima-Spanish interaction was remarkably peaceable (Spicer 1962:124-130). In the mid 18th century, however, increasing numbers of Spanish miners and haciendados began agitating for cessation of mission activities (Spicer 1962:128). This led to replacement of the Jesuits by Franciscans in 1767 (Thompson 1951:109). Nevertheless, the Hispanic acculturation period has been characterized by Ezell, as one of "non-directed acculturation" wherein the Pima were simply exposed to a wide range of new cultigens, new techniques, new beliefs, domestic animals, and European goods (1961:3-5).

Anglo-American influence had become significant among the Pima by the late 1830's. Such influence, manifest particularly in new trade goods, had come along the Santa Fe Trail and through Apache country. The extent to which Anglo-American travel through Apache country renewed Apache interest in depredations against the Pima requires clarification. But there was a temporal correspondence between increased contact with Anglo-Americans and increased Apache raiding in the early 19th century. This continued, aggravated by the military disruption brought about by the American Civil War, through the 1860's. Although legal transfer of this territory to United States control in 1848 is taken as the cut-off point, it was the discovery of California gold that brought about the most significant increase in Anglo-American contacts. During the gold rush, Pima transition to full-fledged cash-cropping took place (Ezell 1961:30). Increased activity between Pima and Anglo-American traders further enhanced trade between Pimas and Mexicans (Ezell 1961:30). Because Pimas preferred Mexican silver to American gold, they exchanged gold coinage with Mexicans to the south (Ezell 1961:30). As hostilities with the Apache increased, Pimas turned to their Maricopa allies and to the United States cavalry for assistance. Pima enlistments in the United States armed services reached a high point between 1861 and 1873 (Spicer 1962:147-148); but following this period, Pima enlistments were discouraged. Nevertheless, Pima forces never clashed with those of the United States, and Pima soldiers were regarded as effective ones.

Near the end of the period of intensive Apache raiding, Anglo-American settlers began to pose a serious threat to the water supplies. Since many Anglo-American settlements were upstream on the Gila River from the Pima farms, the water remaining for Pima use became increasingly inadequate. The resulting near-famine period of the 1860's contributed to the build-up of Anglo-American versus Pima friction and no doubt figured in the increasing importance of wage-labor during this time (Spicer 1962:147-148). Increasing friction, small scale raids, cattle rustling, scattered murders, and general animosity continued throughout the latter part of the 19th century and into the first two decades of the 20th century. This not only resulted from conflicting claims to the limited water resources, but also reflected the heightened importance of land and an increasing demand for it by Anglo-American settlers. A population increase further aggravated both land and water problems, but especially the latter. Internal friction among the Pima themselves sporadically flared up, as manifested in the burning of the village of Blackwater in 1878. This result of a water rights dispute between Blackwater and Casa Blanca may well have been an important development leading to the establishment of the Salt River Reservation.

Throughout the 1860's and the 1870's, while Anglo-American encroachment to the east of the Pima lands increased, agitation for inclusion of the Salt River area within the Gila River Reservation gained momentum. Probably in 1867, though accounts disagree (Stout 1877), a band of some 300 Pima did move to the Salt River.

This band leached the soils, cultivated a strip of land north of the Salt River, and incurred the jealousy and further antagonism of their Anglo-American neighbors to the south. Salt River residents claim that Antonio Azule was the "chief" who led the first contingent of Salt River Pima to the new territory. Although his name is mentioned in letters between the Commissioner of Indian Affairs and Agent Stout, the matter has yet to be settled by archival research. From the time the first band moved to the Salt River until 1878, small groups, including individual families, migrated there also.
The destruction of Blackwater was followed quickly by an increase in migration to Salt River, so that in 1879 an estimated population of 800 Pima inhabited the newly established Salt River Reservation (Prescott Daily Miner 1879). The period following establishment of the Salt River Reservation provides an even greater research possibility, for during that time the Salt River Reservation was developed, relationships with Gila River Pima were structured, land was allotted on both reservations, and Pima-B.I.A. interaction patterns took shape. Although the archive material is even richer for the period from 1879 through 1934 than for the earlier portion of Anglo-American acculturation (1848-1879), no comprehensive

attempt to utilize these materials has been undertaken. My brief comments on this portion of the early Anglo-American acculturation period are largely an impressionistic composite of informant comments and governmental and tribal records surveyed in the field. The immense amount of material precluded examining it all, and most was not particularly relevant to the research problem. From establishment of the Salt River Reservation to 1910, cultivation continued with the Salt River providing irrigation water. At the same time, relations with neighboring Anglo-Americans improved somewhat, and governmental programs to "control" water resources were begun. In 1910, formal tribal organization was attempted and tribal rolls were unsuccessfully started. Ten acre land allotments were made to each reservation resident with one-fourth Indian ancestry (including those still in the womb), from 1912 to 1914. Immediately following allocation, farming became somewhat less an extended family enterprise for Pima generally (Spicer 1962:151). With the beginning of World War I, the first incursions of Anglo-American farming cooperatives and the introduction of mechanized farming took place. Throughout this period, continuing Federal reservoir construction went on as it does at present. As the population of the surrounding metropolitan areas increased and mechanization became more important in the 1920's and 1930's, more land came under cultivation by larger farming cooperatives. At the same time, Salt River Pima involvement in the labor market increased. In the mid 1930's, one Salt River Pima (still living) defied the prevailing opposition to letting the "white man" on reservation and leased his land for cotton cultivation.

In summary, the early period of Anglo-American acculturation brought about the following:

1. Establishment of the Salt River Reservation.
2. Allotment of individual lands.
3. Establishment of the basis for tribal government.
4. Decreasing reliance on subsistence cropping during these fifty years.
5. Increasing reliance on cash-cropping during these first fifty years.
6. Decreasing reliance on cash-cropping in the last two decades of the period.
7. Increasing reliance on wage-labor during this last portion of early Anglo-American acculturation.
8. Initiation of cooperative farming, introduction of mechanized farm implements, and greater

competitive pressures from Anglo-Americans, especially during World War I.

9. Initiation of land-leasing by Pimas to Anglo-American farm enterprises.

10. Increased "water control" which decreased the Salt River flow over several decades. At the end of the early stage of Anglo-American acculturation, the Salt River was an intermittent stream even in "wet" years.

C. Summary of Traditional Cultures

A brief summary of aboriginal Pima culture is in order, so as to provide a base line for assessing change. In presenting this summary, I will note contrasts with current cultural features where appropriate. The time referred to in summary as "aboriginal" is the late 17th century; that referred to as "present" is the study period from July 1964, through August 1965.

It is difficult to identify Pima cultural features or to differentiate them from Spanish introductions because Hispanic acculturation was nearly continuous from the first contacts in the late 17th century. Furthermore, no comprehensive chronicles were maintained by early Spanish explorers and missionaries in Pima country. The earliest accounts that could qualify as "professional" ethnographies date from well into the Anglo-American acculturation period (Grossman 1873 and Russell 1908), after some two centuries of acculturation had taken place. Ezell has undertaken archival research and drawn together an outline of late 17th century Gila Pima culture (1961), and it is this work which provides the basis for the summary presented here. It should be remembered that the Salt River Pima were not a separate group prior to 1879. The work of Grossman (1873) and that of Russell (1908) are employed as the major sources of more detailed information concerning the Pima around the turn of the century.

Santa Cruz Sobaipuris, Papago, and scattered groups of Opas and Maricopas had become allies of the Pima prior to Spanish contact (Ezell 1961:131). Close association of Pima and Papago no doubt dates well into prehistory, as is indicated by linguistic and cultural similarities. The Uto-Aztecan speaking Pima and Papago stand in contrast with their Yuman speaking allies in this respect. Alliance between members of these two linguistic categories seems to have come about for mutual protection from predatory neighbors, but it has not been established how early the alliance came into being. Hostilities between Pima and migratory Yuman speakers west of the Colorado River antedated Spanish contacts, as did hostilities between Pima and Apache. Acquisition of the horse and firearms led to an increase in Apache (and their Yuman speaking Yavapai allies) raiding into the Gila-Salt basins, but did not initiate such activity.

Only two people of Apache ancestry have married into and are presently members of the study community. One of these, commenting on plans to move off reservation, explained that "his (her Pima husband's) folks don't like me; I'm Apache." While this may be only a rationalization, it is interesting that it would have been used.

Archeology indicates that irrigation farming was several centuries old by the time of European contact. The basic New World crops were grown, including the long staple Pima cotton. Cultigens were supplemented by wild foods, primarily mesquite beans, cholla buds, and saguaro sap and flowers (Ezell 1961:131). At present, cholla buds and a syrup prepared from saguaro sap (both purchased from the Papago) are used on "ceremonial" occasions. No significant subsistence cropping is done, for wage-labor and land-leasing have become dominant. Hunting and fishing were practiced aboriginally, but were of little subsistence importance to the Pima (Ezell 1961:131).

Aboriginally, houses were low domed huts constructed by covering a withe framework with mats. These huts were about six feet high and of a diameter some two to four times their height. The "traditional" house is now believed (by Salt River Pima) to be the rectangular adobe, with log beams and a sod roof, of Spanish introduction. Some of the adobes are still present, but more houses are of a composite or "sandwich" type. These consist of a wooden framework with spaced boards as inner and outer wall sheathing. Into these spaces a plastic "adobe" is forced. It dries in place to provide an adobe wall core. Preferred housing is the cement block or wood frame structure common among neighboring Anglo-Americans. Other items of material culture are detailed in many sources (Ezell 1961:49-72; Grossman 1873; and Russell 1908) and need not be repeated here. It is perhaps noteworthy, however, that basket-making is the only Pima technology now maintained by Salt River Pima, although three older women continue pottery-making in the Maricopa tradition.

Concerning social organization, Ezell (1961:131) writes: "The basic social unit was the patrilineal extended family, consisting of a married couple, their sons, and unmarried daughters. Relationship was counted through both parents, covered five generations, and constituted a guide for avoiding incest."

At present nuclear families are the "basic social unit" comprising over half of all households. The majority of informants could recall three generations, some with difficulty. "Relationship was" still "counted through both parents" (bilateral reckoning?) and although marriage does occur between second cousins, such close intermarriage is disapproved. Ezell continues: "Polygyny was permissible but not common" (1961:132). He concluded that "Marriage was unaccompanied by ceremony, and divorce was easy" (1961:133). At present polygyny is neither permitted nor does it occur. Tribal law passed in 1941 required that legal secular formalities be observed, and that law has been observed in the majority of cases. Marriage may be quite simple or elaborate, with the full ceremony of a Latter Day Saint wedding. Ezell identifies patrilineal clans and moieties (1961:133), but only five of my informants recalled any such groups. These informants referred to agamous, named (buzzard and coyote), and now defunct groupings whose functions were largely competitive and confined to "ceremonial" activities; presumably they were moieties. I found only conflicting opinions on how membership in these named groups was determined. Ezell further notes that offspring of non-Pima fathers did not acquire membership with such groups (1961:133). This may be reflected in the present pattern whereby marriage is ideally endogamous for females but not so restricted for males.

Political organization among late 17th century Gila Pima was such that "affairs of each village were in the hands of a council of elders which had a separate structure as a meeting place, where some ceremonial, as well as civil, affairs were carried out" (Ezell 1961:133). Also, "one member of the council was charged with the responsibility of implementing decisions arrived at following discussion" (Ezell 1961:143). There is at present a Tribal Council, but it is not primarily composed of "elders." Members are elected annually; education, ability to communicate, and breadth of contact with community members are given as prime criteria for election. The headquarters building continues as the locale for some "ceremonial" activities but it is primarily an administrative office. According to Ezell, aboriginal "Leaders had no direct authority; government was by example and exhortation, rather than by command" (1961:133). The Tribal Council President now has tenure for a year, rather than only for as long as implementation of a particular decision might take. He is "elected" by the Tribal Council members rather than the community at large. He has direct authority in that the standing police force and the codified tribal law provide both the basis for implementing decisions and enforcing compliance with them. Because the B.I.A. stands as the power behind the Tribal Council, that council is seen as a puppet of the B.I.A. by many informants.

The sphere of supernatural beliefs, legends, and mythology is a complex one, and is illustrated in several works. Foremost among these is a recent publication by a Salt River Pima woman (Shaw 1963). It is sufficient here to note that no survivals of aboriginal beliefs appear to play significant roles in present religious activities. A majority of community members are either Presbyterian or Latter Day Saint, and all save a handful of practicing Catholics are nominally of Protestant persuasion.

D. Summary of Early Studies

From Father Kino's first travels into Pima country in 1694 through the last years of Hispanic occupation of the mid 19th century, a number of Jesuit and Franciscan mission chronicles and explorers' diaries recorded information pertaining to the Pima. But Russell's comment on the Garces' Diary (Coues 1900) that "he exhibited a pitiful waste of opportunities for ethnological observation while among the Pima" (1908:28-29), could be applied to the bulk of these works. Useful compilations of these early materials are to be found in Ezell's work (1961:151-159) and in the report of Russell (1908:26-29). Throughout the early decades of Anglo-American influence (beginning with trappers Carson, Patties, and Weaver in the 1820's and 1830's), no records of importance on the Pima were kept by Anglo-Americans (Russell 1908:30). Records of military expeditions were comparable to those kept by Spanish explorers until the formal transfer of the Gadsden strip to the United States became imminent (Russell 1908:30-31). An account set down by Bartlett, one of the Boundary Survey Commissioners, as his personal narrative (Bartlett 1854) was lauded by Russell as "... by far the best (account of the Pimas) that has been published thus far" (1908:31). With the establishment of the Gila River Reservation in 1859, governmental record keeping began (Russell 1908:31-32). Massive correspondence among field agents, territorial agents, and their various superiors in Washington began at this time. The report of Captain F. E. Grossman, agent to the Gila River Reservation from 1869 to 1871, is the earliest work that could be regarded as a "professional" account of Pima culture. He observes at the outset that "The Pimas have but vague ideas of the doings of their forefathers, and whatever accounts may have been handed down to them have been so changed in the transmission that they cannot be deemed reliable now" (Grossman 1873:407). Governmental records and personal correspondence continued to accumulate throughout the remainder of the 19th century, but no comprehensive description of Pima culture appeared. The establishment of the Salt River Reservation in 1879 did not significantly alter the B.I.A. administrative structure in the area, as the new reservation was placed under the jurisdiction of the Gila River agent at Sacaton. This situation continued until 1962 when the first Salt River Reservation agent, William S. King, was appointed by Secretary of the Interior Udall.

Russell's publication, as a Bureau of American Ethnology Annual Report, of the results of some eight months field research among Gila and Salt River Pima, stands as a landmark in Pima research. Following

Russell's monograph, a number of small articles dealing with Pima basketry (Breazeale 1923; Kissell 1916) and mythology (Hayden 1935; Lloyd 1911) appeared, but little original research was undertaken again until the late 1930's and early 1940's. The definitive work on agricultural techniques of Pima and Papago was published by Castetter and Bell (1942). Hill's article on Pima land tenure (1936) also appeared during this time. Immediately following World War II, a series of studies, conducted under the auspices of the Indian Personality and Administration project (Thompson 1951:12, 20), was published. _The Desert People_ (Joseph, Spicer, and Chesky 1949) was one monograph of this series. Although it dealt primarily with the Papago, the bulk of personality analyses presented there apply to the Pima as well. It comprises the only guideline to an understanding of Pima personality.

Since 1950, an increasing number of works dealing with Gila Pima have been produced, largely by people associated with the University of Arizona. The Bureau of Ethnic Research has maintained and continuously updated census files for the entire Pima-Papago population since its inception in 1952. B.E.R. publications such as the annual reports and the recent Papago population study (Kelly 1963) have provided further data on the Pima-Papago. But none of these works has dealt primarily with the Salt River Pima. Hackenberg's Whitney Report (1957) was prepared in support of a Salt River Tribal Council boundary case. He supervised a census survey of Salt River in 1962, but no results of this research have been published to date. Studies sponsored by the Tribal Council and/or the B.I.A. have been concerned largely with economic development (Western Farm Management Co. 1962; Western Management Consultants Inc. 1962, 1965; and Coldwell, Banker and Co. 1965). The bulk of Pima research to date is either general in nature, relates to the Gila River Pima, or consists of highly specialized economic development planning.

E. Summary of Current Studies

Current anthropological studies (those under way during my study period or at present) can be noted quite briefly. Jack Frisch and Naomi Ware, operating out of the University of Indiana, conducted ethno-musicology studies during the summer of 1965. Miss Ware returned briefly in November of 1965 for further research. Robert Nuss, University of Arizona, began a detailed cross-checking of individual land holdings with the aim of providing data for rationalizing and reorganizing these holdings. This work was still in progress as of January 1966.

CHAPTER V. SALT RIVER PIMA MARICOPA COMMUNITY

A. Purpose of Chapter

The origin of the Salt River Pima has been outlined in Chapter IV, and their development traced to the 1930's. Development of the reservation over the past three decades is dealt with here. But this chapter mainly provides an outline of contemporary Salt River Pima culture, circa 1964-65. This is desirable as an end in itself, but it serves a purpose. It gives the reader a broader picture of these people, as people, and enables him to better assess my work and interpretations. It should also facilitate research aimed at refining the concept of "neoteric culture" or applying my conclusions to other societies.

B. Recent Developments

From their origin as a group of adventurous Pima from Gila River, through the successive waves of Pima immigrants, to the establishment of the Salt River Reservation in 1879, the people termed Salt River Pima were an aggressive, dissatisfied population. As Pima peripheral to the Gila River Reservation, they were forced to develop their own patterns of accomodation to the Anglo-American cultural environment. The group contained significant non-Pima minorities (notably the Maricopa). Consequently, its members held attitudes toward Anglo-Americans, Negroes, Spanish-Americans, and other Indian groups that were less determined by traditional Pima values than was true for other Pima groups.

The decline in cash-cropping following World War I coincided with the depression and with nation-wide unemployment problems. Although the decline in cash-cropping continued through this period, wage-labor involvement did not markedly increase. The beginning of land-leasing during this time was dictated by necessity, to a large extent. But it became a major new economic activity.

The 1940's saw an increase in land-leasing and in mechanization of the Anglo-American cooperative farm activities on reservation. These trends were accelerated by World War II. Enlistment in the armed forces took a number of Pima from the reservation and led to increased off-reservation settlement following the war. Wage-labor opportunities also increased during the war years, and participation in this economic activity reached new highs among the Salt River Pima. Although the information is inconclusive, it appears that accelerated population growth followed post war readjustments. Continuing interaction with Gila River Pima and residence shifts between Gila and Salt River reservations cloud the picture of the Salt River population.

The elimination of produce price controls, increasing farm subsidies, initiation of Federal controls on acreage allotted for specific crops (particularly cotton), and the continued increase in mechanization forced Salt River Pima out of farming altogether in the 1950's. The expense of mechanization and competitive pressures of ever larger farming cooperatives made successful cash-cropping increasingly difficult for these Pima. As wage-labor opportunities continued to improve and land-leasing became increasingly attractive, the Salt River Pima ceased being farmers. The last "real" farming attempts among community members were in 1956. Nevertheless, a few people continue to grow peppers, some cultivate a row or two of corn, and a handful husband figs, oranges, and watermelons.

The distinction between farming and wage-labor appears somewhat academic to the workers involved here. The wage-labor performed by many adults is farm labor. During the study period, of 287 employed men and 154 employed women, 100 and 6 respectively, performed farm work as wage-laborers. One man thought the new situation much better. "We lease our allotments ... and get paid for it. Then they hire us to get the crop in and we get paid for that." But wage-labor at Salt River is only partly a matter of doing farm labor for hire. Since the late 1950's, vocational training and formal education have become tickets to better paying clerical and professional jobs. Although farm labor continues to employ many people, it is a low status, semi-seasonal, and "last chance" sort of job. Other kinds of work employ more people than farm work. A majority of working women is employed in domestic work. A more detailed treatment of the current economic situation is presented in Chapter VII.

In summary, the economic development of the past three decades includes consistently declining cash-cropping and its cessation in the mid 1950's. Wage-labor has been on the rise during the same period. Increasing reliance on wage-labor suffered a setback during the latter 1930's. This was broken by the impetus given wage-labor by the manpower shortages of World War II. During the late 1940's and the early 1950's, a milder slack period for wage-labor prevailed. Since the mid 1950's, a resumed acceleration in wage-labor involvement has gone hand-in-hand with the opening of better paying and higher skilled positions for the Salt River Pima. This latest upswing in wage-labor opportunities may be seen as the result of three related factors: (1) emergence into the labor market of those Pima who benefited from experiences, training, and education during World War II; (2) a general liberalization of hiring practices influenced by the civil rights decision of 1954 and subsequent legislation; and (3) a nationwide shift of population and industry to the west, bringing about a tremendous boom in construction activity in the Phoenix area, introducing electronics parts and manufacturing industries, and resulting in an increased demand for semi-skilled and skilled labor.

Changes in social organization during this period are less clear. The dearth of anthropological research among these people from 1908 to the exploratory census work of the early 1960's makes heavy reliance on records necessary. Settlement patterns and changes within them suggest increasing emphasis on nuclear families as the residence unit. Informants' comments indicate that marriage both outside the community and inside traditional limits of kinship increased in frequency ("some of these kids don't care about kinship anymore; they're even marrying cousins now").

Attitudes toward other ethnic groups underwent a clear change. It appears that relations with Negroes in the armed forces stationed at Fort McDowell were amiable during the latter part of the 19th century. During the first decades of the 20th century, intermarriage with Mexicans, Spanish-Americans, Negroes, and Anglo-Americans took place. Intermarriage with people of most of these groups has continued or diminished only slightly over the past several decades. Interaction and intermarriage with other Indians have increased. But attitudes toward Negroes have become hostile even among school children. When or why this attitude emerged remains unanswered. My own belief, judging from the ages of people with Negro characteristics and comments of the two Negro members of the community, is that it emerged during or just after World War II.

All but the last two years of the period were marked by limited and distant relations with the B.I.A. Sacaton, on the Gila River Reservation (about 30 miles south of the community), served as the B.I.A. administrative headquarters for the Salt River Pima until 1962. As might be expected, interaction between community members and the B.I.A. dealt largely with essentials. What business was essential may have been perceived differently from one side or the other, but the prime consideration is that the frequency and intensity of B.I.A.-Salt River Pima interaction were less than between B.I.A. personnel and Gila River Pima. Salt River Pima sought assistance when it was important or when it was likely to be given, but not for other matters. The Public Health Service, church organizations, county welfare, and state employment and training assistance were probably as important to Salt River Pima as the B.I.A. Since a separate agency headquarters was established in 1962 for Salt River, interaction with the B.I.A. has increased. General assistance case loads have increased, but not to the extent anticipated (due perhaps to the pattern of reliance on county and related welfare agencies). Housing and juvenile problems have come under greater scrutiny, and action to alleviate them has been initiated. Attempts to re-implement an effective tribal roll, to organize land holding data, and to provide a listing of potential heirs to land (especially those no longer associated with the reservation) have been made and/or are under way. Running water and improved sanitary facilities have been provided for the Lehi sub-community and are being extended to the Salt River sub-community.

Although these programs were funded by the P.H.S. and staffed by volunteer workers from within the community, Superintendent King was the moving force. Further upgrading of living conditions has been made possible through his efforts and those of Projects Development Officer Hal Booher. They have contacted families, given information about FHA loans and similar funding possibilities, and helped people follow through in making applications.

Economic development programs for the reservation were begun through the Tribal Council (submitted to the Area Redevelopment Administration in 1962). More complete ones have been prepared under contract with the Tribal Council by Coldwell, Banker and Co.

Paralleling these Tribal Council activities, the Salt River B.I.A. ten year program included eleven specific programs of community improvement. Eight of these coincide with programs brought up during, or discussed at, Tribal Council meetings. Five of these programs had been initiated or were about to begin at the conclusion of my study. These were: (1) International Basic Economy Corporation (IBEC) housing program, (2) Mutual Help housing program, (3) provision of running water to individual households (P.H.S.

program), (4) Southwestern Indian Alcoholic Council education services (S.I.A.C.), and (5) a foster home for children.

The IBEC house was begun September 15, 1964, and completed the end of November 1964. Because of some misunderstandings, anticipated conflict between the IBEC and Mutual Help program, and personal friction between the IBEC field representative and some community members, this program was terminated after a single house was built.

The Mutual Help housing program formally got under way October 30, 1964, when Mrs. M. McGuire, Commissioner for the Public Housing Administration, broke ground for the first Mutual Help house. Fifteen houses were scheduled in the first phase of the program. Eight of these first fifteen were virtually completed by mid 1965, and planning had begun on another twenty.

The P.H.S. water project was completed in the Lehi sub-community early in 1964 and began in the Salt River sub-community August 3, 1964. Frequent slow-downs occurred throughout the period of my study due to inadequate participation by volunteer workers. One complete work stoppage came about the first two weeks of June 1965. Reorganization of the community volunteer water project committee, and an increase in the numbers of volunteer workers got the project under way again. But as of August 1965, it was some two months behind schedule.

The S.I.A.C. program, headed by Vic Werner, is primarily an educational attempt to involve problem drinkers in an Alcoholics Anonymous kind of rehabilitation program and to arouse community concern with the problem. Automobile accidents caused a high proportion of deaths during the study period. Driving while intoxicated figures heavily in automobile accidents among community members. The auto-alcohol fatality rate within the community is nearly one percent of the total population. If the same fatal accident rate prevailed in the nation as a whole, there would be at least one and a half million deaths per year rather than the actual total of forty to fifty thousand.

C. Political Structure

The formal political structure of the community pivots on the Tribal Council. It consists of a President, Vice President, and five additional council members. It is backstopped by a secretary, treasurer, and business manager. Council members are elected for a one year term each June by the community at large. The President and Vice President are "elected" annually by council members. The secretary, treasurer, and business manager hold appointive positions of indeterminate duration. I was unable to get clear answers to whether this appointment is by the President, by him with council approval, or simply by the council.

Two features of staff positions are noteworthy. First, they are not "political" positions. People in these positions are not council members and do not have a vote in council meetings. Second, the functions of these staff people lie largely in areas of B.I.A., lessee, and other Anglo-American interrelations. These three positions are distinctive also in that _all_ _other_ positions are held by Indian community members, but two of these three are held by non-member Anglo-Americans. Only the secretary is a Pima and a reservation resident. His position is the only one that might be obtained through nepotism. For, as should be stressed, all other "officers" are either elected (indirectly in the case of the President) or are "outsiders."

Aside from staff, officers, and council members, the Tribal Council employs a number of hourly workers. The council members (receiving stipends of $1,000), executive officers ($6,300 to the President and $660 to the Vice President), treasurer ($5,400), secretary ($5,100), and business manager ($6,300) are all on annual pay scales. The Tribal Council employees, excepting the Salt River Police, are on hourly wages. Police officers comprise the largest single category of employees. Eleven full time officers, all community members, are employed. The Police Chief is also a community member. But the position of Police Commissioner is funded by the B.I.A. and is held by a non-member. This man acts as liaison between the Salt River Police and both the B.I.A. and local law enforcement agencies. The Salt River Police are structurally subordinate only to the Tribal Council. Nevertheless, there is an informal chain of communication from the Agency Superintendent, to the Police Commissioner, to the Salt River Police Chief. The Tribal Council President is generally in an "information only" position with respect to communications within this chain. But in fact as well as in theory, the President is the immediate superior of the Salt River Police Chief.

Other Tribal Council employees include a judge, an office receptionist, a custodian, three assistant foremen, a general foreman, a foreman of the crew of volunteer workers on the P.H.S. water project, and a community worker. Non-paid positions peripheral to the tribal political structure are also present. These include the editors of the community newspaper (see below) and members of various special purpose committees (such as the water project committee). Members of these committees are unsalaried and informally selected by the Tribal Council. They are also people who were, or aspire to be, active in tribal politics. In all cases, nepotism seems remarkably absent. Those in the employee categories noted above are people with particular training or experience for their jobs. The political offices are elective, in one way or another. Of the 28 Indian employees of the Tribal Council, one each is of Cherokee, Navaho, and Yuma ancestry. All have special skills and were formally adopted into the community.

D. Relations with the Bureau of Indian Affairs

The validity of charges of B.I.A. "paternalism" was conceded by those B.I.A. personnel with whom I dealt. But those making the charges assume that paternalism has been, and is bad; that the B.I.A. should "get out." At times this paternalism <u>was</u>

repressive (several informants mentioned arrest for participation in traditional dances and songfests during the 1920's). But the Indian Reorganization Act of 1934 led to widespread Agency changes. Although these potentially restored initiative to tribal organization, B.I.A. administrators at Salt River are fully aware that paternalism continues. Handling of some lease income checks, countersigning loan applications, administrating the Individual Indian Monies (I.I.M.) accounts, assisting in estate settlements, playing an amica role in contracting for leasing of individual Indian lands, and providing primary educational facilities continue as functions of the Salt River B.I.A. B.I.A. officers from the Salt River Agency mediated with the P.H.S. for the water project and for provision of sanitary facilities to individual homes. They arranged for the IBEC and Mutual Help housing projects. The Projects Development Officer had the responsibility of assisting individuals with FHA or other loans for construction of indoor toilet facilities and for home repairs.

Interaction between the B.I.A. and community members has increased since a resident superintendent was installed at Salt River in 1962. But this cannot be attributed entirely to the greater ease of contact with B.I.A. personnel. The personal motivation of Superintendent King is clearly a factor. As paternalism has diminished, it has been increasingly replaced by a "self help" orientation, reflected, for example, in the Mutual Help housing project.

The Agency staff is not a group of "office" administrators. Superintendent King, the Juvenile Officer, the Operations Officer, and the Projects Development Officer spend at least as much time "in the field" as in the office. The behavior of community members coming to the B.I.A. office reflects the personal touch maintained by the Agency staff. Informality is the keynote; communication between any community member and any Agency officer is open and easy. My impression was that B.I.A.-community interaction was far more amiable at Salt River than at either the Gila River or Papago reservations.

Twenty-five community members are employed by the Salt River Agency office, one by the B.I.A. area office, in Phoenix, three by the Phoenix Indian Hospital, and two by the Phoenix Indian School. During the summer of 1965, five Neighborhood Youth Corps participants also worked in the Agency office.

E. The Population

First, a brief restatement of the population definition is in order. The population consists of Salt River Reservation members who were in residence for at least half of the calendar year 1964. Those whose residence was less than half of that period but was begun by birth or ended by death are also included, provided that their birth or death occurred prior to December 31, 1964.

It is also necessary to add a cautionary note concerning tribal affiliation. Difficulties originate in the long standing practice of intermarriage among these peoples. They are aggravated by my having had to differentiate Salt River from Gila River Pima. Yet this is a political, not a tribal, distinction. The Gila-Salt Pima distinction rests primarily on legal membership "defined" by the tribal rolls of the Salt River and Gila River reservations. But these tribal rolls are incomplete and outdated at both reservations (some individuals are even listed on both rolls). For these reasons and because of the problem of trying to deal meaningfully with fractional "degrees of blood" among people with shallow genealogical depth, I decided to use partly sociological tribal classifications. The tribal affiliation stressed by (or for) an individual is taken as his tribal affiliation (see Table 1).

Information on admixture was noted where available but it proved inconsistent; several definable biases resulted. First, the tabulations are heavily weighted in favor of Salt River Pima. Anyone with a rationalization for calling himself a Salt River Pima presumably would have done so, as my work was thought to include deciding who was or was not a member, for the Tribal Council. Membership is economically desirable as it is a requirement for obtaining a Tribal Council loan and socially helpful in justifying inheritance from a member. A non-member "Mexican" man who had married a Pima woman and had children by her remained as a resident after the death of his wife. Several people commented unfavorably about him to the effect that he "shouldn't be living here." They felt he should not have been allowed to inherit his wife's house nor "his" children the land. Second, Pima, Maricopa and Mexican affiliations are of relatively high status among these people. The resulting classification is probably weighted in favor of these categories. A number of other specific tribes, such as Yuma, Navaho, Cherokee, and the category of Anglo-American also have

TABLE 1

TRIBAL AFFILIATION AND SEX RATIOS
AMONG SALT RIVER PIMA, 1964

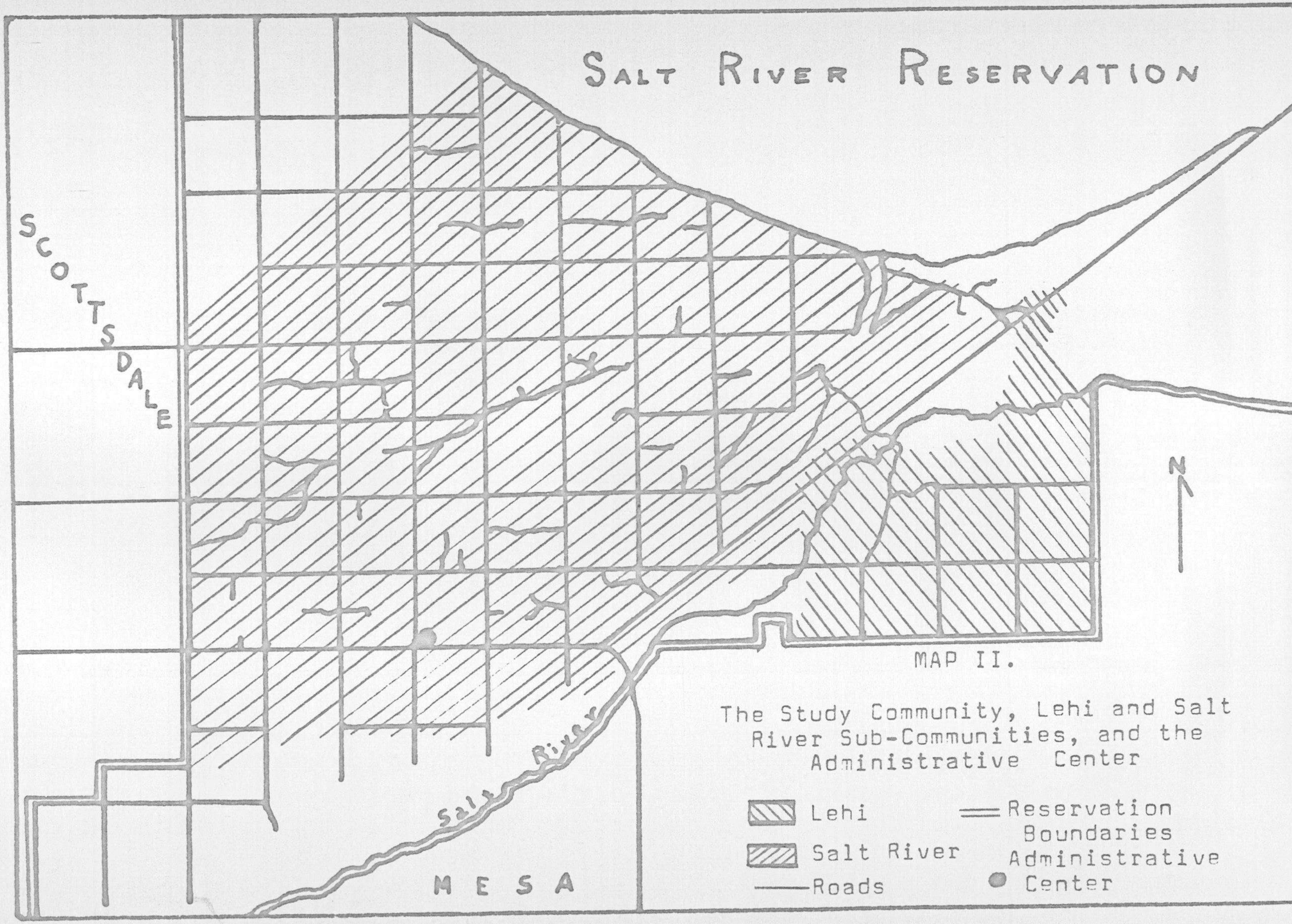
Tribe or Ethnic Group	Male	Female	Surplus Females	Sex Ratio	Totals
Salt River Pima	723	801	78	.9026	1,524
Gila River Pima	31	24	-7	1.2917	55
Maricopa	59	45	-14	1.3111	104
Papago	8	7	-1	1.1428	15
Mexican	31	17	-14	1.8235	48
Negro	2	0	-2	---	2
Other	23	11	-12	2.0909	34
Unknown	6	5	-1	1.2000	11
Totals	883	910	27	.9703	1,793

relatively high status, but are such a small percentage of the total that it was not feasible to categorize them separately. Apache or Negro affiliation carries low status.

Another consideration is illustrated by the tribal affiliation data. Marrying "off reservation" is accepted for men but frowned on for women. "Off reservation" marriage <u>is</u> generally followed by "on reservation" residence. And, it seems to be rather widespread among women, despite the disapproval. This may reflect a retention of patrilineal attitudes and/or the influence of inheritable land. This inheritance tends to be somewhat patrilineal, but the increasing trend toward leaving wills is altering this. Land inheritance by children of "alien" men is feared as a first step toward loss of that land by the community.

Finally, a word on levels of integration (to be more fully elaborated below) will clarify the matter of "sub-communities." Five levels are distinguished: (1) the community; (2) two sub-communities; (3) sodalities (assorted intermediate non-kinship groupings, such as the Salt River Band, the ball teams, the P.T.A., various church congregations, etc.); (4) neighborhoods and compounds; and (5) households. Only the community and sub-communities are of importance at the moment. The community has been defined at the beginning of this section. The prime distinction between "community" and "sub-community" is that the community consists of the entire study population, whereas the sub-communities are geographically distinct entities (although adjacent to one another) and are characterized by historically distinctive tribal affiliation. The sub-communities are Lehi and Salt River (see Map II). Lehi was initially settled by Maricopas, Salt River by Pimas. Although much change had occurred since the reservation was established, the residence pattern at the time of allotment (1912-1914) illustrated this distinction more clearly than it does at present. Nevertheless, tribal affiliations within the sub-communities still reveal this pattern (see Table 2).

Sex ratios at most ages up to the 56-65 bracket are nearly equal. At this point, males have a clear though still relatively slight, numerical superiority. Although the 86-95 age category has a marked surplus of women, the numbers are so small that the ratio cannot be given much weight. This is clearly a young population with the median age falling between 16 and 25.



MAP II.

The Study Community, Lehi and Salt River Sub-Communities, and the Administrative Center

TABLE 2

TRIBAL AFFILIATION AND SUB-COMMUNITY DISTRIBUTION AMONG SALT RIVER PIMA, 1964

Tribe or Ethnic Group	Salt River	Lehi	Transient	Totals
Salt River Pima	1,193	319	12	1,524
Gila River Pima	34	21	0	55
Maricopa	2	102	0	104
Papago	14	1	0	15
Mexican	44	4	0	48
Negro	1	1	0	2
Other	21	13	0	34
Unknown	11	0	0	11
Totals	1,320	461	12	1,793

Data on birth and infant mortality rates are very good, as all births to Salt River Pima (in 1964) took place in, or under the auspices of, a hospital within the Phoenix metropolitan area. Records are kept by the state and photostats of birth certificates are sent to the Data Processing and Research Office of the Phoenix Indian Hospital. Dr. Lull, head of this office, was most gracious to me in providing full access to materials and clerical assistance.

Reports on deaths occurring within one year of birth are processed in this office, and were made available to me. This information may not be as complete as the birth information because the possibility is greater that a death may not be reported. But the matter of land inheritance tends to insure that relatively good filing of death reports will occur. The probable net effect would be to depress the overall death rate slightly. During the calendar year of 1964, 57 births occurred. The birth rate was 132.8 per thousand women (aged 16-65). Six of these infants died a year or less after their birth. This gives an infant mortality rate of 10.5 percent. The overall death rate was 19.5 per thousand. During the same period, 29 deaths occurred among adults, giving a total mortality figure of 35 for the community in 1964. The disproportionate percentage of adult deaths attributable to auto-alcohol accidents has been mentioned. Twelve deaths attributable to automobile accidents occurred among community members; two of these were infants. Nevertheless, the community experienced a net population increase of 22 in 1964.

Although the sex ratio only slightly favors females, the age distribution suggests the sex ratio may become more heavily imbalanced in the future (see 0-15 age brackets in Table 3). A breakdown of the population by sex and sub-community indicates that the Salt River sub-community is the locus of surplus women. In fact, a slight majority of those in the Lehi sub-community are men. Nevertheless, the differences are too small to warrant more than a note.

As shown above (Table 1), the majority of non-Pima are in the Lehi sub-community, yet Lehi has less than one-third of the total population (121 of a 461 total for Lehi; 82 of a 1,320 total for Salt River).

Totals of married and of single (never married) people approach a one-to-one sex ratio (559 single males, 552 single females; 255 married males, 255 married females). But totals of those separated (or

TABLE 3

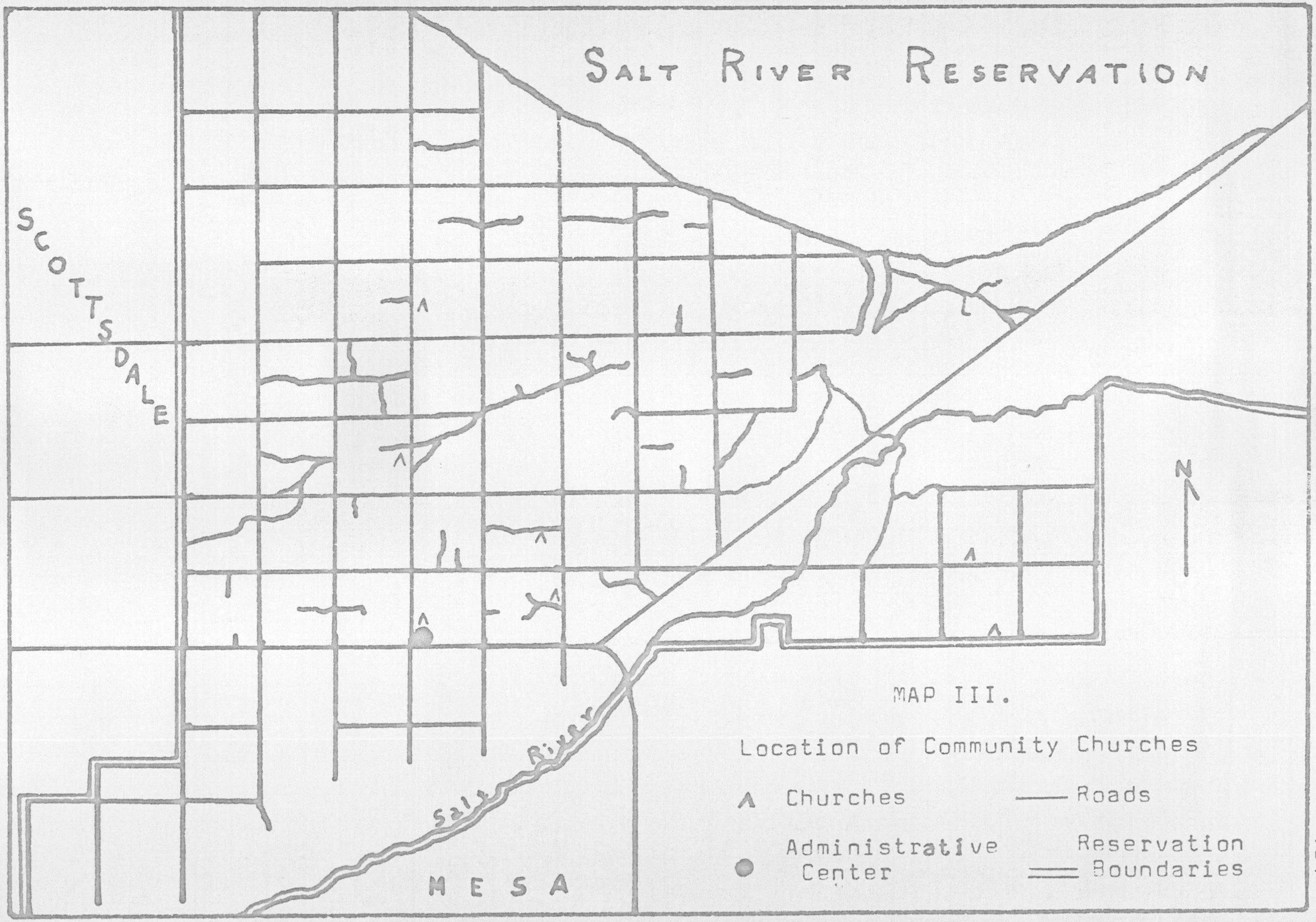
AGE DISTRIBUTION AND SEX RATIOS
AMONG SALT RIVER PIMA, 1964

Age	Male	Female	Surplus Females	Sex Ratio	Totals
0- 5	147	191	44	.7696	338
6-15	246	249	3	.9879	495
16-25	163	154	-9	1.0584	317
26-35	98	96	-2	1.0207	194
36-45	82	87	5	.9425	169
46-55	53	60	7	.8833	113
56-65	44	32	-12	1.3750	76
66-75	32	25	-7	1.2800	57
76-85	12	8	-4	1.5000	20
86-95	3	5	2	.6000	8
UNKNOWN	3	3	0	1.0000	6
TOTAL	883	910	27	.9703	1,793

divorced) show a sexual disparity (38 men versus 53 women). Over one-third of the separated women had been married to "off reservation" men (although such men generally move "on reservation" after marriage). This is understandable in view of the disapproval women marrying "off reservation" experience. It may also help to explain why more women than men are in this marital status. The ratio of 30 men to 50 women in the status of survivor stems from the tendency for men to continue remarrying later in life. That men do remarry well into old age is indicated by the nearly two-to-one ratio of married men to married women over age 65 (30 and 16 respectively). With one exception, all unmarried household heads were over 65. With that same exception, none of these people were in the "never married" category.

F. Religion

Five of the seven reservation churches are in the Salt River sub-community and two are in Lehi (see Map III). The Latter Day Saint church is in the Salt River sub-community, but its congregation includes many Lehi residents. The Baptist and Nazarene churches in Lehi are of relatively less importance to Lehi residents.



MAP III.

Location of Community Churches

The Presbyterian church is dominant among residents of the Salt River sub-community. I had the impression that the Presbyterian church has the largest membership, but my avowed disinterest in religion made it unwise to try to gain access to membership rolls. Whatever the relative size of congregations, the Latter Day Saints are undeniably the equal of the Presbyterians in terms of community activity and support of the various community projects. The other three churches in Salt River -- Assembly of God, Catholic, and Fire Baptised Holiness -- are of lesser importance within the community and have small congregations.

The two dominant churches, Latter Day Saint and Presbyterian, are the only ones with a resident clergyman. The Presbyterian church has the further advantages of being located near the main highway, on a paved road, and near the Tribal Council office. The resident clergyman is both an ordained minister and a Pima. An executive of the regional Presbyterian Synod headquarters in Phoenix is also a Pima and one-time Salt River resident.

The Tribal Council President encouraged volunteers to work on the IBEC housing project but Latter Day Saint volunteers began working an evening shift, trying to complete the IBEC house ahead of schedule. It was completed ahead of schedule. This is remarkable because every other project under way during my study was consistently behind schedule. The Presbyterian church had an ongoing program of youth activities, particularly emphasizing the importance of education. The Latter Day Saint genealogy workshop was a broadly comparable activity that also involved young people and placed a high value on learning.

All churches were involved, to varying degrees, in activities sponsored by the P.T.A., especially in a clothing exchange that provided used clothing at low prices for school children. Paralleling the clothing exchange, and sponsored by both the churches and P.T.A., was the "Save the Children Federation." In addition to providing clothing and other assistance to the families of school children, this operation helped provide cookies and milk for the children in school. I should specify here that although an increasing number of Salt River children attend public schools in neighboring cities, particularly at the secondary level, the above comments refer only to those school children attending the Salt River Day School (a B.I.A. primary school on reservation).

G. Community Activities

Among those community activities mentioned earlier as defining characteristics of the community were the Pima newspaper (Awawthm Awawhan), the Salt River Police, ball teams, community activity centers, musical groups, and the P.T.A. The first two of these will be described further in this section.

The Awawthm Awawhan (Pima News) was begun in October of 1963. It grew out of a summer newspaper initiated by a group of young people. This community newspaper is now published monthly (though some months were skipped) and is hand distributed to reservation residents (by the community worker). The paper consistently places emphasis on reservation news and has encouraged "letter to the editor" writing. Although this policy is being maintained, it is only moderately successful. Information on B.I.A. and P.H.S. activities, progress on housing projects, and "messages" from Tribal Council officers take up most space in the paper. There are no advertisements, and the paper is financed almost entirely by the Tribal Council.

Although there were few significant changes in editorial policy, there were many changes within the editorial staff. Initially the Pima News had a six member editorial board. This had shrunk to a four member board by January of 1964, although all four were original members. In August of 1964, one member of the editorial board was replaced by the Tribal Council receptionist. The following month, the son of another Tribal Council employee was added to the then five member board. By October of 1964, the editorial board was back down to four members, the result of dropping one of the original board members. In December of 1964, the most recent addition to the board quit and was replaced the following month by the daughter of a community leader not associated with the Tribal Council. In March of 1965, the editorial board was reduced to two members (one original member and the Tribal Council receptionist) and one advisor (an Anglo-American B.I.A. employee).

The month before and the month after this shift in board composition were ones in which the paper was not published (the only other skipped month being March of 1964). Subsequent issues of the paper exhibited increasing amounts of B.I.A. news and strongly suggested an increased awareness, by both the Tribal Council and B.I.A., of the importance of the paper as a shaper of opinion. June of 1965 brought two VISTA workers to the reservation. A young woman VISTA worker replaced the B.I.A. employee on the editorial board. Although the VISTA worker was a member of the editorial board for only one issue, she continued to assist in preparing the newspaper the three months she was on reservation. The decline of the editorial board from six to two members (one woman has been a member since the inception of the paper) might suggest a declining interest in the newspaper among community members, or it may simply reflect increasing efficiency of the editors. The former possibility seems most unlikely for the reasons noted below.

Members of the editorial board are not paid, and each member spends a minimum of 20 hours per issue (per month) at the job. This consideration, plus the fact that the paper is a primary "molder of community opinion" as well as an outlet for that opinion, makes the Pima News a potential "propaganda" extension of Tribal Council politics. For this reason, the shifts in editorial board membership are deemed important as indices of changing Tribal Council policy.

The paper was used as a propaganda medium by the B.I.A., the P.H.S., and the Tribal Council for the purpose of spurring the laggard water project back into action in March of 1965. In the four issues between that time and completion of my study, four flyers printed by the P.H.S. were included as part of the paper. Each issue had over half a page devoted to problems of "getting workers out" for the water project, and nearly a page devoted to progress on the Mutual Help housing project. One full page was taken up with a letter to the editor begging the men of the community to get to work on the water lines.

Whatever the future of the Pima News, it does help to shape community opinion and is a forum for expressing that opinion. That it has survived for nearly two years on community contributions and Tribal Council assistance, with no advertising, is an indication of its community acceptance.

The Tribal Council Police force has three major functions. It is the law enforcement agency with primary jurisdiction over Salt River residents. Consequently, it acts in liaison with neighboring city police forces in cases involving Salt River people. It also serves to enforce all Federal law concerning activities on Indian reservations. For this reason, Salt River Police are encountered by Anglo-Americans and others in violation of Federal law on reservation. The Salt River Police also enforce regulations set forth in the Salt River constitution (of 1940). This applies primarily to Indians and residents (as contrasted with transients and tourists) of the reservation. In all capacities, and especially with respect to capital crimes, the Salt River Police act in concert with the B.I.A. appointed and employed Police Commissioner. All Salt River Police, with the exception of this B.I.A. employee, are Indian members of the community.

Relationships among Salt River people and those of neighboring cities center on shopping activities and secondary school attendance by Salt River students. Further details of these relationships are discussed in the sections below on education and economy. The bulk of Salt River Police arrests are for "drunk and disorderly" violations. There is a problem in the failure of people to carry through on complaints filed with the Salt River Police. This is not surprising within the small, closely knit population. A woman may file a complaint against her husband for mistreatment or for misappropriating her welfare check, but will drop charges when the immediate problem is settled.

The Salt River Police are important also as enforcers of the Tribal Council edict that secular legal marriage requirements observed (consensual unions are illegal by tribal law). Although two couples not honoring this edict were encountered in the course of my work (and no doubt others existed), the fact that only two such cases were evident is an indication of the acceptance of this regulation. Relations between community members and their police are far more amiable than those within Anglo-American communities of my acquaintance.

The newspaper and Salt River Police were selected for discussion because they are the communication and control organs of Salt River. But they are relatively impersonal and institutional aspects of the community. The social activities of the community are many and varied. They are the focus of community interaction and the source of "community spirit." Comprehensive coverage of these activities would constitute a monograph in itself, and is outside the scope of my problem. Since my desire here is to illustrate the extent and nature of such activities, I have selected the month of June 1965, to illustrate the frequency, range of interests, and kinds of groups involved in these activities. The information is drawn from my field journal and the Pima News. But I am including only those activities both sponsored, and primarily participated in, by the Salt River Pima. Even so, some activities undoubtedly escaped my notice.

One popular community group is the King's Knights, a rock and roll combo composed of nine people. The combo is basically a Salt River Pima group, seven members being community members. But the presence of a saxophonist from Chandler and a guitarist from Mesa in the combo is indicative of social interrelations with neighboring communities. This group, formed in mid 1964, provides music for community dances and other activities. It is also a profit making organization with bookings in downtown Phoenix, Chandler, Chinle, Flagstaff, Mesa and Yuma. The leader of the group had been a member of the Salt River Band. In June of 1965, the group had three reservation bookings and six in neighboring communities.

The Salt River Band, unlike the King's Knights, is recognized as a representative of the community. Therefore, engagements that are related to Salt River "public relations" are partly financed by the Tribal Council. Participation by the Salt River Band in the Annual Cedar Creek Pow Wow at White River, June 19-20, was one such event. This "Pow Wow" was not well attended by other community members, however.

A dinner was held the first Friday of June for high school and college graduates by the Education Committee of the Tribal Council. Two community women began attending a teacher's aide laboratory (also attended by some two dozen people from other Arizona reservations), on June 27. This laboratory provided training for participation in a kindergarten program scheduled to begin the fall of 1965, as part of the Community Action Program at Salt River.

Church activities during this month included a "Kids Krusade" sponsored by the Assembly of God church. This activity, conducted daily the last week of June and the first week of July, included games, handicrafts and services. On June 10, the Assembly of God youth group, Christ's Ambassadors, had a wiener roast and dance.

The Mormon church sponsored a concert, held in Mesa on June 28, for the purpose of raising funds to help Papago ward members join in a church-tribe visit to New York. The tribal aspect of this visit was a performance of Pima and Papago dancers at the New York World's Fair.

The Community Center, with the help of the Tribal Council, the B.I.A., and Maricopa County sponsored a summer recreation program weekdays from mid June through the first week of August. Among the varied activities provided were boxing and sewing classes.

The major recreational activity, and community activity with the most participation, is baseball. Three new teams were formed in 1965: the Pharaohs, the Quails and the Eagles. One of these three, the Quails, is the only girls' team. All teams participate in the Maricopa County League. Seven Salt River teams played a total of twenty games in June. The population distribution is reflected in the ball teams; nine teams represent the Salt River sub-community and only two represent Lehi. All of these games are very well attended, and the teams are the focus of other social activity. The Eagles sell soda-pop during games to finance uniforms and hold dances to further assist in financing their operation. The Pharaohs receive aid from the Tribal Council and the Salt River Day School (a B.I.A. operation). This team receives indirect B.I.A. support because it is sponsored by the Junior Marines, which in turn is a sub-program of the Salt River Day School. Dances and food sales are conducted by other teams to finance their operation; whatever additional funds may be needed are generally provided by the Tribal Council.

The many school activities are not represented and in this sense, June, or any other summer month, is a relatively "slow" one. Nevertheless, the above synopsis illustrates that the Salt River Pima constitute a functioning community and a highly acculturated one.

H. Education

For the vast majority of children, formal education begins at the Salt River Day School. This school, a part of the Salt River B.I.A. headquarters both functionally and physically, provides a kindergarten and the six elementary grades. Although a few children attend elementary grades at neighboring public schools, at least for brief periods, most of the community children obtain the bulk of their elementary education on reservation. Junior and senior high school education (grades 7-9 and 10-12 respectively) is available at the Phoenix Indian School or any of the several high schools in neighboring communities. Phoenix Indian School is the only boarding school. Although even more shifting from one school to another occurs at the secondary level, fewer than twenty percent of Salt River Pima high school students attend Phoenix Indian School. Phoenix Indian School has "low" status. This may be because students attending it are marked as "reservation Indians" (the school is attended by Indians from all Arizona reservations), or simply because it is a boarding school (thus setting students attending it apart from their Anglo-American peers). By preference, the majority of Salt River secondary students attend public schools in Mesa, Tempe, and Scottsdale. Inasmuch as these cities are roughly comparable in size, roughly equal attendance at schools in these cities might be expected. Scottsdale is closer to the community and has newer, better equipped schools than the other two cities. Nevertheless, Scottsdale has the smallest number of high school students from Salt River; Mesa has the largest. This scaling of Mesa, Tempe, and Scottsdale, with respect to number of Salt River students attending high schools, reflects community attitudes toward these cities.

Mesa is strongly Mormon; it was founded by Mormons and is still a "Mormon town." The favored position given Indians in Mormon theology and the importance of the Latter Day Saint belief on reservation clarify the preference for Mesa. Many informants simply explained, "we get along better with folks in Mesa."

Scottsdale presents problems. It began as a "slice out of the Old West" and has developed into a community of older, wealthy and conservative people. It is also a wintering ground for tourists, especially those with money and an interest in the "Old West." This interest includes Indians -- as basket-makers, potters, weavers and jewelry-makers. Many Scottsdale shops catering to tourists (and this means most of them) are also purveyors of things "Indian." Unhappily, Indians seeking skilled jobs and wishing to participate fully in American society do not fit into this picture very well. Examples of the kind of reception given Indians by Scottsdale residents were cited by many informants. None of these tales was of a sort to engender respect for Scottsdale by Salt River people. Because of the emphasis on grooming and fashion evident even in the high schools, it is extremely probable that Scottsdale attitudes toward the personal habits and clothing of Salt River students make attendance there virtually intolerable for them. Some half dozen informants claimed that Scottsdale Police were generally "out to get them." I was able to learn more about two of these claims from B.I.A. people and the Salt River Police Commissioner (whose respect for Salt River people was far from excessive). Their comments appeared to confirm the original claims.

The distribution of educational levels throughout the population is presented in detail below (see Table 4). Of the total 1,793 community members, 509 are preschoolers and 453 are in school. The number of school age children not in school is difficult to assess due to the shifting of place of attendance; but an estimate that less than six percent of school age children were not in school was made by B.I.A. authorities for the 1964-65 school year. Excluding those still in school and not counting years of trade school attendance, a ninth grade education is the median for the population. Only 61 people lack any formal education, whereas 148 are high school graduates. As of spring 1965, the community included three graduates of a public four year college and twenty people with some college credit in the community (this excludes those in college at the time of my study). Six people had completed education at an Indian vocational institute (such as Haskell or Carlyle), and four had completed training at public trade schools.

I. Housing

Housing within the community is highly varied. It ranges from dirt-floored, sod-roofed, one-room adobe huts to carpeted, brick, multi-room structures

TABLE 4

DISTRIBUTION OF EDUCATIONAL LEVELS
BY SEX AMONG SALT RIVER PIMA, 1964

Educational Level	Male	Female	Totals
PRE SCHOOL	308	201	509
IN SCHOOL	157	296	453
IN VOCATIONAL TRNG.	7	8	15
NONE	30	31	61
ONE YEAR	1	0	1
TWO YEARS	3	1	4
THREE YEARS	8	7	15
FOUR YEARS	8	10	18
FIVE YEARS	12	16	28
SIX YEARS	34	27	61
SEVEN YEARS	26	22	48
EIGHT YEARS	40	49	89
NINE YEARS	43	56	99
TEN YEARS	64	62	126
ELEVEN YEARS	44	35	79
TWELVE YEARS	2	4	6
HIGH SCHOOL GRAD.	75	73	148
ONE YEAR COLLEGE	2	5	7
TWO YEARS COLLEGE	6	4	10
THREE YEARS COLLEGE	3	0	3
FOUR YEARS COLLEGE	0	0	0
COLLEGE GRADUATE	3	0	3
TRADE SCHOOL	4	0	4
INDIAN VOCATIONAL INSTITUTE	3	3	6
TOTALS	883	910	1,793

easily assessable at $15,000. Both extremes are rare. Three intermediate types account for the majority of houses: (1) log and dirt "sandwich" houses of two or three rooms (for description, see page 116), (2) adobe and frame structures of two or three rooms, and (3) frame structures of three to five rooms. The first of these is viewed as more nearly "traditional," and this style is being abandoned. The second is regarded as a compromise between the cooling advantages of adobe and the construction ease of the frame house. The last type is more often bought in a neighboring community and moved to a location on reservation. Some of these houses (generally being sold to make room for modern housing developments) are relatively large, with ornate porches, columns, etc. A few frame houses had been built on reservation; they are more widely desired than the other two types. Two trends suggested by the increasing numbers of frame houses being bought and moved from neighboring cities are of interest. First, the high status of Anglo-American frame houses and the low status of traditional ones are indicative of the acculturation and declining interest in maintaining "traditional" ways. Second, the emphasis on frame houses being bought and simply set down (sometimes on an unprepared field) seems to reflect a declining interest in house building generally. This is further supported by my observation that during the study period only one house was begun by a community member. This house was left half finished after some five months of sporadic work.

Turning to what construction was going on, the IBEC and Mutual Help housing programs provide some explanation for the lack of "new house" construction by the people. They also suggest the future in house types. The type of house constructed under both programs (and the type being built during the previous two or three years by a few people) is a cement block structure with multiple rooms and a flat or very slightly canted roof. As mentioned earlier, the IBEC "program" (it never developed past the building of a model house) added only one structure to the community; the Mutual Help program will add at least thirty-five.

A last note on residence units concerns defining <u>households</u>. Most houses were multi-room ones with an average of three rooms. Sanitary facilities were outside the basic structure in virtually all cases (a well-to-do minority, living near water service lines for the Agency headquarters or the main line serving northern sections of Mesa, had running water and indoor toilets).

But I found defining a household more tricky than anticipated because of other "outhouses." These are locally termed "detached bedrooms."

When a family or group of families sharing one "house" becomes too crowded, people provide additional sleeping space by building separate structures rather than adding rooms to the "house." This technique of increasing space was common where the original structure was an adobe or log and dirt "sandwich" type house. I was told that cutting an additional door was difficult and might weaken the original structure. Also, the detached bedroom could be expanded, by addition of a ramada, to serve as a separate house at some later time. Thus, it was not possible to use an "all people sleeping under one roof" kind of definition for a household. Members of one household might well sleep under two or even three different roofs; but they would all eat together.

J. Utilities

Electricity and telephone service was available to anyone who desired and could pay for it. At least seventy-five percent of all homes did have electricity (and the majority of these had television sets). It was not possible to determine consistently whether a given home had telephone service by observation (and I did not enter all homes). But basing an estimate on the homes observed to have telephones and comments by informants indicating that they had service, I would say that not over thirty percent have residential telephone service. Gas and water service is a more complex matter. Few had access to Phoenix metropolitan gas service. Ironically, this appeared to be due largely to the difficulties of getting one's neighbors to grant easements for the service lines. People having "piped" gas service were those located near major service lines going to the Agency headquarters, northern Mesa, and along the Arizona canal. Bottled gas was widely used for cooking, but cast iron stoves stoked with mesquite were not a rarity. Water service was available to those near water lines paralleling the gas lines. Prior to the P.H.S. water program, only those people living in proximity to such lines had running water; all others had to haul water from the nearest irrigation control outlet (never more than a quarter mile away). I most commonly saw water being hauled in milk cans in the trunk of a sedan. Individual water service lines, providing running water to virtually all homes in Lehi, were completed in 1964. A similar P.H.S. water program was begun in the Salt River sub-community the latter part of 1964, but it had not been completed by August of 1965. As might be anticipated, accessibility of utilities (particularly gas and water) is a factor influencing the siting of houses, land use, and residence patterns (see Map IV).

K. Levels of Social Interaction

Five levels of social interaction were identified earlier in this chapter and the first two levels described. The remaining three levels will be described here. The five levels of interaction are: (1) community; (2) sub-community; (3) sodality; (4) compound and neighborhood; and (5) household. The first two were described earlier because their functions and characteristics pertain to the "community" status of the study population. Before describing the last three levels, it is desirable to identify all five. Defining a level hinges on defining the component groupings (and particularly the membership of those groupings) within each level. These groupings are: (1) community -- the politically defined area of the Salt River Reservation, consisting of the study population as defined above; (2) sub-community -- the


SALT RIVER RESERVATION
SCOTTSDALE
MESA
Salt River
N
MAP IV.
Distribution of Households
within the Community
Households
Roads
Administrative
Center
Reservation
Boundaries

geographically distinct sub-areas of the reservation, Lehi and Salt River; (3) sodality -- the voluntary associations, consisting of those people defined as members by each specific association; (4) compound and neighborhood -- the geographical "clusters" of households (see Map V), consisting of all members of the component households of each "cluster;" and (5) household -- the group of people commonly sharing one daily meal and residing in a common residence structure or a common structure together with its associated "detached bedrooms" (see Map IV).

At the sodality level, interaction is characteristically planned. For example, the P.T.A. has specific monthly meeting dates; similarly, each ball team has a specific schedule of games and other activities. The time, duration, place, and kind of activity are generally decided upon by the people concerned ahead of time. Economic support of sodality activities is also planned. The call may go out for special assessments or emergency fund raising, but dues or other membership fees are generally regularly recurring, known, requirements of membership. I should stress here, to complete the contrast with the following two levels, that the formality of sodality level interaction is also found at the

MAP V.

Distribution of Compounds and Neighborhoods within the Community

community and sub-community levels. Membership in a sodality, however, is voluntary.

Compounds and neighborhoods share similar functions, but I must stress one difference between them. Whereas neighborhoods are solely "clusters" of households (with no two component households more than 100 feet apart), compounds are clusters in which at least one person in each component household is a primary relative of someone in another component household. Within compounds and neighborhoods (as well as households), the nature and frequency of interaction are characteristically unplanned. Weekly to daily interaction among members is common. Much social activity takes place within the compound or neighborhood and may occur at virtually any time of day or night. Baby-sitting; gossiping; sharing meals; helping with tax forms; borrowing utensils, commodities, and cars, etc., exemplify the range of activities taking place within compounds and neighborhoods. Of these activities, baby-sitting is the most common. Within compounds, and to a far lesser extent within neighborhoods, economic assistance takes place on an "emergency" basis. Economic assistance within neighborhoods is confined strictly to emergencies and cannot be counted on. Within compounds, this assistance is more commonplace and in some instances becomes a relatively regular contribution to the on-going operation of another household. This is understandable in view of the kinship tie between the component households of a compound.

Although it is important to distinguish between a family and a household, emphasis on this distinction should not cloud the consideration that most households consist of a family (over half of all households here consist of a married couple and their unmarried children). A family is a kinship unit; a household is a residence unit. This definition avoids such problems as whether a "family" is necessarily a residential unit, always responsible for rearing offspring, based on a marriage contract, or a "universal" institution (see Stephens 1963:1-5, 8-10). Some households consist of families (e.g., my nuclear family households and extended family households). Other households do not consist of families (e.g., my conjugal pair households and one person households). At Salt River, the household level of interaction is similar to that of the compound with three important exceptions. Within a household the frequency of interaction reaches its high point. Daily and frequently continuous, hour-to-hour contact is typical. The nature of interaction includes more, and more intimate activities. Legitimate sexual intercourse is possible only between certain members of a household. Economic interaction is most intensive within the household. An individual matures, his personality is shaped, and his self-image emerges largely within a household.

These levels of interaction were listed at the beginning of this section in order of increasing frequency and intimacy of interaction. The first two levels pertain to interaction that is relatively impersonal, whereas the last three levels involve interaction of a more personal and intimate nature. But the household constitutes the basis of that interaction, shaping the attitudes on which interaction in other areas is based. The roles performed and observed within the household mold peoples' attitudes and prefigure their behavior. Some implications of role are discussed in the following chapter.

CHAPTER VI. SOCIAL ORGANIZATION

A. Families and Marital Status

Two of the three household types that are the focus of this work consist of families (extended and nuclear). But several kinds of household do not consist of families. The family is defined here as a kinship unit including at least two generations and one affinal tie. Consequently, the nuclear family is a minimal family. This does not mean that the nuclear family is necessarily universal or a "natural" unit, but simply that any kinship group with no affinal tie or less than two generations is not a family, as I define it here. Households consisting of only one person, a conjugal pair, or of a consanguineal core are non-familial households. Households consisting of an extended family or of a nuclear family are familial households. These give rise to some ambiguity in use of the terms "family" and "household." A "familial household" may be termed a family or a household; it is both. This does not mean the terms are equivalent. The distinction stressed here is that a family is a kinship group and a household is a residence group. A family need not be a residence unit. In fact, all identifiable families at Salt River are also residence units. But many Salt River households consist of less than a family.

Four categories of marital status are defined. These are: (1) single, (2) married, (3) separated or divorced, and (4) survivor (see Table 5). The first category includes those never married. The second category includes those legally married and living together as well as those publically co-resident as conjugal partners. The third category includes those legally divorced or separated and those still married but no longer living together. The last category consists of widows and widowers, those once married but who have lost their spouse through death. The distribution, by sex, of these marital statuses throughout the community is shown below.

B. Household Types

The defined types, the numbers of each, and their percentages of the total are given in tabular form in Table 6. A more thorough discussion of each type follows.

The "one person household" consists only of a lone individual. With one exception, all such households

TABLE 5

MARITAL STATUS DISTRIBUTION BY SEX
AMONG SALT RIVER PIMA, 1964

	Male	Female	Total
SINGLE	559	552	1,111
MARRIED	255	255	510
SEPARATED	38	53	91
SURVIVOR	30	50	80
UNKNOWN	1	0	1
TOTAL	883	910	1,793

consist of people over age fifty-five. The bulk of these are in the marital status of survivor. All but one of the others (the exception noted above) are people in the separated or divorced category. The one exception is a single man. This suggests that developmental cycles beginning with "single person households" (Otterbein 1961:36) are not applicable here.

The "conjugal pair household" consists of a married pair (as "married" was defined above). Such a household may be composed of young people who have not yet had children or of older people whose children have all left the household.

The "nuclear family household" is a more complex category. The "simple" nuclear family household consists only of a conjugal pair and the children of either or both conjugal partners. Three other sub-types can be identified: (1) those including one parent of either conjugal partner, (2) those including one sibling of either conjugal partner, and (3) those including nephews or nieces of either conjugal partner. When specific reference is made to one of the sub-types, the qualifying adjective will precede "nuclear family household." Otherwise, the term will be used as a generic label encompassing all sub-types.

TABLE 6

FREQUENCIES OF HOUSEHOLD TYPES
AMONG SALT RIVER PIMA, 1964

Household Types	In Compounds Stable	In Compounds Unstable	Not in Compounds Stable	Not in Compounds Unstable	Total
One Pers. H.H.	15	0	5	0	20
Conj. Pr. H.H.	16	0	7	0	28
M'Focal H.H.	10	1	0	25	36
P'Focal H.H.	4	0	6	0	10
Nuc. Fam. H.H.	35	0	112	5	152
Parent N.F.H.H.	0	0	1	6	7
Sibling N.F.H.H.	0	0	0	4	4
Nepotic N.F.H.H.	0	0	0	2	2
Aff. Ex. Fam. H.H.	1	0	1	0	2
Nat. Ex. Fam. H.H.	4	2	0	13	19
Ext. Fam. H.H.	16	0	10	1	27
Sib. Joint H.H.	0	1	0	1	2
Ext. Cons. H.H.	0	1	0	3	4
Parturition H.H.	0	0	0	2	2
Total	101	5	142	67	315

DESCRIPTION OF HOUSEHOLD TYPES

Household Type	Description
One Person Household	Lone individual as "household."

TABLE 6 -- Continued

Matrifocal Consanguineal Household	Mother and unmarried children comprising residence unit.
Patrifocal Consanguineal Household	Father and unmarried children as residence unit.
Simple Nuclear Family Household	Residence unit of husband, wife, and unmarried children of either spouse.
Parental Nuclear Family Household	Nuclear family household plus one parent of either spouse.
Sibling Nuclear Family Household	Nuclear family household plus unmarried sibling of either spouse.
Nepotic Nuclear Family Household	Nuclear family household plus unmarried children of sibling of either spouse.
Affinally Extended Family Household	Residence unit of husband, wife, children of either spouse, and spouses of married children.
Natally Extended Family Household	Husband, wife, unmarried children, plus grandchildren, as residence unit.
Simple Extended Family Household	Husband, wife, their children, spouses of married children, and grandchildren as residence unit.
Sibling Joint Household	Two or more siblings in senior generation of household, plus spouses and children of siblings.
Extended Consanguineal Household	One parent in senior generation, unmarried children, and their unmarried children; multiple generation consanguineal household -- no affinal tie.
Parturition Household	Woman and pregnant daughter of husband's brother.

An "extended family household" includes two or more generations with an affinal tie in each or three or more generations with at least one affinal tie. A man and wife, their children (married and unmarried), the spouses of married children, and their unmarried children, constitute a "simple" extended family household. Two other sub-types, significant in terms of differential development, are present. The first consists of a man and wife, their children and the spouses of resident married children. This household includes only two generations, but has at least one affinal tie in each. It is termed a "maritally extended family household." Its existence is brief, as the birth of children to the junior conjugal pair will either change it to a "simple" extended household or result in fission of the household. The second consists of a man and wife, their unmarried children, and any offspring of their children. This is termed a "natally extended family household." It results most frequently from the return of a divorced, separated or widowed daughter (with children) to her natal family. It represents the fusion of a nuclear family household and a consanguineal (matrifocal) household. The unqualified term "extended family household" will encompass all sub-types.

The "consanguineal household" was defined earlier (see Chapter II). Both sub-types outlined there are present in the study community. The patrifocal household is less common than the matrifocal variety. In two (of ten) cases, the patrifocal household exists because of the death of the wife. Clearly, economic factors do <u>not</u> "cause" or even precede, the emergence of these patrifocal households. Any economic change associated with such reorganization (from nuclear family to patrifocal household) is uncontestably a <u>result</u>. I stress this here because the same factor (death of a spouse) accounts for five (of forty) matrifocal households. It should be clear that the question of whether the consanguineal household results from or contributes to economic conditions, is a misleading one; it may do either in specific cases. Moreover, death rates among people of marriageable age presumably fall within specific, definable ranges for all societies. A percentage of all households in any society (in which they are not immediately fused with another residence unit) should be of the consanguineal type. This percentage would be a direct function of the death rate among people of marriageable age. The presence of consanguineal households in excess of what would be predicted (on the basis of death rates among marriageable people), would be an indicator that some other factor was operative in that society. Furthermore, assuming that death rates among marriageable men and women were similar (or in a known ratio to one another), the percentages of patrifocal and matrifocal types should also be similar (or in a ratio similar to the death rate ratio between marriageable men and women).

The discussion thus far concerns only the emergence of consanguineal households. But those factors that serve to eliminate it (such as the fusion of a matrifocal and nuclear family household to form a natally extended one) must also be considered.

C. Interrelations of Household Types

Three primary modes of dissolution of both types of consanguineal household are present within the study community. These are: (1) fusion of a consanguineal household with either a nuclear family or conjugal pair household, to form a natally extended household, (2) fusion of a consanguineal household with a one person household (or with a person from any sort of household), to form a nuclear family household, and (3) fission of a consanguineal household, resulting in formation of a one person household and movement of the children to the home of siblings or parents of the departed parent. This change in the children's residence results in formation of either a nepotic nuclear family or consanguineal household, in the first case, or of an extended family, in the second case. Reversal of these changes accounts for the emergence of consanguineal households. One other mode of emergence (relevant only to the matrifocal household) is present -- illegitimate birth. A female one person household is transformed into a matrifocal household by the birth of a child. Illegitimate births account (directly and indirectly) for the emergence of fifteen of the forty matrifocal households.

I have already indicated that nearly all one person households consist of survivors or those separated or divorced. The departure or death of a spouse (before the birth of children or after their departure from the natal household) transforms a conjugal pair into a one person household. Nineteen (of twenty) one person households came into being in this way.

Conjugal pair households emerge in one of two ways. Marriage is an obvious and basic one. The second way is through the death or departure of children from a nuclear family household. A co-resident husband and wife exist as a conjugal pair household only until the birth of the first child or the death of a spouse. The first change creates a nuclear family household, the second a one person household. The majority of conjugal pair households consists of older couples. This reflects the relatively short period between marriage and birth of the first child and the longer period between departure of all children and death of a spouse. Again, reversal of these processes transforms conjugal pair households into a pair of individuals or into a nuclear family household (severing the affinal tie and return of departed children, respectively).

The nuclear family household emerges in two primary ways. These are the addition of children to a conjugal pair household or addition of a spouse to someone in the senior generation of a consanguineal household. As before, the reverse operation of these mechanisms dissolves the nuclear family household.

Extended family households are brought into being and dissolved in a number of ways. Since the preceding discussion outlines the primary modes of household transformation, it is pointless to review them again at this time. The importance of extended family households within the community and their interrelations with other household forms are more concisely indicated in the diagrams that follow.

D. Household Development Cycles

Although less than a third of the households are non-familial ones, all households are composed solely of kinsmen. There are no strangers or unrelated friends in any household. All multi-person households, whether familial or non-familial ones, are "kin-based" units. All household transformations can be summarized as those creating or dissolving an affinal tie (marriage or divorce, separation, and death) and those creating or dissolving a new generation (birth of the first child or death, departure of the last child within a generation). Although other modes of transformation can be imagined, especially where households are not strictly kin-based units, I believe this summation of modes of change applies to most, if not all, societies.

The method identified as "family life cycle analysis" (Loomis 1945 and Glick 1957) or "the developmental cycle in domestic groups" (Smith 1956 and Fortes 1958) has been widely employed as a way to obtain a dynamic picture of household organization. Two techniques have been used to derive household development cycles from census data. The "historical" technique employs adult life histories to reconstruct the development of households. Ideally, this technique requires that life histories be taken from all adults within the defined population. In practice, this ideal is seldom obtainable (Otterbein 1961: 1-4). The "cross-sectional" technique utilizes census data to provide a comprehensive picture of current patterns of household composition within a society at a point in time. The household types identified are placed in an evolutionary sequence that presumably approximates the sequence of household development within the reference society. This technique does not require full coverage of the defined population, but -- as the name implies -- may be used with a sample or cross section of that population. It does require that the society not have undergone significant social change for the past three or four generations. Such a requirement clearly limits the usefulness of this technique. Few existing societies meet the requirement. I have combined both techniques, one as a check on the other.

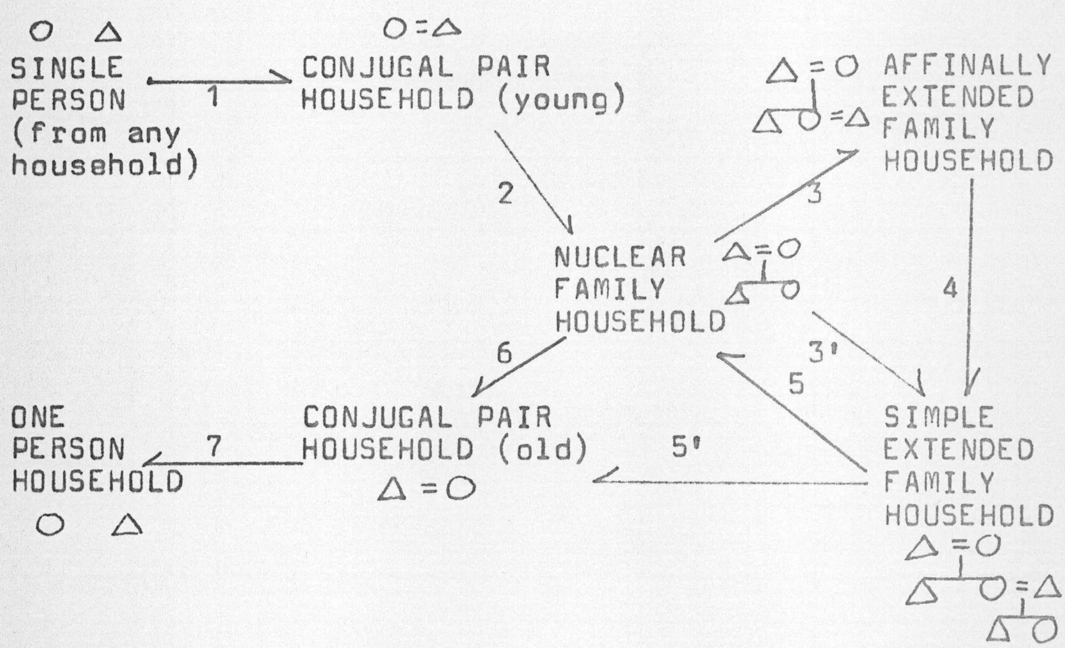
Census data permitting delineation of all community household types were obtained. These types were set out in a tentative developmental sequence (conjugal pairs preceding nuclear families, and they in turn preceding extended families). Brief life histories were later taken from at least one adult within each household. These histories clarified a number of ambiguities appearing from use of the "cross-sectional" technique and indicated that the nuclear family household was less common two or more generations in the past than it is at present.

Two distinctive cycles were identified. The primary cycle (see Diagram I) applies to the majority of the population. The secondary cycle (see Diagram II) applies to a minority (approximately twenty percent). Although these cycles are distinct, it is difficult, on purely structural grounds, to distinguish between certain households in one cycle and similar ones in the other. The types were defined at the first of the chapter. But it is worthwhile to tie the transformations (the numbered arrows of the diagrams) into the overall pattern of household development. I will examine them separately.

Single persons rarely establish separate households; survivors and those separated or divorced do. The first transformation (1) involves people leaving established households to set up a (young) conjugal pair household. Birth of children to that pair (2) creates a nuclear family household. Marriage of a person in the junior

DIAGRAM I

PRIMARY HOUSEHOLD DEVELOPMENT CYCLE

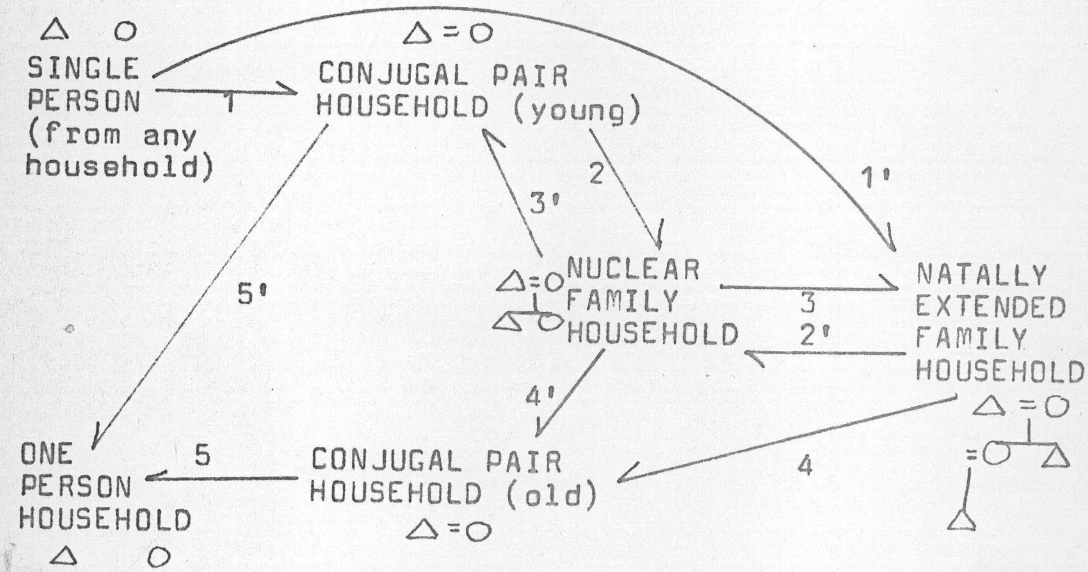


generation of a nuclear family household (and continued co-residence of this new conjugal pair in the original household) transforms it into an affinally extended family household (3). Birth of children to the junior conjugal pair of this household changes it into a simple extended family household (4). An alternate route, resulting from the return of previously married offspring to their natal residence -- together with spouse and children -- transforms the nuclear family household directly (3') into a simple extended family household. All married children may eventually leave their natal household, leaving behind an older nuclear family household (5). Departure of all children from that household transforms it (6) into a conjugal family household (old). Another alternative is the departure of offspring (with spouses and children) from the simple extended family household, changing it directly into the conjugal pair household (5'). Death of either member of the conjugal pair transforms it into a one person household (7). This household form may continue as a stable residence unit until the death of the widow or widower, or the survivor may move into the household of a child. The developmental sequence indicated by the sequential numbers (1,2,3,4,5,6, and 7) is the major mode of development. Those sequences indicated by prime numbers (3' and 5') are alternative "short cuts."

As with the primary developmental cycle, single persons (as opposed to survivors, and those separated or divorced), rarely set up separate residence units. But in the secondary developmental cycle (see Diagram II) the first transformation may result from birth of a child. Birth without benefit of marriage often results (1) in the mother setting up a separate (consanguineal) household within (or thus creating) a compound. An alternate result of such a birth (when mother and child continue residence in the mother's natal household), is the creation of a natally extended family household (1'). A third change involves the addition of a spouse to a consanguineal household (2). The resulting nuclear family household, often unstable, may revert to the consanguineal (3'). These alterations (2 and 3') may be repeated several times. During such time as a nuclear family exists another transformation (3) may occur, birth of a child to a member of the junior generation. The result is the natally extended family household. Such a unit is unstable, and reversion (2') to a nuclear family household generally takes place. Nevertheless, both "reversions" are best viewed as developments

DIAGRAM II

SECONDARY HOUSEHOLD DEVELOPMENT CYCLE



alternative to the major course of progression (indicated by the 1, 2, 3, 4, and 5 sequence of numbered transformations). A natally extended family household may also be transformed (4) into a conjugal pair household by the departure of the mother (or father) and children. Departure of all children from a nuclear family household also produces (4') a conjugal pair household. A one person household will emerge (5) at the death of either spouse within a conjugal pair household. Alternately, a one person household can result (5') from the departure of all children from a consanguineal household. Although it is again possible for the survivor of a conjugal pair to take up residence with a child, it rarely takes place among those within the secondary developmental cycle. The instability of virtually all households within this cycle minimizes the possibility of sheltering a sole surviving parent. Several additional alternatives may be noted. First, it is possible for a junior member of a two generation consanguineal household to give birth, transforming it into a three or even four generation consanguineal (consistently matrifocal) household. Second, it is common for temporarily lone adults to move in with a sibling, the result being a "sibling joint consanguineal household." Third, the children of a consanguineal household may be "orphaned" by the death, imprisonment, or desertion of the sole parent. In such cases, the children are generally taken in by a sibling of their parent. The result is a nepotic nuclear family household.

These transformations are relatively rare, and the resulting households ephemeral. The relative frequency of these transformations may be estimated by reference to the frequencies of household types indicated in Table 6.

E. Patterns of Marriage, Birth, and Separation

The two distinctive developmental cycles suggest the major feature of marital patterns and hint at several others. Marriage is highly unstable and relatively less common among those within the secondary developmental cycle. Households within the primary developmental cycle are more stable. Also, the preference for women to marry within the community is more often observed within the primary developmental cycle. The higher frequency of "outside" marriages among those within the secondary cycle may be one contributing factor to the marital instability of those households. Within both cycles, and whether the marriage was within or outside the community, post marital residence was "on reservation" for those households in the defined population.

Apparently all marriages within the first cycle were legalized by secular authorities, and approximately sixty percent of them were also sanctified by a religious ceremony. Although secular legalization is common within the second cycle, failure to honor this requirement of tribal law seems more common among this segment of the community. Both cases of "common law" marriage admitted to me were within households of the secondary cycle. Religious marital ceremonies were claimed for no more than twenty-five percent of the secondary cycle households. Within both cycles, evidence of traditional ceremony is minimal (taking the form of artifact "trappings" -- baskets, squash blossoms, and in some cases a "something old" household item passed from mother to daughter).

All births during the study period took place in one of the metropolitan area hospitals. Informant comments indicated that no particular formalities preceded, surrounded, or followed birth except for baptism among Methodists and Catholics, and dedication among Latter Day Saints.

People whose household affiliations place them within the secondary cycle have a higher frequency of illegitimate births, but no monopoly on them. An unwed pregnant girl (or _young_ woman) will establish separate residence, or residence with a distant relative (even moving to the Gila River Reservation in some cases) until after the child is born. Two households composed of Gila River residents in temporary residence at Salt River for this purpose were identified. In both cases, the pregnant girl was residing with her father's brother's wife.

I did not attempt to differentiate between separation and divorce. Although legal marriage is now required by tribal law, and generally occurs, legal divorces are not common, and informants seemed generally uncertain about their legal status. Some "marriages" are frequently, and often for long periods, interrupted by extra-marital liaisons that may approach or surpass the stability of the _legal_ marriage. Divorce and separation are virtually equivalent, functionally. Similarly, it was often impossible to differentiate between legal and _de facto_ separation. Even if it had been possible to do so, _de facto_ separation is the significant consideration. This _de facto_ separation formed the basis for identifying people in the category of "separated and divorced." In fact, some of these people were legally divorced, and others probably were but either did not know or did not care to reveal their status. Nevertheless, one respect in which the legality of marriage or divorce is relevant, is a significant one. This is the matter of inheritance, particularly of land. Use of wills to assign land and other property is being encouraged. Although it was not a common practice at the time of my study, it was becoming more common. This makes possible inheritance patterns that violate the traditional and still common bilateral ones (with a patrilineal emphasis for real property, automobiles, and "male" property). But until such time as the writing of a will becomes the common practice, legality of paternity will remain important. Except where a will is left, land owned by a man will be inherited only by his legal offspring. However, land held by a woman (women were allotted equally with men, ten acres per person), can be inherited by any of her children. Most often, inheritance of a woman's property is by children of a legal marriage (if there was issue) or by children of (and adopted by) the man with whom she last cohabited, or both. In this last instance, much wrangling occurs over which class of offspring deserves how much. The children of that man who was a community member are generally given precedence over children of an "outsider," regardless of which was the legal husband (see also pages 63-64). In this light, the preference for women marrying within the community can be seen as a pragmatic matter with the function of keeping land ownership within the community.

F. Residence Patterns

Initially (both in terms of any specific household and in terms of the history of the reservation) residence was determined by the location of allotted land. As households developed and grew since the time of allotment (1912-14), location of family land continued to influence where a new household could be established. But inheritance of land gave an increasingly wide range of a location choice in siting a new household. At first an emergent conjugal pair had only two choices -- his folks' land or her folks' land. After a generation of land inheritance had distributed land holdings to more people, they had more choices. As the range of choices became greater, factors other than allotment locations became increasingly important. In approximate chronological sequence, these include: (1) nearness to roads, (2) accessibility of water (in the form of irrigation control valves), (3) nearness to Scottsdale (for the Salt River sub-community) or Mesa (for the Lehi sub-community), (4) accessibility of electricity, (5) location of an existing house, and (6) amount of income produced by the total allotted land held by the various family groups with which the emergent conjugal pair was affiliated. The last factor has become significant only within the past decade. It appears responsible for the compound -- a supra-household residence unit composed of households affiliated by kinship and geography. It is important to note that the key factor is the amount of income produced by the land (in the form of lease monies), not simply the amount of land held by this or that family group. This is examined further in the next chapter.

There is no evidence of any patrilocal, matrilocal, or other "rule" of residence. Residence is determined by the interaction of those factors noted, not by kinship. Nevertheless, post-marital is not strictly "neo-local," which implies societal pressure for the establishment of a new household upon marriage, but is at the option of the newly formed conjugal pair. This situation is very much like the "expedient" residency of a group without "explicit marital residence customs"

(Service 1962:60). I use the term "optalocal" for the residence pattern at Salt River. Post-marital residence may appear, on examining any one household, to be patrilocal, matrilocal, neolocal, etc. In reality, it is an optional matter reflecting an ideal balance of, for example, accessibility to water, nearness to Mesa, and amount of income produced by land held by the various family groups with which a household is affiliated.

Changes in residence commonly come about when: (1) marriage occurs, (2) inadequacy of income causes a household to merge with another, (3) a child, representing a new generation, is born, (4) a spouse is removed (by illness, imprisonment, death, desertion, etc.), (5) the parent of a consanguineal household is removed (by illness, imprisonment, death, desertion, etc.). Such changes may be purely structural or they may be solely geographical ones involving a move to larger quarters. But more often they also result in the fusion of two households, fission of a household, or the addition of a household to a compound. These changes are generally ones with economic repercussions or causes.

Since all houses built during my study were constructed under the auspices of the Mutual Help housing program or the IBEC program, it would seem that location of existing structures would be a major factor in determining residence patterns. To a small extent this is true. Over fifty unoccupied dwelling structures were present. But the majority of them required major repairs to be inhabitable. All of them were of adobe or "sandwich" construction and had only three rooms or less. Only six of these "unoccupied" structures were re-occupied during the study period, and all re-occupations were temporary ones -- of several weeks to three months duration. Location of existing structures could have a marked influence on residence patterns, were it not for the practice of buying houses to be razed in neighboring metropolitan areas and moving them on reservation. Placement of these moved houses is an index of the relative importance of the factors noted earlier. Two of the eight houses moved onto the reservation during the first seven months of 1965 were located within a compound. The two compounds concerned were ones in which members of the senior household held land providing combined lease incomes of $5,750 and $6,500, respectively. The other six houses were placed near one of the two paved east-west roads (McDowell and Indian School), locations providing good access to the neighboring towns (upkeep on the unpaved roads is minimal and a few drops of rain make them treacherous).

One further aspect of residence goes beyond the boundaries of the reservation and the scope of my study. This is encompassed by the term "relocation" but is not limited to the formal employment service denoted by that term. Relocation, as I use the term here, refers to all long term movement off reservation and from one reservation to another. No short term wage-labor migration exists at Salt River. Since, as I have specified, this matter is largely outside the scope of my study, I can only comment on it in terms of its ramifications within the community. It is important to distinguish two different kinds of relocation: off-on reservation relocations and inter-reservation relocations.

The first occurs in one of two patterns. These patterns correspond to the distinction between primary and secondary household developmental cycles. That pattern manifest by those within the primary cycle is one of off reservation residence on a continuing basis during the period of maximum earnings (roughly from age thirty to sixty). This off reservation residence is followed, on retirement of the wage earner, by return to the reservation. I was unable to secure comprehensive information on households following this pattern, as my contacts were only with those people who had returned to the reservation after retirement. Members of five such households were contacted. My impression is that households following this pattern of on-off reservation movement are very stable ones, their members are highly acculturated, and they consist of people with education above the community average. Within the secondary developmental cycle, the on-off reservation movement is more irregular and the off reservation period is not undertaken by households, but by transient individuals. The majority of these (remaining in Arizona) gravitate to the Guadalupe sector of southeastern Phoenix and southwestern Tempe. It is best identified simply as a slum ghetto occupied by Indians, Mexican-Americans, Negroes, and mixed groups of economically depressed "minorities." These people return to the reservation irregularly and for periods of varying duration, as briefly as a few weeks or as long as several years. It is perhaps most meaningful simply to regard them as transients. Twelve people in this category were identified. Nevertheless, my limited perspective and informant reluctance to identify people in this category, suggest that this total falls far short of the actual number. They are regarded as "black sheep," they "make bad feelings toward Indians," and their existence is somewhat grudgingly conceded.

The second kind of relocation, inter-reservation movement, does not show patterns of the kind noted for on-off reservation movement. First, I must point out that inter-reservation relocation is almost exclusively between the Gila River and the Salt River reservations. This movement occurs in the same manner and for largely the same kinds of reasons that movement within the community takes place (see page 204). Except for the lower frequency of this inter-reservation relocation, it almost could be regarded as equivalent to intra-community residence change. One kind of inter-reservation residence change does not occur within the community. This is the movement of an unwed pregnant girl to the "other" reservation during her period of confinement. Two cases of Gila River people coming to Salt River for this purpose occurred during the study period. I do not know how many Salt River girls went (or were sent) to Gila River for the duration of a pregnancy, but three cases were hinted at.

G. Compounds and Neighborhoods

Basic definitions of the compound and neighborhood are given in Chapter IV. The compound is a geographical grouping of related households. Wide variations exist in the extent of economic cooperation within a compound and in the extent of economic assistance any one household gives to or receives from, any other household of that compound. This can best be illustrated by describing the economic situation within a compound. Compound A (see Map IV) consists of three simple nuclear family households (numbered 1, 6, and 97) and two, one person households (numbered 2 and 3). Households #2 and #3 each consist of an elderly widower. These two men are brothers. The heads of households #1 and #97 are sons of the widower of household #2. The head of household #6 is the son of the man of household #3. Households #2 and #3 are dependent on lease income and wages from lawn work. The head of household #97 is a B.I.A. employee (bus driver for the Salt River Day School) with annual earnings of $4,204 and a lease income of $163. His wife has an annual lease income of $848. Yet this household contributes the least toward economic assistance of other households of this compound -- partly because there are seven children present, four of whom are in school. Household #1 has an annual income of barely $1,000 (all earnings from farm labor) but only two children, both pre-school. This household receives assistance from the father of its head (the widower of household #2). The head of household #2 has annual earnings (lawn work) of $2,500 and lease income of $1,550. The widower of household #3 both gives assistance to and receives aid from household #6. This second widower has annual earnings of $1,750 (from lawn work, but he was sick part of the year) and lease income of $163. His son (head of household #6) is employed in construction as a skilled laborer (welder, riveter, equipment operator, and sometime mason). His $4,500 annual earnings were somewhat unreliable, however, and at the first of the year (time of lease income payments) he obtained assistance from his father (head of household #3). In the latter part of the year, when lawn work was at low ebb and lease income had been spent -- but construction activities were going well, the father received assistance from his son. By contrast, within many compounds, economic assistance is limited to emergencies (sudden illness, death, desertion, etc.) and within a few it takes the form of continuous assistance to a component household by other households.

In all cases, the component households of a compound are within a maximum of 100 feet of one another. These households also are affiliated by kinship; at least one person in each household is a primary kinsman (parent, child, or sibling) of someone in another household of that compound. Neighborhoods are defined on the basis of the nearness criterion only; members of each household may be utterly unrelated to members of other households within a neighborhood. There are twenty-eight compounds, twenty in Salt River and eight in Lehi. Only five neighborhoods exist, four in Salt River and one in Lehi.

Besides the defining differences between compounds and neighborhoods, two features distinguish them. First, interaction within a neighborhood is largely confined to social activities (gossiping, sharing and borrowing of cars, baby-sitting, etc.); whereas clear and intimate economic interaction is present within a compound. Some economic interaction (mostly borrowing money) occurs within neighborhoods, but primarily in emergency situations. Second, compounds form around the kinship ties that relate them and on land held by kinsmen; neighborhoods lack these bonds. Although the first five pragmatic factors noted (see page 202-203) apply equally to both the compound and neighborhood, and the sixth one applies only to compounds. Most simply, co-residence of newly emergent households with households of older kinsmen in a compound appears partly a matter of maintaining good relations with kinsmen in order to insure inheritance of income producing land. This consideration is absent within neighborhoods.

H. Other Extended Kinship Groupings

As is evident by now, this Indian community is highly acculturated. Nearly a century ago the Pima had become acculturated to the extent that Grossman regarded their recollections of traditional culture as "unreliable" (1873:407).

Named groups, the buzzards and coyotes, were recalled by five informants. These few informants did not agree on the nature or functions of these groups. Nor would they speculate on how membership was obtained in them. A few features, on which all informants with any information about the matter agreed, did emerge. First, a person becomes a buzzard or coyote at birth. But informants did not agree on how membership in one or the other group was determined. The groups were agamous and did form the nucleus of singing competition that took place during dances or ceremonial activities. Joking rivalry between members of these groups took place on many occasions. One informant mentioned that arguments between spouses might include insults referring to membership in such groups. "You see, if a man got home from the fields and his supper wasn't ready, or just some plain beans and pan bread, he might complain, 'coyotes never could cook.' And his wife would just tell him, 'buzzards will eat anything, that's why.'" But this same informant was "sure" that her father's mother and father's father were both buzzards. Other informants also insisted that membership in either group had nothing to do with whom one could marry. It is reasonably clear that these groups were, and functioned as, moieties -- with a joking rivalry between them. Membership was determined by kinship and was effective at birth. These seemed to be no initiation ceremonies and the moieties were allegedly agamous. I could find no evidence of other kinship based groups of any sort.

I. Kinship Terminology

Again, the high degree of acculturation has resulted in the virtual disappearance of traditional kinship terms. They are not used, and few informants could even recall Pima terms for kinsmen. Proper English terms, with apparently standard Anglo-American referents, are predominant. People under twenty to thirty years of age commonly speak only the English language. Spanish terms are used by few people. Hybrid English, Spanish, and Pima terms are known by older people. In all, I located fourteen people able to relate some of the "Pima names for relatives." Three informants gave reasonably complete outlines of Pima terms, but all gave a number of alternate terms for a given relative. No informant gave terms that were completely consistent with those from any other informant. These kinship terms were recorded on tape, but their marginal relevance to the problem (especially inasmuch as few people even know these terms, and they are rarely used even by those that do know them) precluded transcribing them and attempting to bring about some consistency in the three sets of disparate terms. Three features of Pima kinship terminology are identifiable. First, terminological distinction was made between elder and younger siblings, and a degree of respectful behavior toward an older sibling was expected. Second, different terms of address for one's own siblings were identified for a woman speaking and for a man speaking. Third, a prefix was added to the term of reference upon the death of an individual. The compadrazgo system was identifiable but vestigal among the Catholic minority and those of "Mexican" ancestry. No indication of the Peri system reported by Alegre (1842:II:217, cited in Ezell 1961:102) was found. No formalized kinship usages were identifiable. Respect and deference were sporadically shown to older siblings, elderly people and women. It would be absurd to insist that this reflects traditional kinship usages; such deference can be as easily (and probably more accurately) explained as the result of Hispanic and Anglo-American acculturation.

CHAPTER VII. ECONOMY

A. The Work Force

It is necessary, in defining the Salt River work force, to include all people over eighteen years of age and not in school. People outside the work force may, nevertheless, have incomes. Some have lease income or receive welfare monies. Some students work part time or during the summer. People over age sixty-five may no longer be seeking employment, but are included within the work force. The age of sixty-five is not an upper cut-off point in defining the work force because older people do commonly obtain farm labor -- frequently after several years of apparent "retirement." The majority of students who work do so only in summer and rarely hold jobs the entire summer. Such work is non-paying in many cases. On-the-job training with the Tribal Council or on one of the volunteer projects (the P.H.S. water or Mutual Help housing project) is a common form of student summer occupation.

Although many women neither had nor sought employment during my study, it was not feasible to exclude women from the population defined as the work force. Virtually all community housewives will work at wage-labor some time in their lives. At any one time, relatively few housewives will be so employed. But the portion of the female population engaged in wage-labor changes frequently. A woman not actually involved in wage-labor during the study period, might well have become active in it at any time during the study.

The unemployed are defined as those with no earned income during the calendar year of 1964. Those with earned income for less than nine months of that year are "under-employed." People with earned income for nine months or more of that period are "employed." The "employed" category also includes the self-employed (two men and one woman), regardless of the duration of employment. Although the unemployment totals are higher for women than for men, it must be remembered that this includes housewives. Even so, over forty percent of the work force is unemployed, and less than twenty-five percent of it is employed on a full-time basis (nine months or more of the year). The ratios of men to women in all categories of employment indicate the dominance of men in the more stable job categories (see Table 7).

Although age is a factor in employment, it is

TABLE 7

EMPLOYMENT STATUS, BY SEX, OF
THE SALT RIVER PIMA WORK FORCE, 1964

Employment Status	Male No.	Male % of Work Force	Female No.	Female % of Work Force	Total No.	Total % of Work Force
Unemployed	102	13.2	229	29.6	331	42.8
*Under-employed	139	18.0	119	15.6	258	33.6
**Employed	148	19.1	35	4.5	183	23.6
Total Work Force	389	50.3	383	49.7	772	100.0
Not in Work Force	494	--	527	--	1,020	--
Total Population	883	--	910	--	1,793	--

* Includes those employed less than nine months in 1964

** Includes those employed nine or more months in 1964 mediated by education. Consequently, examination of educational levels in relation to the various income sources is desirable.

B. Income and Education

Education appears to be associated with variations of income in all categories of income source, but that association may be indirect. Greater income amounts appear more commonly among those with education above the median (nine years of education) in the case of wage-labor income (see Table 8). But greater amounts of lease income appear more commonly among those with education at or below the median. This reflects the inverse relationship between education and age, among adults. Lease income depends on the possession of land, the amount of lease income on the amount of land held. Individual possession of land began formally with the allocation of ten acres per person in the period of 1912-1914. All original allottees were over fifty years of age at the time of my study. They retain their own original ten acres plus the land they have inherited since the time of allocation. Younger people (those under fifty in this case) possess only such land as they have inherited. Most inherited shares are far smaller than the original

TABLE 8

WAGE-LABOR INCOME AND EDUCATION
AMONG SALT RIVER PIMA, 1964

Dollars per annum Wage-Labor Income	Educational Levels*			Total	Cumulative Total of People with Wage-Labor Income
	1	2	3		
None	219	156	972	1,347	--
1-199	5	0	5	10	10
200-499	2	3	0	5	15
500-999	78	73	0	151	166
1,000-1,499	9	10	0	19	185
1,500-1,999	52	52	0	104	289
2,000-2,999	26	34	0	60	349
3,000-3,999	23	40	0	63	412
4,000-4,999	8	13	0	21	433
5,000 plus	2	11	0	13	446
Total	424	392	977	1,793	--

* Educational levels are:

1 = zero through nine years
2 = ten or more years
3 = in school or pre school

ten acres, and they have been getting smaller with the passage of time. Consequently, older people have more land and realize more income from leasing. It is an historical "accident" that these older people also have less education. The potential advantages of education, which could assist younger people to obtain better lease rates, are not manifest. Rates are largely determined by the market, and the lease contracts are drawn up with the supervision of B.I.A. personnel. So the advantage that "educated" people might have at the bargaining table does not come into play (see Table 9).

Welfare income accounts for a very small part of total community income. During the calendar year of 1964, sixty-one people were identified as welfare recipients (informant responses, B.I.A. and Maricopa county welfare information). This is less than ten percent of the work force. As would be expected, those on the welfare rolls with education at or below the community median outnumber those with education above the median (see Table 10). Welfare income, as tabulated here, includes the General Assistance made available through the B.I.A. and the Aid to Families with Dependent Children, Old Age Assistance, and Aid to the Permanently or Totally Disabled, made available through county agencies. No

TABLE 9

LEASE INCOME AND EDUCATION AMONG
SALT RIVER PIMA, 1964

Dollars per annum Lease Income	Educational Levels*			Total	Cumulative Total of People with Lease Income
	1	2	3		
None	178	270	972	1,420	--
1-49	41	29	1	71	71
50-99	20	14	1	35	106
100-199	31	28	1	60	166
200-499	47	22	1	70	236
500-999	67	16	1	84	320
1,000-1,499	15	6	0	21	341
1,500-1,999	10	3	0	13	354
2,000-2,999	9	4	0	13	367
3,000 plus	6	0	0	6	373
Total	424	392	977	1,793	--

* Levels of education are:

1 = zero through nine years
2 = ten or more years
3 = in school or pre school

TABLE 10

WELFARE INCOME AND EDUCATION
AMONG SALT RIVER PIMA, 1964

Dollars per annum Welfare Income	Educational Levels*			Total	Cumulative Total of People with Welfare Income
	1	2	3		
None	382	373	977	1,732	--
1-49	0	0	0	0	0
50-99	2	0	0	2	2
100-199	4	0	0	4	6
200-499	7	1	0	8	14
500-999	13	5	0	18	32
1,000-1,499	3	5	0	8	40
1,500-1,999	6	3	0	9	49
2,000-2,999	7	5	0	12	61
3,000 plus	0	0	0	0	61
Total	424	392	977	1,793	--

* Educational levels are:

1 = zero through nine years
2 = ten or more years
3 = in school or pre school

cases of Aid to the Blind were uncovered or reported. Surplus commodities recipients were not handled as welfare recipients because I was unable to maintain adequate coverage of this aspect of "welfare." It would have been virtually impossible, also, to assess dollar equivalencies of varying commodities not consistently utilized.

The A.F.D.C. category of welfare is the one with the largest number of recipients, and the one providing largest annual amounts of income. But this is qualified by the consideration that any G.A. case transferred to the county welfare office was not classified as a G.A. case, but classified according to its handling by the county (A.F.D.C., O.A.A., etc.). Only those G.A. cases denied county assistance and thus continued as G.A. cases, were classified as General Assistance.

Education presumably influences the amounts of income realized from wage-labor by making possible employment in skilled and more highly paid occupations. Clerical work is a separate category in Table 11, but it is also regarded as "skilled" wage-labor in contrast to "unskilled" work. The "trade" occupations, mason, carpenter, welder, plumber, etc., are grouped together as "semi-skilled" jobs. They also are placed within the "skilled" half of the "skilled-unskilled" dichotomy. Skilled and professional

TABLE 11

OCCUPATION AND EDUCATION AMONG
SALT RIVER PIMA, 1964

Occupation	Educational Levels*			Total	Cumulative Total of "Occupied" People
	1	2	3		
None	125	84	973	1,182	--
Housewife	94	73	2	169	169
Domestic	62	56	0	118	287
Farm Laborer	65	40	1	106	393
Common Laborer	20	31	1	52	445
Clerical	3	16	0	19	464
Semi-Skilled	44	68	0	112	576
Skilled and Professional	11	24	0	35	611
Total	424	392	977	1,793	--

* Educational levels are:

1 = zero through nine years
2 = ten or more years
3 = in school or pre school

occupations are those requiring specialized training, education, or experience beyond the high school level. Clergymen, engineers, teachers, administrators, and those holding executive business positions are the skilled and professional people of the community. The occupational categorizations of Table 11 indicate that more people with education above the median level are in the more highly skilled occupations. Those with education below the median are more in evidence within the unskilled occupations. It is no great surprise that women have a monopoly on domestic work (and, of course, the "occupation" of housewife). Men have a monopoly on common labor and a virtual monopoly on farm labor (one hundred men and only six women were active in farm work during 1964). Whereas most common laborers are just that, a few of them sometimes perform the work of a "tradesman." The necessarily arbitrary line was drawn by the individuals concerned. Those who claimed to be "primarily" plumbers, painters, etc., were classified as semi-skilled. Those who claimed primary employment as a "construction worker," "common laborer," or "jack of all trades," were classified as common laborers.

Education appears to enhance amount of wage-labor income and amount of welfare income (although fewer "educated" people were on welfare rolls, those who were received slightly higher amounts of income). Lease income is higher among those with less education. Those who are older generally have had less education. But they hold more land and are able to realize more lease income.

C. Wage-Labor Income

The importance of skills and abilities in securing wage-labor (especially skilled wage-labor) work is a key point in my analysis. Other matters such as discriminatory hiring practices based on assumptions about "Indian workers" and individual problems with alcohol or absenteeism are related to securing wage-labor employment. But they do not override the importance of skills and abilities. One consideration that could detract seriously from the influence of skills and abilities is the possibility of control networks developing within the job market. Networks directing hiring practices along nepotic lines (such as exist among the Argentinian *criollo*, see Strickon 1962:500-515) are not in evidence at Salt River. I mentioned earlier that most Tribal Council employees are community members. Two Anglo-American non-residents are the only exceptions. But no control network appears to be present. The question pivots on whether hiring practices perpetuate certain individuals in jobs for which they are ill-qualified or if those practices maintain a reasonable "matching" of abilities and job requirements. The latter possibility seems to hold true within this community. Those community members holding skilled and managerial positions within the Tribal Council during my study appeared qualified for those positions. Few of those holding Tribal Council jobs during my study were the same people who had those jobs two and three years earlier. This turnover may only reflect changes among elected officers. In that case Tribal Council jobs may be regarded as no more and no less obtained through "influence" than most positions within any political agency. Moreover, only twenty-eight jobs were provided by the Tribal Council, of which seven are elective. Thus, only some twenty-one positions (or 4.7 percent of all wage-labor jobs) could be regarded as obtainable through "influence" (see Table 12). Even these positions seem not to be controlled by considerations other than skills and abilities, although this cannot be proved.

Table 13 illustrates two points made earlier. In all categories of wage-labor income amount, there are

TABLE 12

EMPLOYER AND SEX OF EMPLOYEE AMONG SALT RIVER PIMA, 1964

Employer	Male	Female	Total
Bureau of Indian Affairs	19	6	25
Tribal Council	23	5	28
Land Lessees*	10	0	10
Public Health Service	7	0	7
Others	228	143	371
None	596	756	1,352
Total	883	910	1,793

* Although for most specified employers data are complete, for land lessees as employers the data are virtually worthless. The actual number of people employed by lessees is much higher than shown here, but the above total represents those whose employment by lessees was verifiable. The number given reflects the unwillingness of people to admit their employment by lessees and the strained relations between the people and lessees.

TABLE 13

WAGE-LABOR INCOME AND SEX OF RECIPIENT
AMONG SALT RIVER PIMA, 1964

Dollars per annum Wage-Labor Income	Male	Female	Total	Cumulative Total of People with Wage-Labor Income
None	593	754	1,347	--
1-199	10	0	10	10
200-499	3	2	5	15
500-999	76	75	151	166
1,000-1,499	10	9	19	185
1,500-1,999	54	50	104	289
2,000-2,999	52	8	60	349
3,000-3,999	52	11	63	412
4,000-4,999	20	1	21	433
5,000 plus	13	0	13	446
Total	883	910	1,793	--

more men than women. Admittedly, this partly reflects the heavier involvement of men in wage-labor. But it also demonstrates the greater importance of men as income providers -- quite apart from their numerical superiority in wage-labor. Above the median level for wage-labor income amounts (the $1,500 to $1,999 category), men outnumber women 137 to 20.

In all, 290 men and 156 women were engaged in wage-labor during the study period. The mean income for these 446 people was $1,953.40 from wage-labor. The entire community realized approximately $871,250.00 from wages. This amounts to a per capita wage-labor income for the community of $485.10 for 1964. Fifty-seven percent of the work force realized income from wage-labor.

The reliability of wage-labor is another prime consideration in assessing its social ramifications (see Table 14). As might have been predicted from the material already presented, more men than women are engaged in the <u>reliable</u> forms of wage-labor. Despite the importance of wage-labor as an income source, it is neither so reliable as might have been expected nor reliable enough to provide income security to a majority of community members.

Reliability of income presumably reflects the level

TABLE 14

RELIABILITY OF WAGE-LABOR INCOME AND SEX OF RECIPIENT AMONG SALT RIVER PIMA, 1964

Level of * Reliability	Male	Female	Total
0	593	754	1,347
1	68	49	117
2	76	73	149
3	32	10	42
4	114	24	138
Total	883	910	1,793

* Levels of reliability are:

0 = no income for year

1 = income for less than three months of year

2 = income for three to six months of year

3 = income for six to nine months of year

4 = income for more than nine months of year

of occupational skill required for a given position. Job reliability should be high where the required skill level is high. This is confirmed in Table 15. But there are three apparent anomalies in Table 15. These result from considerations noted earlier in this chapter. Some people have wage-labor income but are not in the work force, as defined. Some people in the work force, with wage-labor income, do not have occupations as such. And some people who have "occupations" do not have wage-labor income. These considerations pertain to ten people. Five men and two women have no occupation and are classed as having income at reliability level "one." Two men and one woman (self-employed) have occupations but are classed as having "zero" level wage-labor income reliability. Although these three self-employed people are not in wage-labor, they do have skilled occupations involving the application of individual skills and abilities. Nevertheless, elimination of these people from Table 15 would make the expected association more evident. Even with their elimination, the relationship of higher skill levels and higher reliability levels is clear.

Wage-labor income is the most important source of income in that it: (1) provides highest per capita

TABLE 15

OCCUPATION AND RELIABILITY OF WAGE-LABOR INCOME
AMONG SALT RIVER PIMA, 1964

Occupation	Level of Reliability*					
	0	1	2	3	4	Total
None	1,175	7	0	0	0	1,182
Housewife**	169	0	0	0	0	169
Domestic	0	42	62	9	5	118
Farm Labor	0	46	43	12	5	106
Common Labor	0	15	22	7	8	52
Clerical	0	2	3	0	14	19
Semi Skilled	1	4	19	14	74	112
Skilled and Professional	2	1	0	0	32	35
Total	1,347	117	149	42	138	1,793

* Levels of reliability are:

0 = no income for the year
1 = income for less than three months of year
2 = income for three to six months of year
3 = income for six to nine months of year
4 = income for more than nine months of year

** Housewife may be a "reliable" occupation in some cases, but it is placed in the "zero" reliability category here on the grounds that it provides no income.

income to those involved in it, (2) involves more people than any other single economic activity, (3) provides the highest per capita income to the community as a whole, (4) provides more total income to the community than any other source of income, and (5) constitutes the major income activity requiring acculturative contacts between community members and the larger Anglo-American society of the area. Wage-labor is largely the province of men, although women have a monopoly on domestic work. Men predominate in farm labor and monopolize common labor. In most occupational categories women are outnumbered by men. In terms of reliability and amount of income, men consistently do better. There is an evident association between (1) amount of wage-labor income and education, (2) amount of wage-labor income and occupational skill level, and (3) occupational skill level and reliability of income.

D. Lease Income

The primacy of historical factors in understanding lease income and its relation to education have been mentioned. The slight numerical superiority of men with regard to lease income and lease income amount is indicated in Table 16. The importance of leasing to the community

TABLE 16

LEASE INCOME AND SEX OF RECIPIENT
AMONG SALT RIVER PIMA, 1964

Dollars per annum Lease Income	Male	Female	Total	Cumulative Total of People with Lease Income
None	698	722	1,420	--
1-49	29	42	71	71
50-99	20	15	35	106
100-199	24	36	60	166
200-499	38	32	70	236
500-999	47	37	84	320
1,000-1,499	9	12	21	341
1,500-1,999	8	5	13	354
2,000-2,999	5	8	13	367
3,000 plus	5	1	6	373
Total	883	910	1,793	--

is second only to that of wage-labor. Mean lease incomes to those persons leasing land are smaller than from any other income category, $763.10 in 1964. Nevertheless, the total community income from leasing is second only to wage-labor -- approximately $284,650.00 for the year. The high total of lease income, despite the low mean incomes realized by individuals, reflects the large number of people involved in leasing, 373 people in 1964. Consequently, the per capita income for the community at large is also second only to that provided by wage-labor. Leasing provided an overall community per capita income of $158.70 in 1964.

The crucial point about lease income is that within the study community it is indirectly dependent on an extended kinship group. This need not be true for groups in other areas with lease, or similarly controlled, income sources. But within this community, a kinship network has effective influence on inheritance of land, and thus indirectly determines who may have lease income. This network does not continue traditional patrilineal patterns of inheritance. It has apparently arisen within the past half century as a result of individual land allocation. This allocation, conducted between 1912 and 1914, provided 975 individuals (the reservation population at the time) with ten acres of land each. Since that time, death has reduced the number of original allottees to 147 (76 men and 71 women). The remaining unallotted land was set aside by the Tribal Council as community land by the 1940 Salt River Pima Maricopa Community Constitution. Thus 8,280 acres have been passed through inheritance to offspring, spouses, and siblings of the original allottees who have died. All living original allottees receive lease income. An additional 226 people receive lease income derived solely from land that has been inherited. But the original allottees also have inherited land, and generally have inherited more land than younger people.

The extended kinship network (actually a number of networks that happen to be interrelated) exercises influence over inheritance by selective elimination of those who have not maintained "proper" behavior toward kinsmen from eligibility to inherit. This is done by "forgetting" or simply denying that an individual is "really" a full brother, legitimate child, etc. of the person whose "estate" is being settled. Those potential heirs who provide care and economic assistance for their senior and elderly relatives are assured of having their kinship relation and legitimacy favorably reported. Those that move off reservation, or who fail to maintain the desired support and assistance behavior, can expect an unfavorable evaluation of their "eligibility." This refers to the most common mode of land inheritance, in which the B.I.A. administrators depend on statements by survivors of an individual (who are not themselves generally potential heirs) in assessing kinship ties as the basis for determining inheritance. In these cases some people who are (genealogically) eligible to inherit are downgraded out of their inheritance by unfavorable statements by surviving elders of that kinship network (statements making them appear less closely related to the deceased). Others who are <u>not</u> (genealogically) eligible may receive a share of land because statements by these "elders" make them appear to be more closely related to the deceased. As important as this technique of "directing" inheritance by senior members of a kinship network may be, it is not the only way in which the influence of these "elders" may be applied. It is not common, but is a long-standing practice, for the owner of land to pass it along to a "favorite" before death. Although that choice may be contested after his death, I know of no cases in which the original decision was seriously altered. A third technique, and one which the B.I.A. favors as a replacement for the first (and commonest one), is the writing of wills. Since 1962, the B.I.A. has provided legal assistance to those wishing to draw up a will. As the practice becomes more widespread (which I believe will happen), two important results can be expected. First, the influence now exerted over inheritance practices will be less from the network and more from those specific individuals owning land. As the situation is now, those individuals without land are as much a part of the "control network" as those who do possess land. Second, the continuing fractionation of shares may be stopped and even reversed. This would have the result of increasing the amount and coherence of land held by any one individual, thus increasing the lease income amounts realized by those individuals with land.

E. Welfare Income

Although welfare is widely assumed to be important and prevalent among reservation residents, it is not so among the Salt River Pima. It was essential to the economic survival of only thirty-two households and received by only sixty-one individuals in 1964. The mean income from this source to welfare recipients for 1964 was $1,193.40, second only to wage-labor. But since the number of welfare recipients is far smaller than the number of wage-labor or lease income recipients, the total of welfare income available to the community is small -- approximately $72,800.00 for 1964. The overall per capita income to the community from welfare is also small -- about $40.60 for the year. The most marked contrast with the other income sources discussed thus far is with regard to numbers of people involved in welfare income. Only some 7.9 percent of the work force realized welfare income during 1964.

But I must note some shortcomings of the data pertaining to welfare. First, the above assessment omits unemployment compensation, workmen's compensation, and "private" charity sources -- as well as surplus commodities assistance. Unemployment and workmen's compensation data were not available. It was also evident from the state and county records available to me that identifying the community members within these records would have been nearly impossible, within the research period. Churches and other sources of assistance either did not wish to reveal or did not keep records that would have allowed me to assess the amounts directed toward the reservation or those individuals who received such assistance.

The ratio of men to women with welfare income is surprisingly close to equality -- 25 men (of 883) to 36 women (of 910). The distribution of welfare amounts by sex fails to reveal any striking association (see Table 17). Nevertheless, women do receive slightly larger amounts. This leads to the safe assumption that women are more frequently recipients of A.F.D.C. assistance (confirmed in Table 18). This form of welfare consistently provides greater income amounts to its recipients.

General Assistance, handled through the B.I.A. welfare officer, is one form of welfare that was clearly unreliable for members of the Pima Maricopa community. O.A.A. and A.P.T.D. income appeared reliable. But A.F.D.C. was highly variable for a majority of families. Some people that received A.F.D.C. income throughout the entire study period expressed concern about whether they would be able to "keep on getting it." Records for the previous two years indicated that some A.F.D.C. cases had been terminated with little apparent reason (it must be noted that I did not have access to all records relating to welfare matters, and ample reasons for such terminations may have been among those not examined). Pooling my impressions from informants, the information on record that I saw, and the facts of

TABLE 17

WELFARE INCOME AND SEX OF RECIPIENT
AMONG SALT RIVER PIMA, 1964

Dollars per annum Welfare Income	Male	Female	Total	Cumulative Total of People with Welfare Income
None	858	874	1,732	--
1-49	0	0	0	0
50-99	1	1	2	2
100-199	3	1	4	6
200-499	4	4	8	14
500-999	8	10	18	32
1,000-1,499	4	4	8	40
1,500-1,999	2	7	9	49
2,000-2,999	3	9	12	61
3,000 plus	0	0	0	61
Total	883	910	1,793	--

TABLE 18

WELFARE TYPE BY SEX OF RECIPIENT AND AMOUNT AMONG SALT RIVER PIMA, 1964

Sex	Welfare Type* 1	2	3	Total	Cumulative Total
Male	12	12	1	25	25
Female	28	6	2	36	61

Dollars per capita Welfare Income	Welfare Type* 1	2	3	Total	Cumulative Total
50-99	0	1	1	2	2
100-199	3	1	0	4	6
200-499	1	5	2	8	14
500-999	10	8	0	18	32
1,000-1,499	6	2	0	8	40
1,500-1,999	9	0	0	9	49
2,000-2,999	11	1	0	12	61
Total	40	18	3	61	--

* Welfare types are:

1 = Aid to Families with Dependent Children
2 = Old Age Assistance and Aid to the Permanently or Totally Disabled
3 = General Assistance

case-load handling that came to my attention during the study period, I would say that the overall reliability of A.F.D.C. income is reasonably good in fact; nevertheless, welfare recipients view this income as unreliable. This situation may be explained by reference to the legal requirements of eligibility and the assumption that some recipients were violating these requirements. Those recipients in violation of the legal requirements feared having their assistance "cut off" if they were "found out" and regarded the income as precarious. The welfare checks generally continued to come regularly because they were not "found out."

F. Other Income

A residual category consisting of the income realized by a total of twenty-seven people but not included in the previous categories is also present. It is not examined elsewhere because the paucity of data concerning its reliability and the few people realizing such income make it of little theoretical use or significance here. Moreover, all people with income falling in this category have income from one of the first three categories. The number of people with income in the present category is smaller than for any of the other income categories, and they constitute only 3.5 percent of the work force. The mean income, to these people from sources in the present category, is $1,109.40 -- less than from any other category except lease income. The total community income from sources in this category was $29,955.00 in 1964. Due largely to the small number of people involved, the community per capita income from these sources was only $16.70 for 1964.

Placing handicrafts income within this category might seem questionable. The particular handicraft activities included here (see Table 19) are generally undertaken only after a "consumer" has sought the <u>product</u>. In contrast, the <u>self-employed</u> man doing "handicraft" work (a Navaho), works on a continuing basis. He produces whether there is an identified "consumer" or not. In effect, he is marketing his <u>labor</u>. His "handicraft" activities are regarded as "skilled" (self-employment), and the resulting income is placed within the first income category. The sub-class of income identified in Table 19 as handicrafts is derived from sale of a <u>product</u>. It is done on an incidental, "favor for a friend" basis, in which the income is almost secondary to the social ramifications of the activity. The remaining sub-classes of "other" income are self-explanatory.

TABLE 19

"OTHER" INCOME SUB-CLASSES AND SEX OF RECIPIENT
AMONG SALT RIVER PIMA, 1964

"Other" Income Sub-Classes	Male	Female	Total
Handicrafts	0	3	3
Retirement	5	2	7
V. A. Compensation	3	0	3
Insurance Annuities	4	0	4
Savings, Dividends, and Inheritance	6	4	10
Total	18	9	27

It is important to stress that information on "other" income sources is less complete than that on wage-labor, lease, and welfare income. Informant statements concerning these first three categories of income were cross-checked with and supplemented by information from records. But no record data were available for comparison with informant statements about "other" income. As before, men have larger "other" income amounts (see Table 20).

Although the amounts realized from retirement income are most highly varied, it is the sub-class providing more people with most income. Insurance annuities provide consistently high amounts of income but do so to fewer people. Handicrafts involve the fewest individuals and provide smaller amounts of income generally. The collective sub-class of savings, dividends, and inheritance provides most people with income of this category. Income amounts from it are roughly equivalent to those from V.A. compensation. It is interesting that the two sub-classes of income most evidently reflecting wage-labor activities (retirement and insurance annuities) provide nearly half of all "other" income. Moreover, the collective sub-class of savings, etc., provides income to nearly as many people and would appear to reflect attempts to utilize capital effectively within the monetary economy (see Table 21).

TABLE 20

"OTHER" INCOME AND SEX OF RECIPIENT
AMONG SALT RIVER PIMA, 1964

Dollars per annum "Other" Income	Male	Female	Total	Cumulative Total of People with "Other" Income
None	865	901	1,766	--
1-49	1	0	1	1
50-99	0	2	2	3
100-199	0	0	0	3
200-499	4	4	8	11
500-999	3	2	5	16
1,000-1,499	4	1	5	21
1,500-1,999	2	0	2	23
2,000-2,999	1	0	1	24
3,000 plus	3	0	3	27
Total	883	910	1,793	--

TABLE 21

"OTHER" INCOME AND SUB-CLASSES OF "OTHER" INCOME
AMONG SALT RIVER PIMA, 1964

Dollars per annum "Other" Income	"Other" Income Sub-Classes* 1	2	3	4	5	Total	Cumulative Total
1-49	0	1	0	0	0	1	1
50-99	1	1	0	0	0	2	3
100-199	0	0	0	0	0	0	3
200-499	2	0	2	0	4	8	11
500-999	0	1	0	1	3	5	16
1,000-1,499	0	1	1	0	3	5	21
1,500-1,999	0	1	0	1	0	2	23
2,000-2,999	0	0	0	1	0	1	24
3,000 plus	0	2	0	1	0	3	27
Total	3	7	3	4	10	27	--

* "Other" income sub-classes are:

1 = Handicrafts
2 = Retirement
3 = V. A. Compensation
4 = Insurance Annuities
5 = Savings, Dividends, and Inheritance

G. Summary of Individual Income

The economic data presented thus far pertain only to individuals. Their incomes were examined in four broad categories: (1) wage-labor, (2) land-leasing, (3) welfare, and (4) "other." The preceding material is presented to further an understanding of the economic bases of the community and to supply the essential data for evaluating the representative character of the community by comparison with other neoteric societies. But individual incomes cannot provide the necessary basis for evaluating the hypotheses. Patterns of income within households are required. Household income patterns are, of course, based on the individual incomes of household members. Nevertheless, individual incomes will not be examined further after this brief summary.

It is desirable to summarize certain data for ease of reference. Mean dollar incomes to those receiving income, percent of the work force involved, total income realized by the community, and mean per capita income to all community members are presented, for each income category, in Table 22. It is evident that receipt of income from wage-labor, for example, does not preclude receipt of income from other sources. Nevertheless, some

TABLE 22

SUMMARY OF SELECTED FEATURES OF INDIVIDUAL INCOME AMONG SALT RIVER PIMA, 1964

Income Source Type	Selected Features			
	Mean Dollar Income to Individuals	Percent of Work Force Involved	Total Dollar Income to the Community	Mean Per Capita Dollar Income
Wage-Labor Income	1,953.40	57.7	871,250.00	485.10
Lease Income	763.10	48.3	284,650.00	158.70
Welfare Income	1,193.40	7.9	72,800.00	40.60
"Other" Income	1,109.40	3.5	29,955.00	16.70
Totals	---	---	1,258,655.00	801.10

patterns appear. Whereas lease income is commonly associated with income from all of the other three sources, welfare income is rarely received by those with skilled wage-labor income. A.F.D.C. and O.A.A. welfare monies are generally received by those with lease income. Age is a factor evidently responsible for the association of lease income and O.A.A. assistance. Income within the "other" category is also typically found among people with lease income. This too reflects the ages of people with retirement, insurance annuities, and similar types of income. As mentioned, older people more consistently receive lease income. Total community income and mean per capita incomes to community members are obtained by adding all incomes realized from all sources (see Table 22).

H. Household Income Patterns

The variables to be examined under household income patterns are: (1) income type, (2) amount of total household income, (3) reliability of income, and (4) multiple dependency (income pooling). The first three of these are essentially the same as the major economic variables examined in the context of individual income. But income type is simplified here and categorized in a manner concordant with the theoretical bases of the hypotheses to be tested (see Chapter II).

Household income types differ from the individual income categories in that: (1) only the skilled wage-labor occupations are regarded as dependent on individual skills and abilities -- thus they constitute a separate type; (2) welfare income is combined with unskilled wage-labor income to form one type; (3) lease income, defined solely as the income derived from the possession of the allotted reservation lands, remains the same; and (4) the "other income" category drops out because it is in no case the primary source of income for a household. To avoid confusion, the categories of individual income were consistently referred to as categories or classes of income. Similarly, the types of household income will be consistently designated as types, sub-types or patterns.

The income types further differ from the individual income categories in that the possibility of multiple dependency is present. Compositeness, the receipt of income from two or more of the income types or categories, is possible within both individual and household incomes. Compositeness was not dealt with in discussing individual income because it was preferable to deal with <u>primary</u>

individual income categories. Among households, compositeness may develop in the manner noted above, or may result from the contribution of income by two or more individuals within the household. The operational problem then arises of where to draw the line between "type composites" and "person composites." "Person composites" are called multiple dependency. "Type composites" are rare, and setting the sixty percent level of contributions from one income type as defining _the_ type for a household eliminates all "type compositeness." Thus only multiple dependency will be examined.

In theory, multiple dependency may be defined as the contribution of income to a household by two or more of its members. But it is more difficult to define operationally. Is it valid to designate a household with a husband contributing $4,500 per year from skilled wage-labor and a wife contributing eight cents from land leasing as one with multiple _dependency_? Would the added contribution of similar small amounts by three children make it "really" a multiple dependency household? The decision of where to draw the line here rests on two considerations: how many people contribute to the total income and how much do they contribute? Only 103 households are supported solely by one individual. And 135 of them are supported by only two persons. Of the 77 households with three or more income contributors, 57 of them depend on one individual for eighty percent or more of the income total. Yet husband and wife are essentially equal contributors within 62 of the households with two income contributors. A composite definition was derived giving paramount weight to the percent of income contributed by the primary income provider. Any household in which one person provides eighty percent or more of the total income is designated a "single dependency" household. Any household to which no person contributes sixty percent or more of the income is designated a "multiple dependency" household. Those households falling between the above percentage brackets are designated single dependency households if there are one or two income providers and multiple dependency households if there are three or more income providers. The distributions resulting from application of these definitions are included in Table 30.

Non-economic considerations, education and sex, were included in tabulation of individual incomes. None is included here. In part this is because there are a number of economic considerations to examine other than the matter of income source type. Also, the major non-economic considerations pertinent to household income types (household types, household stability, and supra-household residence units) are the focus of the hypotheses to be examined.

Although the income types (Chapter II) are expected to show a significant degree of relationship with certain household types, two other considerations were indicated. These are income amount and income reliability. Specifically they are presumed to be intermediate "variables," relevant to the expected associations between household types and income types. Also, as I discuss in the next chapter, these intervening "variables" are presumed to be of importance with respect to wage-labor and welfare income. As a corollary to this, amount and reliability of income are presumed to be of relatively slight importance in affecting the relationship between lease income (income derived from a kin network controlled resource) and extended family residence units. The hypotheses pertaining to relationships involving intermediate variables are specific to the Salt River Pima.

Two hypotheses concerning extended residence units do hinge upon consideration of the amount of income derived from land leasing. These are the hypotheses pertaining to multiple dependencies. On purely logical grounds it seems that multiple dependency would be associated with extended households rather than other, presumably smaller, households. Inasmuch as these households are expected to be associated with income derived from land-leasing, there would be an indirect relationship between dependence on land-leasing and amount of income. Further, it is anticipated that stable extended family households will be those with relatively high lease income whereas unstable ones will be those with relatively low lease incomes.

One additional comment on indexing amount of income is necessary. It is possible to use either the total annual household income or the annual per capita income within each household. At this point it seems most desirable to present the distributions resulting from use of both indices of income amount.

Table 23 presents distributions of households by income type and amount of total annual income.

If total amount of annual household income indexes the same factor indexed by per capita income within households, there should be a very high correlation between these two indices. The decision of which index to use in measuring the "amount of income" factor can be made easier by examining such information. Table 24

TABLE 23

INCOME TYPE AND TOTAL HOUSEHOLD INCOME
AMONG SALT RIVER PIMA, 1964

Dollars per annum Income	Income Type*			Total	Cumulative Total
	1	2	3		
0-499	0	3	0	3	3
500-999	8	7	10	25	28
1,000-1,999	11	8	30	49	77
2,000-2,999	18	11	32	61	138
3,000-3,999	39	4	27	70	208
4,000-4,999	16	3	16	35	243
5,000-5,999	23	1	2	26	269
6,000-6,999	24	2	1	27	296
7,000 plus	13	5	1	19	315
Total	152	44	119	315	---

* Income types are:

1 = Skilled wage-labor
2 = Land-leasing
3 = Welfare and unskilled wage-labor

presents distribution of amount of annual per capita income against distribution of total annual household income. The resulting distribution indicates a marked correlation between these indices, but provides no assessment of the strength of that relation. Nevertheless, the simple distribution does suggest that the relation is not sufficiently high to permit using either of them as the equivalent of the other -- they appear to be measuring distinct aspects of the "amount of income" factor. A "common sense" consideration suggests that "income amount" is better indexed by "total annual household income" ("amount" per household) than by "per capita income" within households ("amount" per individual). This receives support from assessing the relationship between per capita income within households and income reliability -- a positive association being expected. Table 25 presents household distributions on the basis of income reliability (see page 59, Chapter II) and suggests a positive relation between income reliability and per capita income within households. Comparison of Table 25 with Table 27 suggests that total household income is a better predictor of the expected levels of income reliability than per capita income. The distribution of households in terms of per capita income

TABLE 24

PER CAPITA INCOME AND TOTAL INCOME WITHIN HOUSEHOLDS AMONG SALT RIVER PIMA, 1964

Per Capita Income	Total Household Income 1	2	3	4	5	6	7	8	9	Total
1	0	2	0	0	1	0	0	0	0	3
2	1	8	6	0	0	0	0	0	0	15
3	2	9	27	24	19	9	3	0	0	93
4	0	6	10	23	33	13	14	11	8	118
5	0	0	2	10	9	9	5	5	4	44
6	0	0	4	0	7	2	4	8	4	29
7	0	0	0	2	0	1	0	2	1	6
8	0	0	0	2	0	0	0	0	1	3
9	0	0	0	0	1	1	0	1	1	4
Total	3	25	49	61	70	35	26	27	19	315

KEY:

Total Household Income in Dollars

1 = 0-499
2 = 500-999
3 = 1,000-1,999
4 = 2,000-2,999
5 = 3,000-3,999
6 = 4,000-4,999
7 = 5,000-5,999
8 = 6,000-6,999
9 = 7,000 plus

Per Capita Household Income in Dollars

1 = 0-99
2 = 100-199
3 = 200-499
4 = 500-999
5 = 1,000-1,499
6 = 1,500-1,999
7 = 2,000-2,499
8 = 2,500-2,999
9 = 3,000 plus

TABLE 25

INCOME RELIABILITY AND PER CAPITA INCOME WITHIN HOUSEHOLDS AMONG SALT RIVER PIMA, 1964

Per Capita Household Income in Dollars	Income Reliability			Total	Cumulative Total
	Low	Medium	High		
0-99	1	1	1	3	3
100-199	7	6	2	15	18
200-499	21	57	15	93	111
500-999	6	74	38	118	229
1,000-1,499	3	22	19	44	273
1,500-1,999	1	10	18	29	302
2,000-2,499	0	1	5	6	308
2,500-2,999	0	0	3	3	311
3,000 plus	0	1	3	4	315
Total	39	172	104	315	---

against the income types is illustrative (see Table 26) as is comparison of that distribution with the distribution shown in Table 23. For the above reasons and others that become evident below, per capita income is rejected as a workable index of household income amount and will not be examined further. Total annual income will be used as the index of household income amount.

Income reliability figures in several hypotheses (see Chapter II). The expectations indicated in the relevant hypotheses will be tested with the data presented in Table 28.

Household income patterns show a number of features worthy of note, especially in terms of their distribution among households as compared with distribution of individual income categories. It is not surprising that wage-labor, which provides income to nearly fifty-eight percent of the work force, constitutes the primary source of income within nearly seventy-six percent of all households (see Tables 22 and 29). This is reasonable in view of the high mean dollar income realized by those in wage-labor. Similarly, the dependence of about ten percent of all households on welfare, whereas just under eight percent of those in the work force have welfare income, is in keeping with expectations. On the other hand,

TABLE 26

INCOME TYPE AND PER CAPITA INCOME WITHIN HOUSEHOLDS AMONG SALT RIVER PIMA, 1964

Dollars per capita Income	Income Type* 1	2	3	Total	Cumulative Total
0-99	0	1	2	3	3
100-199	6	2	7	15	18
200-499	38	13	42	93	111
500-999	62	15	41	118	229
1,000-1,499	24	8	12	44	273
1,500-1,999	16	3	10	29	302
2,000-2,499	4	1	1	6	308
2,500-2,999	0	1	2	3	311
3,000 plus	2	0	2	4	315
Total	152	44	119	315	---

* Income types are:

1 = Skilled wage-labor
2 = Land-leasing
3 = Welfare and unskilled wage-labor

TABLE 27

INCOME RELIABILITY AND TOTAL INCOME WITHIN HOUSEHOLDS AMONG SALT RIVER PIMA, 1964

Dollars per capita Income	Income Reliability			Total	Cumulative Total
	Low	Medium	High		
0-499	0	0	3	3	3
500-999	10	6	9	25	28
1,000-1,999	11	29	9	49	77
2,000-2,999	8	43	10	61	138
3,000-3,999	4	47	19	70	208
4,000-4,999	3	20	12	35	243
5,000-5,999	1	12	13	26	269
6,000-6,999	1	9	17	27	296
7,000 plus	1	6	12	19	315
Total	39	172	104	315	---

the ratio of individual lease income to households primarily dependent on lease income seems out of line. Lease income is received by over forty-eight percent of of the work force, but under fourteen percent of all households depend on such income. This is partly clarified by the low mean dollar incomes realized from leasing. But even more significant is the spread in amount of incomes derived from leasing. Lease income to individuals ranges from a low of eight cents per year to a high of just over seven thousand dollars. It is evident that the vast majority of lease income recipients have far less than the mean of $763.10. The incomes merged together as "other" income, stand in marked contrast to lease income. "Other" income received by individuals exhibits a very narrow range of variation in amount. Consequently (and in part because of the few individuals having such income), "other" income provides the primary support for no households.

Before I turn to statistical analysis of the data just tabulated, it will prove helpful to include here several selected features of household income patterns. These features are not new information, but points of data that would require some probing and minor calculations on the part of the reader to obtain them from

TABLE 28

INCOME RELIABILITY AND INCOME TYPE
AMONG SALT RIVER PIMA, 1964

Income Type	Income Reliability			Total
	Low	Medium	High	
Skilled Wage-Labor	12	86	54	152
Land-Leasing	0	11	33	44
Welfare and Unskilled Wage-Labor	27	75	17	119
Total	39	172	104	315

the tables already presented. Table 29 does not resemble Table 22 in content, but in intent. It constitutes a summary reference table for the convenience of the reader.

TABLE 29

SELECTED FEATURES OF HOUSEHOLD INCOME PATTERNS AMONG SALT RIVER PIMA, 1964

Total number of households	315
Total number of households in compounds	106
Mean number of households per compound	3.8
Mean number of persons per household	5.7
Total number of households primarily dependent on skilled wage-labor income	152
Total number of households primarily dependent on lease income	44
Total number of households primarily dependent on welfare income	32
Total number of households primarily dependent on unskilled wage-labor income	87
Total number of households primarily dependent on wage-labor income	239
Total number of compounds	28
Total number of unstable households	72
Total number of households with multiple dependency	91

CHAPTER VIII. ASSOCIATIONS AND INTERPRETATIONS

A. Data and Statistics

The primary hypotheses (pages 38, 42, 50) focus on associations between income patterns and household types. They are aimed at clarifying the effects of a monetary economy on household organization, as observed in one neoteric community. Four extra-organizational features of households may illuminate the associations and interrelations among households. These features are: (1) household stability, (2) cooperation among households within compound residence units, (3) household developmental cycles, and (4) role fulfillment. Participation of households in compounds and household stability are based on good, solid data. Household developmental cycles, although derived from comparable data, are necessarily constructs. They include my subjective evaluations and a measure of arbitrariness. Role fulfillment assessments are based largely on my impressions of interpersonal relations. Although I feel the resulting assessments are meaningful, I do not claim that another observer would duplicate them.

For testing the primary hypotheses, simplification of the household types presented in Table 6 is necessary. The following categories are the result: (1) nuclear family households, (2) extended family households, (3) consanguineal households, and (4) all other households.

The first category includes all sub-types of nuclear family household. In all cases the parents, siblings, or sibling's children, whose presence made the household something more than a simple nuclear family one, were transient, temporary members of the households concerned. The second category includes affinally extended family, natally extended family, extended consanguineal, and simple extended family households. My placing extended consanguineal households in the category of "extendeds" rather than the category of "consanguineals" might seem arbitrary. The rationale is that in terms of the expectations outlined the vertical extendedness of a household is more important than its consanguinealness. The co-residence of several generations suggests the influence of income from a resource controlled by an extended kinship network (or multiple dependency). It would not suggest the influence of welfare or unskilled wage-labor income. Those income sources may well contribute to the total income of such households. But they would not explain why those households are extended ones. The presence of lease income provides such an explanation in terms of the primary hypotheses. Moreover, a number of non-economic explanations can be advanced to account for consanguinealness. Income from a resource controlled by an extended kinship network (or multiple dependency) is a possible explanation for the extendedness of these households. Consequently, extended consanguineal households were combined with those households to which the same explanation is expected to apply.

Multiple dependency is expected to be found among extended households. But multiple dependency is functional in that it makes several incomes available to the household, thereby evening out fluctuations in individual incomes. Multiplicity of income providers (as opposed to non-contributing consumers) would be maximized by horizontal rather than vertical extension of a residence unit -- _except_ where vertical extension enhanced access to a kinship controlled resource. Where a kinship controlled resource is the basis of multiple dependency, that dependency _is_ reliance on a kinship controlled resource. In such cases multiple dependency would be a tautological result of reliance on a kinship resource and incapable of explaining anything. Where multiple dependency involves _various_ income sources (which is generally the case) it can provide an explanation of extended households. But where dependence on lease income does not involve multiple dependency (as among most one person households and conjugal pair households), it is most clearly related to the presence of (supra-household) extended residence units.

The third category combines both matrifocal and patrifocal consanguineal households. It also includes the two sibling joint households and the two parturition households. Inclusion of the last four households requires a word of explanation. The two sibling joint households are matrifocal consanguineal and horizontally extended households. Since access to land for leasing at Salt River is controlled within a vertical kinship network (particularly people in the eldest generation), horizontal extension of a household is not explicable as a means of maximizing access to that resource (although it may have that function in other societies, see Strickon 1960:513-514). Consequently, the consanguineal feature of these households is of primary interest. The two parturition households (consisting of an older woman and a younger, pregnant woman related to the first by distant kinship ties) are special purpose, temporary, residential arrangements. Nevertheless, they are included in the consanguineal household category on the grounds that there is no husband-father within these multi-person households (see Chapter VI).

The last category consists of one person and conjugal pair households only. There are no specific hypotheses concerning the income pattern that might be associated with such households. Their "explanation" is to be found in natural cycles of household development. But it is possible to predict the income types likely to be associated with these household types at Salt River. All but one of the one person households and the majority of conjugal pair households consist of people over age sixty-five. Since they have had less formal education than younger people (on the average), possess fewer marketable skills, and are less physically fit, it would be surprising if their households were dependent on skilled wage-labor. Since these households lack dependent children (precluding the A.F.D.C. assistance that might provide significant welfare income) it is unlikely that they could depend on welfare income. This leads to the conclusion that one person and conjugal pair households are primarily dependent on lease and/or unskilled wage-labor incomes. This is particularly likely since it is precisely the older people who actually hold and control most land. They comprise a kind of "board of directors" of the extended kinship network. Although not all older people are in one person and conjugal pair households, the majority of these households (nearly 65 percent) are in compounds, whereas only a third of all households (33.6 percent) are found in compounds.

In this chapter the number of income types is reduced to three, by combining welfare income with unskilled wage-labor income. This is in accordance with the theoretical position outlined. The primary rationale for doing this is that both kinds of income are realized _in lieu of_ income from skills and abilities or from a resource controlled by an extended kinship network. Three additional economic factors were presented: (1) amount of income, (2) reliability of income, and (3) multiple versus single dependency. Two measures of income amount were first investigated, total amount and per capita income (by household on a per annum basis). The first measure proved more workable (see pages 258-263). Total income exhibited a clear association with income types; per capita income did not (contrast Tables 23 and 26).

Household developmental cycles, income reliability, and household stability necessarily involve change.

But it is important to clarify just what my measures of household stability and income reliability are, and what they do or do not imply. The terms "stability" and "reliability" imply the possibility of saying something about future states of households or income. If I say a household is stable, I seem to imply that it will be, in the future, as it is now. The household stability measure says only that a household has changed a certain number of times during the study period. The measure of income reliability says that a household realized income for a certain portion of 1964. Any assumption that "stable" households or "reliable" incomes will continue to be stable or reliable ignores this critical point. These measures are strictly measures of past performance. No predictive capacity should be read into them.

Before presenting and evaluating the results of testing the primary hypotheses, a comment must be made on the applicability of those results and the statistical techniques used. The data encompass the entire population of the Salt River Reservation. Use of the entire population would seem to preclude use of probability statistics. Yet without some assessment of the significance and strength of relationship between variables, the interpretations and conclusions can only be descriptive statements about the study population. It is possible to treat this population _as if_ it were a sample and use the .05 level of significance as a cutting point for deciding which associations effectively confirm the hypotheses tested. This use of inferential statistics where they are not strictly applicable imposes an artificial handicap on the results. But accepting only those correlations that would be "significant" if I were dealing with a random sample, strengthens the theoretical position. For these reasons, I will use probability statistics and employ the .05 level of significance as the basis for inferring statistical support for an hypothesis.

Inasmuch as most of the variables involve qualitative data, use of nonparametric statistics was indicated. Chi square values were computed as the basis for probability values. Since the "sample" (N = 315 in most cases) is relatively large, neither correction for continuity nor Fisher's exact test offers sufficient advantage to merit their use (Blalock 1960:220-225). Phi and phi square were calculated as measures of relationship (Blalock 1960: 229). The tables supporting the hypotheses include data distributions and values of phi, phi square, and chi square. In all other cases, _the_ measure of association is phi; in a 2 x 2 table, phi may be regarded as a special case of r (Blalock 1960:229,230).

B. Primary Hypotheses

The primary hypotheses are repeated here to save the trouble of thumbing back for reference to them. The first hypothesis is: extended kinship residence units will be found where income is derived primarily from a resource controlled by an extended kinship network. "Extended kinship residence units" are operationally defined as extended family households. The expected income source has been operationally defined as lease income. The statistical results of testing this hypothesis are positive but not "significant" at the required level (summarized in Table 30). Re-examination of the operational definition of "extended kinship residence units" is suggested by these results and by the presence of compound residence units. It is highly probable that the influence of lease income is manifest in residence units that transcend households, namely the compounds. If the primary hypothesis is re-tested using households within compounds and extended family households as the operational definition of "extended kinship residence units," better results (in terms of the theoretical basis of the hypothesis) should be obtained. I must stress first that alteration of the operational definition shifts the analysis to a different dimension. As modified, hypothesis one is not comparable with the other primary hypotheses. Although the units of analysis are the same (households), the new definition fails to exclude the contrasted household types examined in hypotheses two and three. The problem of counting cases is evident. Counting compounds and contrasting them with "non-compounds" is impossible, for there are no such contrasting units. Households within compounds and those extended family households <u>not</u> in compounds are counted together and contrasted with the remaining households. This procedure is not fully satisfactory, but it is a compromise taking into account both kinds of "extended kinship residence units." The results, presented in summary Table 30, are "significant" and support the hypothesis. It can be stated that lease income is positively associated with extended kinship residence units, <u>if</u> those units include supra-household, compound residence units.

The second primary hypothesis is: <u>nuclear family residence units will be found where income primarily derives from individual skills and abilities</u>. The results provide strong support for the hypothesis and indicate a moderately high degree of relationship. In view of the high proportion of nuclear family households and the low proportion of people in skilled wage-labor, this finding is especially important. It suggests that the amount of income or its reliability (or both) is particularly high among those with skilled wage-labor. Clearly, skilled wage-labor income is positively associated with nuclear family households.

The third primary hypothesis is: <u>consanguineal residence units will be found where income primarily derives from welfare or unskilled wage-labor</u>. Summary Table 30 shows that the hypothesis may be accepted. Although the results are "significant" and a moderate degree of relationship is suggested, the operational definition of consanguineal households omits one important consideration. A household dependent on welfare or unskilled wage-labor will probably be of the nuclear family variety at some period during its existence (see household developmental cycles, pages 190-198). Therefore, some households dependent on welfare or unskilled wage-labor are expected to be <u>unstable</u> nuclear family ones. If these households were added to the category of consanguineal households, the strength of their association with welfare-unskilled wage-labor dependency should increase. This is not a test of the hypothesis proper, but a test of an assumption derived from the theoretical implications of that hypothesis. The results are, as

TABLE 30

SUMMARY OF RESULTS OF TESTING PRIMARY HYPOTHESES

Hypothesis one	Extended family households	All other households	
			Chi square = 1.3924
Lease income dominant	10	34	Phi square = .0044
Lease income insignificant	42	229	Phi = +.066
p .3	N = 315		

Hypothesis one, modified	Extended and compound households	All other households	
			Chi square = 49.0424
Lease income dominant	40	4	Phi square = .1553
Lease income insignificant	94	177	Phi = +.39
p .001	N = 315		

Hypothesis two	Nuclear family households	All other households	
			Chi square = 1 9.4029
Skilled wage-labor income dominant	128	24	Phi square = .379
Skilled wage-labor income insignificant	37	126	Phi = +.62
p .001	N = 315		

TABLE 30 (CONTINUED)

Hypothesis three	Consanguineal households	All other households	
Welfare, unskilled wage-labor dominant	42	77	Chi square = 53.9577
			Phi square = .1713
			Phi = +.41
Welfare, unskilled wage-labor insignificant	8	188	
p .001		N = 315	

Hypothesis three,	Consanguineal and unstable nuclear family households	All other households	
Welfare, unskilled wage-labor dominant	57	62	Chi square = 81.0539
			Phi square = .2573
			Phi = +.51
Welfare, unskilled wage-labor insignificant	10	186	
p .001		N = 315	

before, not comparable with the results of the un-modified primary hypotheses. But they do provide support for the rationale underlying the third primary hypothesis. The strength of the association is increased. The data support the statement that welfare-unskilled wage-labor is positively associated with consanguineal households. Combining unstable nuclear family households with the consanguineal households increases the strength of that association.

In summary the three primary hypotheses are all confirmed with one qualification. Re-examination of the operational index of "extended kinship residence units" to include households in compounds was necessary to bring that index into alignment with all empirical evidence. Narrowly defining extended kinship residence units as extended family households overlooked the importance of compounds and led to "non-significant" results. Addition of unstable family households to the consanguineal household category increased the strength of the indicated relationship and provided a test of one diachronic assumption underlying the association stated in hypothesis three.

C. Secondary Hypotheses

The secondary hypotheses will not be repeated here, but their foci are indicated in the relevant summary table. They can be summarized as constituting four groups of hypotheses: (1) those relating households and income amount, (2) those associating income reliability with household type and income type, separately, (3) those associating income type and amount of income, and (4) those concerning multiple dependency.

The results of testing the first group are summarized in Table 31. All correlations are "significant" well above the level required for acceptance. The association of extended family households and nuclear family households with income amount is a direct one, that between consanguineal households and income amount is an inverse one. All results are congruent with theoretical expectations; the first three secondary hypotheses are confirmed.

Test results pertaining to the second group of these hypotheses are summarized in Table 32. The associations of consanguineal households and of welfare, unskilled wage-labor income with income reliability are "significant" and confirm the fifth and seventh secondary hypotheses. Correlation of nuclear family households and of skilled

TABLE 31

SUMMARY OF RESULTS OF TESTING FIRST THREE SECONDARY HYPOTHESES

Hypothesis one	Extended family households	Other households	
			Chi square = 10.9118
High income *	40	137	Phi square = .0334
Low income	12	126	Phi = +.18
p .001	N = 315		

Hypothesis two	Nuclear family households	Other households	
			Chi square = 10.5723
High income *	107	70	Phi square = .0335
Low income	58	80	Phi = +.18
p .005	N = 315		

Hypothesis three	Consanguineal households	Other households	
			Chi square = 14.1398
High income *	16	161	Phi square = .0445
Low income	34	104	Phi = −.21
p .001	N = 315		

* High income is that at or above the median; low income is below the median.

TABLE 32

SUMMARY OF RESULTS OF TESTING
SECONDARY HYPOTHESES FOUR THROUGH SEVEN

Hypothesis four	Nuclear family households	Other households	Chi square = .1292
High income reliability *	56	48	Phi square = .0004
Low income reliability	109	102	Phi = +.02
	p .8	N = 315	

Hypothesis five	Consanguineal households	Other households	Chi square = 14.2192
High income reliability *	5	99	Phi square = .0451
Low income reliability	45	166	Phi = −.21
	p .001	N = 315	

TABLE 32 (CONTINUED)

Hypothesis six	High income reliability	Low income reliability	
Skilled wage-labor income dominant *	54	98	Chi square = .830 Phi square = .0026
Skilled wage-labor income insignificant	50	113	Phi = +.051
	p .5	N = 315	

Hypothesis seven	High income reliability	Low income reliability	
Welfare, unskilled wage-labor dominant *	17	102	Chi square = 30.3665 Phi square = .0963
Welfare, unskilled insignificant	87	109	Phi = −.31
	p .001	N = 315	

* Income of high reliability present for nine months of year or more, of low reliability present less than nine months of year.

wage-labor with reliability is not "significant." Although the expected direction of association is indicated, the degree of association is very weak. These findings deny support to secondary hypotheses four and six.

The secondary hypotheses concerning the relation of income type and income amount are all acceptable. The results of testing (summarized in Table 33) provide support for the three hypotheses. Whereas skilled wage-labor income is positively associated with income amounts, lease income and welfare-unskilled wage-labor income are both negatively associated with income amount. The three hypotheses of this group are supported by the data.

The correlations expected in accordance with the last three hypotheses, those pertaining to multiple dependency, are all supported by the data. But only two of the correlations are "significant" at the necessary level. The association of stable extended family households and the presence of lease income is not acceptable. Narrowing the sample to those extended family households with multiple dependency reduced its size to 35. Despite the weak degree of correlation it is an important finding. The Salt River situation suggests the presence of a resource controlled by an extended kinship network may enhance the <u>stability</u> of extended family households. Unfortunately,

TABLE 33

SUMMARY OF RESULTS OF TESTING SECONDARY HYPOTHESES EIGHT THROUGH TEN

Hypothesis eight	High * income	Low income	
			Chi square = 10.5502
Lease income dominant	15	29	Phi square = .0334
Lease income insignificant	162	107	Phi = -.18
	p .005 N = 315		

Hypothesis nine	High * income	Low income	
			Chi square = 45.251
Skilled wage-labor income dominant	107	70	Phi square = .1426
Skilled wage-labor income insignificant	58	80	Phi = +.38
	p .001 N = 315		

Hypothesis ten	High * income	Low income	
			Chi square = 21.7272
Welfare, unskilled wage-labor dominant	47	72	Phi square = .0689
Welfare, unskilled wage-labor insignificant	130	66	Phi = -.26
	p. .001 N = 315		

* High income is that at or above the median; low income is that below the median.

the information available on the Salt River population does not permit further examination of the question here. But it may be concluded that multiple dependency is positively associated with both extended family households and high income amounts (see Table 34).

Although the majority of the secondary hypotheses receive support from statistical testing, simple associations of the variables involved reveal little about the multiple interrelationships among the variables examined. The above findings illustrate one problem that is insoluble in terms of simple correlations. Income amount is positively associated with multiple dependency, which is itself positively associated with extended family households. Dependence on lease income is positively associated with extended family households, but is negatively associated with income amount. Clearly, further investigation of these correlations is necessary in light of such a paradox. Yet correlation cannot prove (or disprove) the causal relationships that might clarify the problem illustrated.

Two techniques are available that provide workable bases for inferring causal relationships.

TABLE 34

SUMMARY OF RESULTS OF TESTING
MULTIPLE DEPENDENCY HYPOTHESES

Hypothesis eleven	Extended family households	Other households	
Multiple dependency present	35	56	Chi square = 44.8795
			Phi square = .1425
Multiple dependency absent	17	207	Phi = +.378
p .001		N = 315	

Hypothesis twelve	High * income	Low income	
Multiple dependency present	73	18	Chi square = 31.819
			Phi square = .101
Multiple dependency absent	104	120	Phi = +.318
p .001		N = 315	

TABLE 34 (CONTINUED)

Hypothesis thirteen	Stable extended family households	Unstable extended family households	
			Chi square = 1.41
Lease income present	10	0	Phi square = .0402
Lease income absent	22	3	Phi = +.2005
	p .1	N = 35	

* High income is that at or above the median; low income is that below the median.

D. Causality

First, it is desirable to present a summation of the variables explicitly examined in the preceding and present sections. All pertinent variables are presented in Table 35 together with identification of the operational definitions and measures used in assessing them.

This analysis of causality is heavily dependent on the analyses of Blalock (1961:61-94 and 1962:182-194). Causal models permit making predictions about the behavior of correlations, as control is made for other variables in the system. The statistical technique used is partial correlation. Partial correlations were computed from phi values derived from dichotomous distributions of the data presented. Blalock's formula for computing partials and the F test for significance of partials were used (Blalock 1960: 329-336). The convential dot notation system (Blalock 1961:62) is used in presenting partial correlations and prediction equations derived from the models. In this system, the correlation between variables X_1 and X_2 is stated as r_{12} and the correlation between variables X_1 and X_4 controlling for variable X_3 is written $r_{14\cdot 3}$ (r equals phi).

Since partial correlation is used as an exploratory tool in examining causal models, confidence intervals

TABLE 35

BRIEF SUMMARY OF VARIABLES EXAMINED

Variable	Measure	Status of Variable	Categorizations
Income Source Type	Work histories and census	Independent	Skilled wage-labor Lease income Welfare, unskilled wage-labor
Income Amount	Total household income for 1964	Intervening	High (at or above median) Low (below median)
Income Reliability	Portion of year in which household realized income	Intervening	High (income for nine or more months) Low (income for less than nine months)
Multiple Dependency	Number of persons contributing to income and percent contributed by major provider	Intervening	Present (multiple dependency) Absent (single dependency)
Household Types*	Community census	Dependent	Nuclear family households Extended family households Consanguineal households other households

* Originally a fourteen-fold categorization (see Table 6), simplified for analysis of interrelationships

are not presented. Although the models presented evolved from testing a number of theoretically adequate possibilities, use of Blalock's models and prediction equations greatly reduced that trying task (Blalock 1962:186-188).

Underlying the primary hypotheses is the assumption that income types and household types are causally related. The correlations obtained confirm that they are related. But I have not yet made explicit the expected direction of causality. The theoretical basis of the hypotheses suggests that income source types are responsible for variations in household type. This is now examined.

Decisions about the acceptability of causal models can be made on the basis of "fit" between observed correlations and prediction equations derived from those models. Causal inference then rests on the appropriate causal models. Although a simple two variable model ($X \longrightarrow Y$) fails to yield the necessary prediction equations, many models with three or more variables do yield prediction equations. If a possible relationship between variables is (or theoretically should be) absent within a model, the relevant equation can be set equal to zero. This equation then becomes a prediction equation. Partial correlation "controls" for other variables in the system whose influence may mask the genuine relationship between two particular variables. The "fit" between predicted correlation values (derived from prediction equations) and the observed values (computed from the data) determines the "fit" between the causal model and those data. The causal relationships indicated by the most satisfactory model may be inferentially applied to the "real life" counterparts of the variables examined.

An infinite number of variables <u>can</u> be identified within virtually any system. At one level of analysis it might be enough to say that John Doe caused the death of Bill Smith -- in which case the causality would be direct. But it may be desirable to specify that cyanide was the intervening variable -- in which case the initial relationship becomes an indirect one. Limiting analysis of any system to a finite number of variables is somewhat arbitrary. In this analysis, the number of variables examined in each system is four. In large part this was dictated by the impossibility of obtaining adequate data on other presumably important variables.

Another aspect of the above problem is limiting the scope of the system itself. The present analysis is confined to variables antecedent to household organization and subsequent to income. Ethnic discrimination may influence whether a person is able to secure skilled wage-labor. But such problems are conceptually antecedent to income and outside the scope of this analysis. Household organization may well influence child-rearing practices. But the myriad ramifications of household organization are outside the scope of this work.

Although income and household types were discussed as variables in themselves, it has become evident that investigating their gross interrelations only would obscure differences among the components of these variables. The paradox concerning multiple dependency, income amount, extended family households, and lease income, noted a moment ago, would never have come to light if these subdivisions of the variables had been ignored. Therefore, I shall examine four separate systems of causality. These are: (1) skilled wage-labor income $\longrightarrow$ nuclear family households, (2) welfare, unskilled wage-labor income $\longrightarrow$ consanguineal households, (3) lease income $\longrightarrow$ extended family households, and (4) lease income $\longrightarrow$ households within compounds. In the first two systems, income amount (X_3) and income reliability (X_2) are intervening variables. Systems III and IV exclude income reliability from consideration. There are two reasons for this. First, as noted in Chapter II, the reliability of lease income is fixed within the study population; the reliability of lease income is "controlled" within that context. Second, multiple dependency serves to even out household income, thus making it more "reliable" (even those households dependent on lease income generally have income from other sources). Multiple dependency, as an intervening variable within systems III and IV, is somewhat analogous to reliability in systems I and II.

System I encompasses the causal relationships among skilled wage-labor income (X_1), income reliability (X_2), income amount (X_3), and the nuclear family household (X_4). Model I depicts the causal sequence most congruent with the data. The prediction equations for this model are $r_{12} = 0$, $r_{24} = 0$, and $r_{34 \cdot 1} = 0$ (see Blalock's Model A_{45}, 1962:187). Table 36 presents the correlation values on which the appropriateness of this model is based. As can be seen in the table, the prediction equations are satisfied.

It may be inferred that skilled wage-labor accounts most effectively for the presence of nuclear family households. The associations between income reliability or

TABLE 36

ZERO, FIRST, AND SECOND ORDER CORRELATIONS
AMONG VARIABLES OF SYSTEM I

r	Zero order partial	r	First order partial	r	Second order partial
12	+.051*	12·3	-.081*		
13	+.38	13·2	+.38		
23	+.32	23·1	+.32		
14	+.62	14·2	+.62		
		14·3	+.61	14·23	+.61
24	+.02*	24·1	-.01*		
		24·3	-.04*	24·13	-.013*
34	+.18	34·1	-.07*		
		34·2	+.18	34·12	-.05*

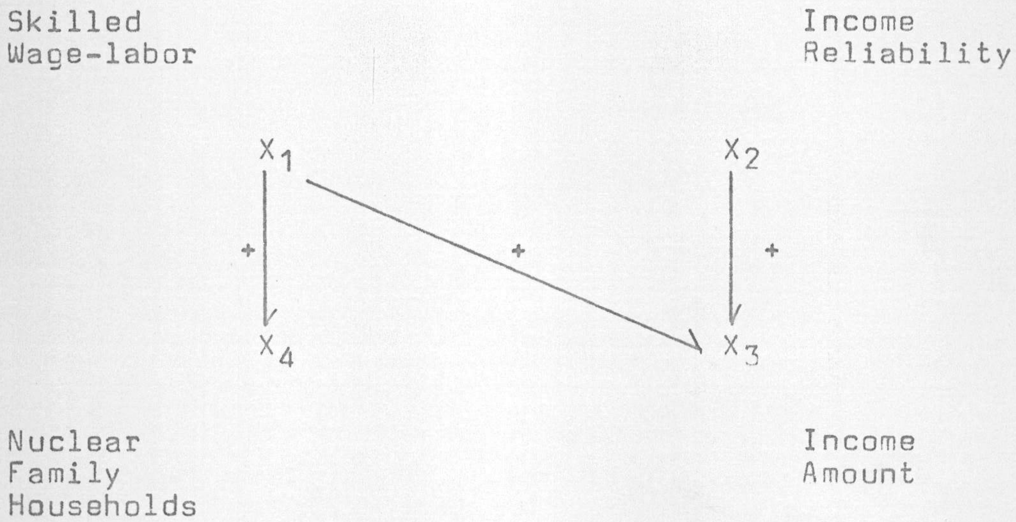
* Correlations not "significant" at required level

Significance values for phi (zero order partials) were derived from chi square values. For all first and second order partials, significance values were obtained through use of the analysis of variance F test (see Blalock 1960:355).

income amount and the nuclear family household are seen as results of the influence of skilled wage-labor on income reliability and income amounts (in Table 36 compare r_{24} with $r_{24 \cdot 1}$ and $r_{24 \cdot 13}$). The income type accounts in part for the high income levels, but high reliability also contributes to maintenance of those income levels. The absence of any causal link between skilled wage-labor income and income reliability suggests that reliability is largely determined by factors outside the defined system. The relationship between nuclear family households and amount of income also vanishes when control is made for the effect of skilled wage-labor income (in Table 36 compare r_{34} with $r_{34 \cdot 1}$ and $r_{34 \cdot 12}$). It would appear that the relationship between skilled wage-labor and nuclear family households would not be affected easily by external changes so long as the <u>source</u> of income was skilled wage-labor, if that skilled wage-labor continued to provide high incomes of high reliability. But this leaves open the possibility that a decline in the amount or reliability of income from skilled wage-labor might have the result of people seeking income from other <u>sources</u>, such as welfare. This would lead to other consequences, which are examined next.

MODEL I

CAUSAL RELATIONSHIPS WITHIN
SYSTEM I



System II consists of welfare-unskilled wage-labor (X_1), income reliability (X_2), income amount (X_3), the consanguineal household (X_4), and their interrelations. Computing partial correlations and comparing them with the relevant prediction equations do not allow a clear-cut decision concerning the most congruent model. Two models "fit" the data reasonably well. The key to deciding between the two "fitting" models concerns the behavior of r_{34} as control is made for X_1. That correlation does diminish as controls are made ($r_{34} = -.21$, $r_{34 \cdot 2} = -.15$, $r_{34 \cdot 1} = -.12$, and $r_{34 \cdot 12} = -.10$). But its diminution is less, and its minimum value more, than observed for the other vanishing partials. In view of the trend toward vanishing observed as controls are placed on this correlation, it appears most appropriate to regard it as a vanishing partial. This decision leads to acceptance of Model IIa, for which the prediction equations are $r_{24 \cdot 1} = 0$ and $r_{34 \cdot 1} = 0$. Table 37 indicates the extent to which the data satisfy these equations. Since it is possible to hold that r_{34} does not vanish, the alternate of Model IIb is also possible. The relevant prediction equation is $r_{24 \cdot 13} = 0$ (see Blalock 1962:186-188, models E and E_5).

TABLE 37

ZERO, FIRST, AND SECOND ORDER CORRELATIONS
AMONG VARIABLES OF SYSTEM II

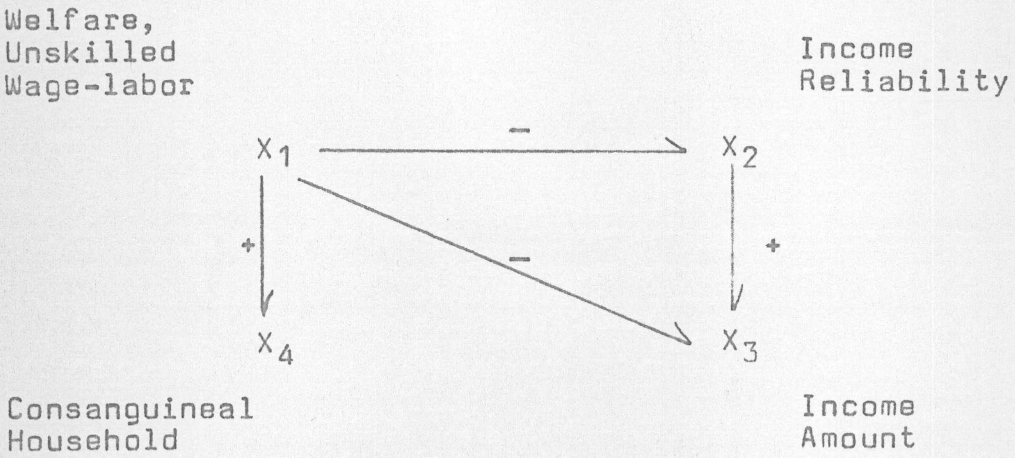
r	Zero order partial	r	First order partial	r	Second order partial
12	-.31	12·3	-.24		
13	-.26	13·2	-.18		
23	+.32	23·1	+.26		
14	+.41	14·2	+.38		
		14·3	+.37	14·23	+.37
24	-.21	24·1	-.09*		
		24·3	-.15	24·13	-.06*
34	-.21	34·1	-.12		
		34·2	-.15	34·12	-.10*

* Correlations are not "significant" at required level

Significance values for phi (zero order partials) were derived from chi square values. For all first and second order partials, significance values were obtained through use of the analysis of variance F test (see Blalock 1960:355).

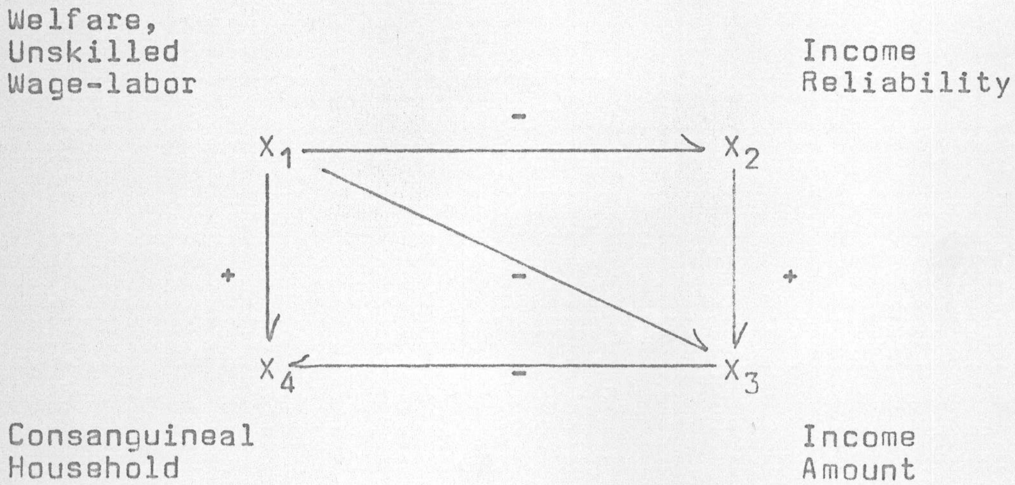
MODEL IIa

CAUSAL RELATIONSHIPS WITHIN
SYSTEM II



MODEL IIb

CAUSAL RELATIONSHIPS WITHIN
SYSTEM II, ALTERNATE INTERPRETATION



The common feature of both models is that low income reliability appears as only a mediating factor. Control for the welfare-unskilled wage-labor factor results in the virtual disappearance of the low (and negative) correlation between reliability and the consanguineal household. That correlation is seen as the result of the influence of the income type factor on both reliability and consanguineal households. In Model IIa, a similar relationship is indicated (although less clearly) for the correlation of low income amount and consanguineal households. But in Model IIb, that relationship is not seen as spurious, however weak and diminishing the correlation.

The differences between models are not great enough to seriously alter the causal inferences possible. Dependence on welfare and unskilled wage-labor depresses income amounts, but is the most effective variable in explaining the existence of consanguineal households. It is seen as an inhibitor of income reliability. The income levels of consanguineal households are congruent with the income reliability and are negatively associated (as anticipated) with the income source type, welfare-unskilled wage-labor income. Although the system is undoubtedly affected by outside variables, it would appear that improving the reliability of income would have little effect on the consanguineal household. Increasing the amount of income _might_ affect the consanguineal household. The critical difference between the models influences this statement. Increasing the amount of income would have some effect on the presence of consanguineal households if Model IIb is accepted. There would be no effect on consanguineal households if Model IIa is taken as more representative. The evidence at Salt River and from a score of "poverty centers" indicates that increasing income has relatively little influence on consanguineal households (Kirschner Associates 1966, report to the Office of Economic Opportunity). This finding favors Model IIa.

System III includes lease income (X_1), multiple dependency (X_2), income amount (X_3), the extended family household (X_4) and the interrelationships among them. In this system, associations were _not_ as expected.

The prediction equations for the appropriate model are $r_{14 \cdot 2} = 0$ and $r_{34 \cdot 2} = 0$ (see Blalock 1962:188, Model D_5). Table 38 presents the values on which selection of that model was based. Here the paradox mentioned earlier reappears. The association of lease income and income amounts is _unexpectedly_ a negative one.

TABLE 38

ZERO, FIRST, AND SECOND ORDER CORRELATIONS AMONG VARIABLES OF SYSTEM III

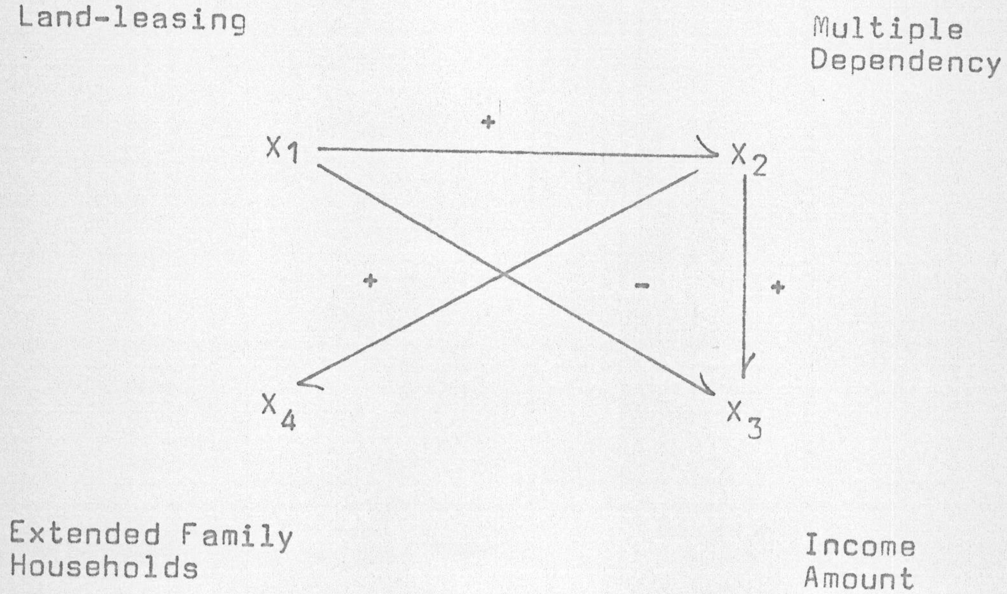
r	Zero order partials	r	First order partials	r	Second order partials
12	+.20	12·3	+.28		
13	-.18	13·2	-.26		
23	+.32	23·1	+.37		
14	+.07*	14·2	+.011*		
		14·3	+.101*	14·23	+.029*
24	+.38	24·1	+.38		
		24·3	+.34	24·13	+.35
34	-.18	34·1	-.17		
		34·2	-.067*	34·12	-.034*

* Correlations are not "significant" at required level

Significance values for phi (zero order partials) were derived from chi square values. For all first and second order partials, significance values were obtained through use of the analysis of variance F test (see Blalock 1960:355).

MODEL III

CAUSAL RELATIONSHIPS WITHIN
SYSTEM III



Resolution of the paradox is a straightforward matter, but one with important implications. The association of multiple dependency and income amount is positive. The inverse association of lease income and income amount must largely concern households without multiple dependency. This is indicated by the behavior of r_{13} as control is made for the multiple dependency variable ($r_{13} = -.18$, $r_{13 \cdot 2} = -.26$). Lease income does lead to multiple dependency in many cases, but not all. Dependence on lease income without multiple dependency means low household income. But because of the low amount of individual lease income, households dependent on lease income commonly do pool incomes (and not necessarily only those from land-leasing). Where multiple dependency occurs, and because of it, total household incomes are high (whatever the sources of income). Income amounts within extended family households are the result of opposing influences from lease income and multiple dependency. The positive relationship of income amount and extended family households, in evidence when these influences are not controlled -- particularly that of multiple dependency -- results from the effects of multiple dependency on both income amount and extended family households. There is no direct causal link between lease income dependency and extended family households, _in this context_. If the profitability of land-leasing increased, such a linkage might be revealed. Land-leasing simply does not provide (cause) high amounts of income at Salt River. "Why" this is so cannot be answered within the limits of this system. The status of reservation land and the market demand within the Phoenix area during the current decade are important factors. But income amounts realized from leasing Salt River land _can_ be expected to increase in the future. The question of "who" will realize that income may be in doubt. If lease incomes increase (and accrue to Pima individuals) the importance of multiple dependency, where _lease_ incomes are concerned, would presumably decline. This might lead to a stronger relationship between lease income and extended kinship residence units. This examination of system III has left an important question unasked. What kind of household organization exists among those depending on land-leasing but not multiple dependency? Of the forty-four households dependent on lease income, seventeen are one person and conjugal pair households -- none of which have multiple dependency. Moreover, all of those households are in compounds. Examining the relationship between lease income and compounds should clarify some of the problems encountered here.

System IV includes lease income (X_1), multiple dependency (X_2), income amount (X_3), households in compounds and extended family households (X_4) and their interrelations. The prediction equations for Model IV are $r_{24\cdot 1} = 0$ and $r_{34\cdot 1} = 0$ (see Blalock 1962:188, Model E_5). The partial correlations presented in Table 39 indicate satisfaction of these equations. The negative correlation of lease income and income amount is again present, and the explanation offered for system III applies.

Here lease income is permitted to do more explaining. It is causally related to both multiple dependency (for the reasons given within system III) and the suprahousehold, compound residence unit. Compounds are not explained by any variable (within system IV) except lease income. Two linkages present in Model III have vanished. Disappearance of the correlation between income amount and the dependent variable (compounds) is congruent with expectations. Compounds include a full range of household types. Consequently, a full range of income amount levels would be expected. The absence of a causal link between multiple dependency and compounds suggests that two very different groups of "households

TABLE 39

ZERO, FIRST, AND SECOND ORDER CORRELATIONS
AMONG VARIABLES OF SYSTEM IV

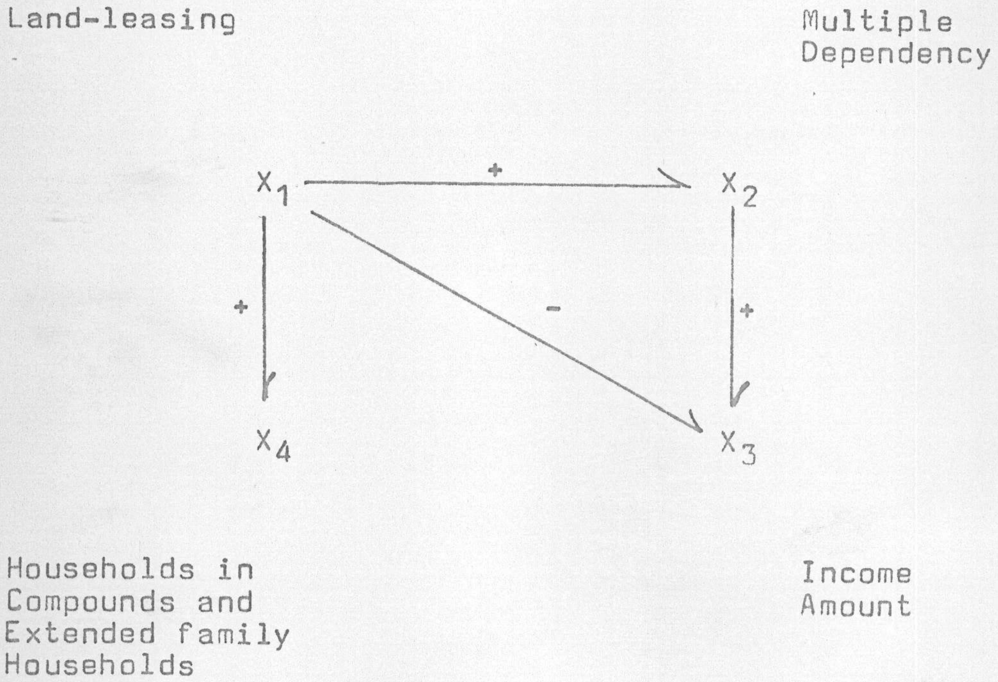
r	Zero order partials	r	First order partials	r	Second order partials
12	+.20	12·3	+.28		
13	-.18	13·2	-.26		
23	+.32	23·1	+.37		
14	+.39	14·2	+.39		
		14·3	+.39	14.23	+.403
24	+.0011*	24·1	-.08*		
		24·3	+.02*	24·13	-.06*
34	-.003*	34·1	-.067*		
		34·2	-.003*	34·12	-.009*

* Correlations are not "significant" at the required level

Significance values for phi (zero order partials) were derived from chi square values. For all first and second order partials, significance values were obtained through use of the analysis of variance F test (see Blalock 1960:355).

MODEL IV

CAUSAL RELATIONSHIPS WITHIN
SYSTEM IV



dependent on lease income" can be identified. One group, of numerically large households, is able to pool incomes to provide high total income amounts. Another group, of numerically small households, must depend on income primarily from a single provider. Households within compounds maintain relative economic autonomy except in times of crisis. At such times, a household within a compound can expect assistance from neighboring households. But that assistance occurs on a short-term, "crisis oriented" basis. Such economic assistance is from nuclear family and extended family households to households consisting of widows, widowers, and elderly couples -- near the year's end. But it flows in the opposite direction in the early part of the year -- at the time of lease income payments. Land-leasing and the annual schedule of lease income payments explain (in part) the existence of compounds and the changing flow of crisis assistance within them. Comparing the analyses of systems III and IV indicates that multiple dependency provides an explanation of the extended family household, but that the presence of lease income accounts for the supra-household, compound residence unit.

Before getting into further interpretations of these findings, it is important to stress again the limitations of causal analyses such as I have presented here. First, each of the preceding systems was artificially limited to the four variables specified. This is a distortion of reality for the reasons outlined earlier (see pages 295-296). Second, isolation of a system (whatever the number of variables examined within it) assumes that extra-systemic factors do not affect the system. This assumption is virtually never valid. Controlling for outside variables (thus minimizing their influence by way of justifying this assumption) was not possible in this case. Blalock stresses that "... it is possible to make causal <u>inferences</u> concerning the adequacy of causal models ..." (1961:62). But use of such models involves "... (1) a finite set of explicitly defined variables, (2) certain assumptions about how these variables are interrelated causally, and (3) assumptions to the effect that outside variables, while operating, do not have confounding influences that disturb the causal patterning among the variables explicitly being considered" (1961:62). Finally, Blalock also cautions that "... since a number of different causal models all yield the same set of prediction equations, the mere fact that we cannot reject a particular model does not mean we have established its validity" (1962:194). Of the possible models depicting relationships among the four variables selected, those models presented appear most closely congruent with the data _and_ with those causal limitations implicit in the variables (the reliability of income can hardly be held to "cause" dependence on its source, or the household type to "cause" the income amount provided by a particular source). The models do not prove nor even demonstrate causality; they only provide a tangible basis for causal inference.

E. Interpretations

Any household can shift from dependency on one form of income to dependency on another form. This will occur when the amount of income from one source becomes relatively greater than that from another source. I noted that a relative decrease in the amount of income realized from skilled wage-labor could result in a shift to dependency on welfare income. But if that decrease occurred within a household having land for leasing, the shift could be to dependency on lease income -- if the lease amount were greater than the income obtainable from welfare (or unskilled wage-labor) sources. The specific income _dependency_ of a given household at any point in time reflects the _relative_ proportions of income from the various sources available to that household. This obvious truism has a number of important ramifications.

Future increases in lease rates at Salt River are highly probable. If the lease rate increase constitutes a *relative* increase in the profitability of land-leasing, more households could be expected to become dependent on lease income. A decline in the importance of multiple dependency would presumably result, as well as a decline in the number of extended family households. But the number (or size, or both size and number) of compounds would presumably increase.

The possession of marketable skills is necessary for realization of skilled wage-labor income. But the opportunity to apply such skills and the receipt of more income from their application than from other sources are necessary for household *dependence* on skilled wage-labor income. Simple *presence* of any particular income source is of relatively slight importance. The possession of land is necessary for realization of lease income. But the existence of a market for leased land and the realization of more income from land-leasing than from other sources are necessary for household *dependence* on lease income. In both cases, income rates (dollars per hour or per acre) and degree of skill or amount of land influences the total annual income obtainable. And in the case of wage-labor (but not land-leasing, at Salt River), the reliability of employment also affects the total amount of income realized. But dependency on unskilled wage-labor or welfare income requires <u>only</u> that other income sources provide relatively less income (or less than a legally determined amount in the case of welfare). This suggests that unskilled wage-labor and welfare are pivotal to an understanding of the transition from a traditional economy to full, effective participation in a monetary economy. They are the income sources available to people alienated from the traditional economic bases but not yet possessing skills marketable in the monetary economy. The pivotal position of unskilled wage-labor and welfare is indicated in Diagram III.

Although I have presented the two "variables" as polar dichotomies, both are infinitely divisible, continuous variables. Infinite degrees of "exploitation" or "application" are possible. Varying proportions of income from different sources more commonly characterize real households. Consequently, a comparably infinite range of household organizational variations is theoretically possible.

An additional feature of the above interpretation must be mentioned. Exploitation of a resource controlled

DIAGRAM III

INTERRELATION BETWEEN DEPENDENCE ON EXPLOITATION OF A KINSHIP RESOURCE AND ON APPLICATION OF INDIVIDUAL SKILLS AND ABILITIES

		Income derived from exploitation of a kinship controlled resource	
		Dependence	Non-Dependence
Income derived from application of individual skills and abilities	Dependence	Mixed Income	Skilled Wage-labor Income
	Non-Dependence	Lease Income, cash or subsistence cropping	Welfare, Unskilled Wage-labor Income

by an extended kinship network does not mean the absence of individual skills and abilities, as might seem to be implied by the diagram. But no matter how highly skilled a cash-cropper may be, he will not have much of a crop if he is denied access to land. In this respect, the resource is more critical than the individual's skills. Consequently, dependence is on the kinship controlled resource, although skills may well be useful in exploiting that resource. It follows from this that where any household depends on such a resource, the influence of an extended kinship network will be maximal. Where such a resource is absent, the economic influence of an extended kinship network will be minimal.

Three factors can be identified that may lead to a shift in the income dependency of a household: (1) addition or loss of skills (or of skilled members), (2) gain or loss of an exploitable resource (land, for example), and (3) any contextual changes in rate or reliability of income that result in a change in relative amount of income provided by any source. Changes from dependency on one income source to dependency on another source can take place in any direction. A shift from dependency on skilled wage-labor to dependency on welfare is possible (as may occur on a large scale as technological unemployment increases). But the overall trend for neoteric peoples appears to be: (1) from subsistence cropping to cash-cropping, (2) from cash-cropping to unskilled wage-labor (or welfare), (3) from unskilled wage-labor (or welfare) to skilled wage-labor.

It is important to stress that "wage-labor" is not always wage-labor -- jobs may be a resource controlled by an extended kinship network (as among the Argentinian criollo, see Strickon 1962:500-515). The presence of an exploitable resource, such as land, does not require the presence of a controlling extended kinship network. Land may be owned by individuals, and utterly devoid of control by any extended kinship network. In such cases, the income realized from land might fall into an income category not represented at Salt River or be properly regarded as income derived from individual skills, depending on the specific method used to exploit the land. But the critical point is that the status of land, "wage-labor," or any other resource can be determined only with reference to a specific social and economic context. Jobs may be a controlled resource, land may be free of control by a kinship network.

Some resources may not be recognized as resources in certain societies or at certain periods of time.

The non-exploitation of Oklahoma oil by Indian tribes in that area prior to Anglo-American intervention, is an illustrative case.

Exceptions to the "overall trend" just outlined are also important. The first shift (subsistence to cash-cropping) seems to have taken place (or is under way) wherever a money economy has been introduced among farming peoples.

The second kind of change depends on the decline of cash-cropping before marketable skills are developed. Although this condition is not rare, it is neither universal nor necessary. Cash-cropping *may* continue to be of primary economic importance indefinitely. Marketable skills may be obtained before a decline in cash-cropping income forces people into the job market. In this case the transition may be made directly from cash-cropping to dependence on skilled wage-labor, skipping welfare-unskilled wage-labor dependency.

The third change seems to be most difficult for neoteric peoples. In order to have a skilled wage-labor position, marketable skills must be obtained. But possession of such skills does not guarantee the opportunity to apply them. The marginal position of neoteric peoples relative to the dominant society is social as well as economic. Any person may be refused a job because he lacks the necessary skills. Some people, with those skills, may be denied a job because their skin is the wrong color. Because both marketable skills and a degree of "social acceptance" are necessary for making the jump to skilled wage-labor, and because opportunities to gain those skills may be limited by economic and social marginality, the "transitional stage" of dependence on unskilled wage-labor and/or welfare appears to be a crucial one.

A most important ramification of the causal analysis concerns household developmental cycles. The two cycles identified earlier (see Chapter VI) may be related to the causal analysis by focusing on the most common household type within each cycle. In the first cycle, this is the nuclear family household. In the second cycle, it is the consanguineal household. Although both cycles begin, schematically, with the one person household, the virtual absence of young people composing such households -- and their scarcity within conjugal pair households -- makes it clear that these two household types are terminal rather than beginning stages in household development. The initial stage in the development of households within the first cycle is essentially the nuclear family household (actually these exist as conjugal pair households briefly before children are born, but that period is too brief to warrant close examination of "pre-natal" conjugal pair households). During this stage of development, households within the first cycle are evidently dependent on unskilled wage-labor income. The following state, of extended family households, is commonly one of multiple dependency. This is a period of economic adjustment on the part of the newly marrieds, the junior component nuclear family. At this time that junior component family presumably contributes unskilled wage-labor income to the household. On developing the marketable skills, members of the junior component family set up separate residence as a nuclear family household. That leaves the original household as a nuclear family household once again. This sequence may be repeated several times, until the last child of the original couple has married and established separate residence. At this time the original nuclear family household becomes a "denuded" conjugal household -- to be later transformed into a one person household by the death of either marital partner. As shown earlier, conjugal pair and one person households characteristically subsist on lease income (augmented in some cases by retirement, social security, or small amounts of welfare income). It is possible, but in fact rare, for a spouse to die prior to the departure of the last dependent child. In such a case, the household becomes a consanguineal one and its future development will fall within cycle two. This means that the household has become organizationally atypical of those in cycle one, but typical of those in cycle two. The subsequent economic re-adjustment of such a household is also noteworthy. Where the deceased spouse was the husband-father, his death makes necessary dependency on welfare or unskilled wage-labor (in most cases). Here it is the loss of a skilled household member that "creates" the consanguineal household. Its subsequent dependency on welfare or unskilled wage-labor is the result, rather than the cause, of its consanguineal organization.

In developmental cycle two, the one person and conjugal pair households also constitute "survivor" households rather than beginning stages of development. The initial stage of cycle two development is the consanguineal household. It commonly comes into being as the result of an "out-of-wedlock" birth or of a mother and child setting up separate residence, detaching themselves from the mother's natal household. Although the consanguineal household is numerically the most common household form within cycle two, it is not a stable one. The mother may marry (or cohabit with) a man briefly and the household exist as a nuclear family household (characteristically unstable). Or mother and children may rejoin her natal household, bringing into being an extended family household. Or sisters may take up joint residence, bringing the sibling joint household into being. These three household forms are very short-lived ones. The sibling joint household in particular has an average life expectancy of two to three weeks (based on observation of seven such households over a thirteen month period). Although a consanguineal household may change to a nuclear family, to a sibling joint, to an extended family, and back to consanguineal, many times during its existence, the consanguineal household is the form in which the majority of cycle two households are found at any point in time. Establishment of separate residences by the one-time dependent children, eventually leaves the original household as a denuded conjugal pair (rare) or as a one person household. Cycle two households generally depend on welfare and/or unskilled wage-labor. As with cycle one households, those in cycle two practice multiple dependency during the extended family household stage. And in both cycles multiple dependency generally includes some lease income. Although simple extended family households occur in both cycles, natally extended ones are peculiar to cycle two, and affinally extended households are typical of cycle one.

In summary, I would suggest that developmental cycle one outlines the "life history" of households primarily dependent on skilled wage-labor. Cycle two describes the development of households primarily dependent on welfare and unskilled wage-labor. The influence of lease income transcends households and their development; it accounts for the existence of the larger, more stable residential aggregations -- compounds. "Survivor" households characteristically depend on lease income and are the focal point of compounds.

Thus far, interpretation has been limited to those variables on which reasonably good information was obtained. But it would be remiss to ignore other factors simply because the available data are inadequate. The importance of role fulfillment has been stressed by several authors (Boyer 1964:602, Clarke 1957:21, Goode 1963:170 and Rodman 1966:682). What constitutes success or failure in role fulfillment hinges on societal definition of the roles examined. I would not attempt to comprehensively define roles at Salt River. But one feature each for two critical roles can be identified at Salt River: (a) provision of adequate economic support of the household by the husband-father and (b) provision of child training and nurture by the wife-mother. In both cases the possibility that economic conditions may deprive either spouse-parent of successful role fulfillment is evident.

The importance of role fulfillment is that it may function as an intervening variable mediating the effects of income type, amount, and reliability. Economic factors may not account directly for variations in household organization. Rather, economic factors may facilitate or hinder role fulfillment, which directly affects viability of the marital tie. Maintenance of the marital tie between spouses within a household is, by definition, essential to stability of the nuclear family household. Rupture of the marital tie may produce the consanguineal household.

Within a neoteric society acculturated to the point of being effectively involved in wage-labor, it seems probable that traditional values will have undergone change in the direction of those held by the dominant society. This is certainly true at Salt River. Therefore, it might be suggested that role expectations within a neoteric society would tend to approach those of the dominant society, commensurate with the degree of acculturation undergone by that neoteric society.

On the other hand, the "individuating" effects of wage-labor (skilled or unskilled) are partly responsible for both nuclear family and consanguineal households. These effects are identified in Kunkel's behavioral theory (1965:257-277). Basically, the argument is that as extended kinship networks become incapable of providing adequate (economic) rewards for certain behavior (observance of extended kinship obligations), that behavior will disappear. As the advantages of wage-labor are perceived to be greater than those of traditional economic activities, traditional residence patterns will be replaced by nuclear family or consanguineal households. Which of these household forms comes into being depends partly on the relative adequacy of the wage-labor income. Compounds appear, in this light, as a compromise means of realizing the best of both worlds. They allow virtual economic independence of households, yet make possible token observation of some extended kinship obligations (behavior commensurate with the relatively token rewards of lease income, at Salt River).

Although the Salt River population does not constitute a random sample of neoteric peoples, it can be argued that the data obtained at Salt River are representative, in certain respects. The western Papago, for example, are not as heavily involved in skilled wage-labor as the Salt River Pima. But those western Papago employed at skilled wage-labor are presumably influenced by "individuating" tensions similar to those found at Salt River. Households primarily dependent on unskilled wage-labor or welfare are expected to be consanguineal ones, where-ever such sources provide small incomes of low reliability. Whether those households are along the Gila River, in a Negro ghetto, or throughout the Caribbean, the relationship should be present.

It should prove valuable to examine these interpretations concerning income patterns and household types present at Salt River among other neoteric societies exhibiting similar patterns and types. The causal relations indicated are assumed to be comparably applicable. This necessarily refers to the <u>patterns</u> and <u>types</u> rather than their specific manifestations within the study population. The specific manifestation of income derived from a resource controlled by an extended kinship network, present at Salt River (lease income), may be absent among many neoteric societies. But if the income <u>type</u> is present, the conclusions are expected to apply. Specific manifestations of unskilled wage-labor (such as the migratory form common throughout the Caribbean) are absent at Salt River, but unskilled wage-labor is present. The specific implications of the conclusions advanced here must be modified in accordance with the conditions existing within a given society. Land-leasing need not provide low income, nor be highly reliable, in other settings. Because of the necessity of examining the economic and social conditions within any society to which these conclusions might apply, I have described these conditions for the study community in Chapters IV through VII. This enables any investigator, wishing to continue examination of the problems outlined here, to compare the Salt River population with any other group. The suggested applicability of these interpretations is necessarily tentative. The applicability of the following conclusions to other neoteric societies rests largely on the question of whether the Salt River population is representative of neoteric societies generally. Resolution of that question requires further research among, and a more precise definition of, neoteric societies.

CHAPTER IX. SUMMARY AND CONCLUSIONS

A. Land-Leasing and Extended Family Residence Units

It is now possible to clarify some ramifications of economic acculturation. Extended family residence units may co-exist with intensive involvement in a monetary economy under certain conditions. Two of those conditions reflect that involvement itself. First, where people are in a marginal position with respect to a monetary economy, low individual incomes are common. Low individual incomes may make multiple dependency necessary. Multiple dependency may lend viability to, or bring into being, extended family households. A second condition concerns the exploitation of traditional economic resources within the monetary economic system. Subsistence cropping may be replaced by cash-cropping or by land-leasing, but land is being exploited in all cases. The income derives from a resource that may be controlled by an extended kinship network. If such a network does control access to the resource, extended family residence units (households, compounds, or both) may be expected. They would be expected because the kinship solidarity and intensive interaction implicit in either residential arrangement effectively assures access to that resource. But it must be remembered that immediate practical advantages may be relevant to the existence of extended residence units (for example, household location is important at Salt River for reasons indicated on pages 202-203, and limited housing may be a factor within the context outlined on pages 192-197).

Resources given importance through the monetary economy may <u>come</u> under the control of an extended kinship network, with similar effects. At Salt River these effects are seen in the existence of supra-household residence units, compounds. They presumably reflect the relatively low return on land-leasing. Compounds permit limiting continued economic cooperation to households yet permit limited observance of kinship obligations. Minimal observance of kinship obligations is presumably in accordance with the limited income derivable from the kinship controlled resource.

Inasmuch as leasing yields low individual incomes, it frequently leads to multiple dependency. Multiple dependency partly explains extended family households. But considerations such as the location of houses; nearness of certain land tracts to serviceable roads, electricity, and water; and the potential economic advantages of living with or near specific relatives also come into play. Individual variations in willingness to care for and provide economic support to elderly or non-producing relatives, are also important. The findings examined earlier provide partial explanations of a series of household types and specifically the existence of extended family residence units.

One caution must be made concerning the applicability of my findings about lease income. The causal linkage of lease income and compounds may be accepted, tentatively, as having relevance to other neoteric societies with income from similar sources. The causal linkage of multiple dependency and extended family households may be regarded in a similar light. Where relatively low individual incomes are derived from a kinship resource, multiple dependency and the extended family household may be expected. But the association of land-leasing and multiple dependency may not be widely applicable. Land-leasing, or similar exploitation of a "controlled" resource, may provide relatively <u>high</u> incomes in some societies. Within such societies, lease income (or income from some other "controlled" resource) is not expected to be associated with multiple dependency.

Also, multiple dependency may involve income from any source. Consequently, societies in which exploitation of a kinship resource provides relatively high income should prove to be critical "test cases." If the hypothesis that dependence on a kinship controlled resource lends viability to extended kinship residence units is generally valid, such residence units would be present even where income from a controlled resource is high. It is difficult, at Salt River, to be certain whether the need for multiple dependency or the realization of lease income most effectively accounts for the extended family household. The specific income amounts realized from leasing at Salt River are peculiar to that community and to the specific time of my research. And land-leasing at Salt River will probably become more profitable during the next decade. Moreover, the relative amounts of income, not their absolute amounts, are the important consideration. This makes it particularly difficult to evaluate the relative importance of one income source over another where that "income" is in the form of food, other goods, or services -- and not easily assessed in terms of some standard unit of value. I was uncommonly fortunate in that virtually all income at Salt River is in the form of dollars.

The Salt River data suggest that income realized from exploiting a "controlled" resource partly explains the existence of extended family residence units. The analysis emphasizes that extended family residence units need not be <u>households</u>. They may take various forms depending on the total socio-economic context. Among the Salt River Pima, they appear as compounds. At the same time, and for other reasons, extended family households may exist and may obscure the presence of supra-household residence units.

With these considerations and qualifications, three conclusions emerge. First, dependence on income derived from the exploitation of a resource controlled by an extended kinship network contributes to the viability of extended family residence units. Second, the receipt of relatively low individual incomes may necessitate multiple dependency, which in turn also contributes to the existence of extended family residence units. Third, different kinds of extended family residence units (households and compounds at Salt River) may co-exist in a given society.

B. Skilled Wage-Labor and Nuclear Family Households

The individual whose income results from application of his own efforts, and in no way depends on an extended kinship network, is unlikely to continue performing extended kinship obligations. If the non-economic rewards of that behavior are also relatively slight, it is especially probable that he will discontinue it. Departure from an extended residence unit and setting up a nuclear family household is an effective way of "getting out from under" the influence of an extended kinship network.

Skilled wage-labor provides relatively high income amounts and income reliability. Within the framework of "individuation" (due to reliance on wage-labor), residence units with minimal generational depth are expected. Where these residence units depend on <u>skilled</u> wage-labor income, the relative reliability of income enhances the likelihood that these nuclear family households will be independent of kinship entanglements. But dependence on <u>unskilled</u> wage-labor, because that income tends to be unreliable, may mean that kinship "independence" will be as temporary as the job (see also Aberle 1963:6). Thus, these nuclear family households may be relatively unstable, as economic hardship may see the marital tie give way to the relative security to be found among consanguineal kin.

This leads to three conclusions. The first is that dependence on skilled wage-labor contributes to the existence of nuclear family households (among neoteric societies). The second is that where income from sources free of kinship control is of primary importance, minimal kinship units will be the predominant residence units. The third is that where income from skilled wage-labor provides, and is perceived as providing, reliable and relatively high incomes, the probability is enhanced that an individual will "feel safe" in ignoring kinship obligations.

C. Unskilled Wage-Labor, Welfare, and Consanguineal Households

The consanguineal household is generally defined in terms of two primary characteristics. These are the absence of affinal ties and the presence of consanguineal ties. The absence of affinal ties implies the absence of one person of a conjugal pair. For most consanguineal households that have come under investigation, the husband-father is missing. The resulting arrangement is commonly called a matrifocal household. Although there is much variation in specific definitions of this kind of household (see Clark 1957, Kunstadter 1963, Otterbein 1965, Smith 1956 and Solien 1959), it appears to be the consensus that the paramount characteristic is the absence of a person occupying the role of husband-father. This has a number of ramifications, most of which have been investigated by various students. But one of its most immediate implications has not been explicitly identified. This is that the absence (or removal) of a husband-father is the proximate _cause of_ matrifocal consanguineal households. Evidently this need not _always_ cause them. Certain social conditions, such as predominance of extended family households and the practice of polyandry or the levirate, preclude the development of matrifocal households. Economic conditions, such as the impossibility of a woman supporting herself and her children, may force the consanguineal core to co-reside with some other household unit. Consequently, this causal implication must be qualified. Removal of a husband-father from any residence unit with but one affinal tie creates the matrifocal household, wherever the social and economic conditions permit its continued existence as a separate residence unit. This does not "explain" anything, but it helps clarify what needs to be explained. The _existence_ of matrifocal households needs no "explanation;" their proximate cause is implicit in their definition.

The critical question is "what explains the _high incidence_ of matrifocal households in certain societies?" This has two noteworthy implications. First, the proportions of matrifocal and patrifocal households should approach equality within any society where death is the only factor removing spouses from households. Second, it should be possible to define an "irreducible minimum" of consanguineal households for any society. This can be done by analysis of death rates among people of marriageable age and examination of the ratio of matrifocal to patrifocal households. Since it appears that patrifocal households are consistently the scarcer variety, they may be the "irreducible minimum," whose existence is due to death among women of marriageable age.

Total adherence to polygyny or to polyandry would confound such analyses, as would marital practices producing an unequal sex ratio among those of marriageable age (see Dorjahn 1959: 105-112). Within this framework, it is possible to determine what percentage of consanguineal households constitutes "high incidence," requiring recourse to explanations other than death. At Salt River, patrifocal households comprise just over three percent of all households. If this figure represents the percentage of patrifocal households caused by the death of the wife, six to seven percent of all consanguineal households at Salt River may be said to result from the death of a spouse. Variations in death rates would alter this figure, but it is a rough illustrative estimate.

Presence of consanguineal households in excess of six to seven percent may be regarded as "high" incidence, requiring further explanation.

I noted the uncommonly high rate of fatal auto accidents at Salt River and stressed the indirect influence economic marginality has on that accident rate. Similar factors may operate in other neoteric societies to raise death rates among those of marriageable age. High crime rates among ghetto Negroes and other "economically disadvantaged" minority groups quite effectively remove spouses from households (most generally the male). They do so through high homicide rates and the imprisonment of lawbreakers. Economic factors influence crime rates. Marital discord may lead to divorce or separation, which generally means the development of a consanguineal household wherever children are present. Where consanguineal households _can_ exist, they will be fewer if widows or divorcees remarry within a month than if a mandatory two year "waiting period" precedes remarriage.

This recalls the question of "how long" and "how far" the removal or absence of the male must be, for the wife and children to constitute a matrifocal household. It can be suggested that if the time _or_ distance is such that the wife _must_ provide some support for herself and her children, they constitute a matrifocal household.

All of the preceding summary concerns factors that are not strictly economic ones. Yet economic factors have been stressed in accounting for the high incidence of matrifocal households within neoteric societies. Migratory wage-labor has been shown to explain "high" incidence of consanguineal households among the Black Carib (Solien 1959). This wage-labor is <u>not</u> skilled. Migratory wage-labor is absent at Salt River, yet nearly sixteen percent of all Salt River households are consanguineal ones. The Salt River data indicate that dependence on unskilled wage-labor and welfare accounts for some consanguineal households (ideally they should account for slightly more than half of them -- just under half being explained by death at Salt River). Dependence on unskilled wage-labor and welfare is suggested as the common factor. It is present at Salt River, underlies the migratory pattern among the Black Carib, characterizes the ghetto Negro, and theoretically would be found wherever consanguineal households in excess of the "irreducible minimum" are present. It must be stressed that <u>dependence on</u> such income provides an economic explanation of <u>some</u> consanguineal households. A residual percentage of consanguineal households will be present because of non-economic factors such as those noted above.

This reasoning is further supported by Padfield and Martin (1965) in their finding that migratory wage-labor does not always lead to removal of a spouse from the household. The "Anglo-aggregates" of Padfield and Martin are migrant workers, but are skilled, realize relatively "high" incomes, and have income reliability (1965:176). They are financially able to, and in fact do, keep their families with them in following the crops (Padfield and Martin 1965:151). This is in marked contrast to "Anglo-isolates" who are generally unskilled, transient, and not financially able to keep their families with them (Padfield and Martin 1965: 218-222). This "aggregate"-"isolate" dichotomy holds true, with similar ramifications, regardless of ethnic differences (Padfield and Martin 1965: 199-217, 231). It is evident that migratory wage-labor in itself cannot account for removal of a husband from the household. If a migratory wage-laborer has the money he can bring the whole household with him. Commuters may not be regarded as migratory wage-laborers, but migratory wage-laborers could be commuters if they had the money. The low income amounts provided by unskilled wage-labor, rather than its being migratory, accounts for separation of the male and his household. This also suggests why patrifocal households have not been widely reported (see Kunstadter 1963:61). Since men are more commonly involved in the job market of a monetary economy, economic factors more consistently and more directly affect them. Women are less commonly or less directly affected by economic factors. Consequently, patrifocal households are relatively rare and presumably constitute the irreducible minimum, wherever socio-economic conditions permit their existence.

At Salt River there is no problem of commuting or bringing along the family, because there is no migratory wage-labor. Therefore, Salt River men are neither required to leave the household by migrancy, nor withheld from it by low income. But matrifocal households are present in excess of the irreducible minimum.

The data support the conclusion that unskilled wage-labor and welfare are causes of consanguineal households. Unlike skilled wage-labor, unskilled wage-labor is unreliable, and offers no promise of continued income. Consequently, people are less likely to sever the kinship ties through which economic assistance may be sought. And it is consanguineal kin from whom such aid can be expected. Where a husband-father is failing in the role of breadwinner, his wife may leave him. But in so doing, she is rejoining her consanguineal kin (for example, in a sibling joint or natally extended household, see pages 194-197) as much as she is leaving affinal kin (her husband). Consanguineal households are not necessarily the result of a marital breakup following unsuccessful role fulfillment by a spouse. Where economic factors are paramount, consanguineal households may represent the choice of a more economically reliable household (based on consanguineal ties) in preference to a relatively unreliable one (based on an affinal tie).

Welfare is functionally similar to unskilled wage-labor in several respects. That neither comes from application of skills nor exploitation of a kinship resource, is of primary importance here. Welfare may be relatively more reliable than unskilled wage-labor. Unskilled wage-labor does, in a sense, involve application of the individual's abilities. But their similarities are more important here than their differences. In comparison with skilled wage-labor, both are relatively unreliable and provide low income amounts. These low income amounts focus on another feature of this income category. Households dependent on welfare or unskilled wage-labor may resort to multiple dependency in order to have adequate income for maintenance of the household.

Consequently, extended or sibling joint consanguineal households may be expected where the incomes are low. Joint dependence on welfare or unskilled wage-labor and income from a kinship resource would theoretically produce extended family households also. This is evidently the case throughout much of the Caribbean (see Clark 1957, Smith 1956, and Solien 1959). Moreover, welfare itself may create apparent consanguineal households precisely because of the qualification requirements. A man who is not doing well economically may "disappear" in order to qualify his wife for welfare. At Salt River, the practice appears to be relatively uncommon -- probably because the small population and its closeness to urban centers make concealment of the facts difficult. But among larger, more dispersed, or very dense urban populations, the practice could be more successful and may be more common.

This summary of consanguineal households may be closed by specifying the conclusions that have emerged. First, income provided by welfare and unskilled wage-labor is generally of low reliability and relatively low in amount. Second, these two income sources are causal antecedents of some consanguineal households. Third, a definable percentage of consanguineal households results from the death of a spouse of other non-economic causes. Fourth, the low income reliability associated with welfare and unskilled wage-labor tends to accentuate the importance of consanguineal ties over affinal ones. One can rely on consanguineal kin, but affinal kin are less likely to be of economic assistance. And with unreliable wage-labor, the possibility of needing economic help is never far away. Hence consanguineal households are more common than nuclear family ones.

Additional summary statements have been offered that are analagous to "conclusions." But since they were not derived from the data obtained at Salt River, they are not presented as conclusions.

D. Conclusion

In attempting to clarify the effects of a monetary economy on household organization, I have examined three broad classes of income and three generalized household types. Information on these income sources and household types was obtained from residents of the Salt River Indian reservation. Examination of existing theory led to a number of hypotheses that were tested with the information obtained. Analysis of various causal models for fit, by reference to correlations among several aspects of income and the household types, provided a basis for inferring causal relations among these variables.

Three groups of conclusions were presented within the preceding summary sections. Those conclusions were supplemented by: (1) suggestion of a quantitative basis for identifying "consanguineal systems," (2) analysis of certain ramifications of existing theory and my findings, and (3) projection beyond the data and suggestion of critical areas for further research.

Two general conclusions pertaining to the problem of resolving the conflict noted at the beginning of the work can be stated here, by way of closing. First, it appears to be the individuating effects of dependence on highly paid, reliable, skilled wage-labor that are causally related to development of nuclear family households. Second, neither cash-cropping, wage-labor, nor other specific aspects of involvement in a monetary economy necessarily detract from the viability of extended residence units. If a resource on which monetary economy involvement is based comes under the control of a kinship network, the viability of extended residence units may be enhanced.

Some of my conclusions and many of my suggestions lack fully satisfactory empirical support. More precise definition of neoteric societies would help identify the extent to which my findings clarify the problem and indicate which findings should be rejected, re-evaluated, or modified. Just as social adjustment to economic change is a continuing process, so study of the problems it presents can never be concluded.

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APPENDIX A

HOUSEHOLD SURVEY SHEET*

Mailing address: ______________

Head of Household ______
Residence no. ______

	Relation to head	Birth date	Birth Place	Edu-cation	Ethnic group	Allot-ment no.
Household head						
Spouse						
Mother of head						
Father of head						
Mother of spouse						
Father of spouse						
Siblings						
Offspring						
Others in residence						

Household photo no. ________ No. of persons ________
No. of allotments ________ No. of affinal ties ______
No. of acres land held ______ No. of generations ______

Comments and notes; history of household development.

____

* The actual form was larger, included ample space for required information, and was oriented horizontally on the page. The back of the sheet was used to record the household history.

WORK FORCE SURVEY QUESTIONNAIRE*

WHEN WERE YOU BORN?___MALE___FEMALE___WHAT ARE THE BIGGEST PROBLEMS IN GETTING A JOB HERE?___WHERE IS JOB-GETTING EASIER?___WHY IS IT EASIER THERE?___HOW WELL DO JOBS PAY HERE?___WHERE DO JOBS PAY BETTER?___WHY IS PAY BETTER THERE?___HOW DO PEOPLE GET THESE JOBS?___WHAT KIND OF WORK DO YOU DO NOW?___WHAT OTHER KINDS OF WORK HAVE YOU DONE? ___WHAT KIND OF WORK DO YOU PREFER?___HOW FAIRLY IS THE HIRING FOR JOBS DONE IN MESA?___CHANDLER?___PHOENIX?___ SCOTTSDALE?___TEMPE?___BY LEASEES ON THE RESERVATION?___ WHAT DO YOU THINK IS GOING TO HAPPEN TO FARMING ON RESERVATION LAND IN THE NEXT TEN YEARS?___HOW EASY IS IT TO GET FARM JOBS ON LAND BEING LEASED?___FOR JOBS IN GENERAL, DO MOST PEOPLE GET THEIRS THROUGH FRIENDS?___EMPLOYMENT AGENCIES?___NEWSPAPER ADS?___TRIBAL COUNCIL?___OTHER WAYS? ___HAVE YOU HAD ANY SPECIAL TRAINING OR SCHOOLING FOR GETTING A JOB?___WHAT KIND?___WHERE?___WHEN?___HAS THE TRAINING HELPED YOU GET A JOB?___WHAT JOBS HAVE YOU HAD IN THE LAST TWO YEARS?___WERE THERE TIMES WHEN YOU COULDN'T GET A JOB? ___WHAT DID YOU DO?___DID YOU NEED ANY WELFARE HELP LAST YEAR?___COULD YOU GET IT?___HOW MUCH HELP DID THEY GIVE?___ WHAT KIND OF WELFARE WAS IT?___DO YOU GET ANY PENSION,

WORK FORCE SURVEY QUESTIONNAIRE (CONTINUED)

RETIREMENT, SOCIAL SECURITY, VA, INCOME?___HOW MUCH?___ DO YOU GET ANY LEASE INCOME?__HOW MUCH?___HOW MUCH WAS YOUR EARNED INCOME LAST YEAR?___WHERE WOULD YOU GO FOR HELP WITH A BIG MONEY PROBLEM?___DO YOU THINK JOB TRAINING PROGRAMS WILL HELP PEOPLE GET JOBS?___WHY?___WHAT ELSE MIGHT HELP?___WHY?___WOULD PEOPLE USE THESE PROGRAMS?___WHY?___DO YOU HAVE ANY OTHER IDEAS HOW YOUR TRIBAL COUNCIL OR THE PEOPLE COULD GET MORE OF THE BETTER JOBS FOR MEMBERS OF THE COMMUNITY?___

---

* The actual questionnaire provided space for complete answers. The above presents only the questions. Additional comments, detailed answers, and extensive work history information were recorded on the backs of the actual questionnaires.

ROYAL MCBEE DATA CARD

7 6 5 4 3 2 1	7 4 H 2 1	7 4 T 2 1	7 4 U 2 1	7 4 T 2 1	7 4 U 2 1	7 4 T 2 1	7 4 U 2 1
TRIBE	RESIDENCE NUMBER			YEAR OF BIRTH LAST 2 DIGITS		ALPHA SORT NUMBER	

NAME			RESIDENCE NR.	MARITAL STATUS
SEX	HOUSEHOLD HEAD	RES. RESIDENCE	D.O.B.	SPOUSE
POLICE	ALLOTMENT	MEMBERSHIP	EARNED INCOME	FATHER
EDUCATION			LEASE INCOME	MOTHER
WELFARE SOURCES			OTHER INCOME	
LOAN STATUS			OCCUPATION	
INCOME SOURCES				
REMARKS				

EDUCATION 7 4 2 1

SEX

HH

RR

LBO

OA

M

W

L

EARNED INCOME 7 4 2 1

LEASE INCOME 7 4 2 1

MARITAL STATUS 4 3 2 1

OCCUPATION 7 4 2 1

INCOME SOURCES 8 7 6 5 4 3 2 1

OTHER INCOME 7 4 2 1

YS1101X PHX

APPENDIX B

INDIVIDUAL CODING SCHEDULE

In IBM column(s)	Punch according to the following schedule
1.	Tribal affiliation, Unknown = 0; Salt River Pima = 1; Gila River Pima = 2; Papago = 3; Maricopa = 4; Spanish-American = 5; Negro = 6; Other = 7
2-4.	Household number, punch as a three digit number.
5.	Marital status, Unknown = 0; Single = 1; Married = 2; Separated or divorced = 3; Widow or widower = 4
6.	Sex, Unknown = 0; Male = 1; Female = 2.
7.	Head of household? Yes = 1; No = 2.
8.	Reservation residence? Yes = 1; No = 2.
9.	Sub-community location, not in community = 0; Salt River = 1; Lehi = 2.
10,11.	Date of birth, punch last two digits of year of birth.
12-14.	Allotment, if no Salt River Allotment punch 999; if Salt River allotment, punch the number of it as a three digit number.
15.	Membership? Unknown = 0; Yes = 1; No = 2.
16.	Dollars of earned income in 1964, none = 0; 1-199 = 1; 200-499 = 2; 500-999 = 3; 1,000-1,499 = 4; 1,500-1,999 = 5; 2,000-2,999 = 6; 3,000-3,999 = 7; 4,000-4,999 = 8; 5,000 plus = 9

In IBM column(s)	Punch according to the following schedule
17,18.	Education, For grades 1-16 punch the grade number as the two digit code number; High school graduate = 17 College graduate = 18 Trade school graduate = 19 In trade school = 20 In primary, secondary school = 21 In college = 22 Pre school = 23
19.	Dollars of lease income in 1964, none = 0 1-49 = 1 50-99 = 2 100-199 = 3 200-499 = 4 500-999 = 5 1,000-1,499 = 6 1,500-1,999 = 7 2,000-2,999 = 8 3,000 plus = 9
20.	Dollars of welfare income in 1964, punch on same schedule as for lease income.
21.	Welfare source pattern, none = 0 A.F.D.C. = 1 O.A.A. or A.P.T.D. = 2 Gen. Asst. = 3 if 1 and 2 = 4 if 2 and 3 = 5 if 1 and 3 = 6 if all = 7
22.	Other income dollars received in 1964, punch on same schedule as for lease income.
23.	Other income source, none = 0 Handicrafts = 1 Enterprise = 2 Soc. Sec. = 3 Retirement = 4 G.I., V.A. comp. = 5 Insurance = 6 Dividends, etc. = 7 Other = 8
24.	Occupation, none = 0 Unknown = 1 Housewife = 2 Domestic = 3 Farm labor = 4 Common labor = 5 Clerical = 6 Military = 7 Semi-skilled = 8 Skilled and administrative = 9

In IBM column(s)	Punch according to the following schedule	
25.	Employer, none	= 0
	Bureau of Indian Affairs	= 1
	Tribal Council	= 2
	Leasor	= 3
	Public Health Service	= 4
	Unspecified	= 5
26.	Reliability of wage-labor, none	= 0
	Seasonal, 1/4 of year or less	= 1
	Seasonal, 1/2 of year	= 2
	Seasonal, 3/4 of year or more	= 3
	Irregular, 1/4 of year or less	= 4
	Irregular, 1/2 of year	= 5
	Irregular, 3/4 of year or more	= 6
	Full-time	= 7

27. Total income, in dollars, for 1964,

0-199	= 1	3,000-3,999	= 6
200-499	= 2	4,000-4,999	= 7
500-999	= 3	5,000-5,999	= 8
1,000-1,999	= 4	6,000-6,000	= 9
2,000-2,999	= 5		

28., 29.	Pattern of income sources,	
	Wage-labor only	= 1
	Lease only	= 2
	Welfare only	= 3
	Other only	= 4
	1 and 2	= 5
	1 and 3	= 6
	1 and 4	= 7
	2 and 3	= 8
	2 and 4	= 9
	3 and 4	=10
	1,2, and 3	=11
	1,2, and 4	=12
	1,3, and 4	=13
	2,3, and 4	=14
	all	=15

HOUSEHOLD SUMMARY CODING SCHEDULE

In IBM column(s)	Punch according to the following schedule
2.	Household type, One person household = 1 Conjugal pair household = 2 Simple extended family h'hold = 3 Nuclear family household = 4 Natally extended family household = 5 Parturitional household = 6 Matrifocal household = 7 Patrifocal household = 8 Affinally extended family household = 9
4.	Household sub-type, With sibling of head = 1 With parent of head = 2 With grandchildren of head = 3 With grandparents of head = 4 All matrifocal extended family household = 5 Sibling joint family h'hold = 6 With children of siblings of head = 7 With distant relatives = 8
6.	Number of generations, punch the one digit number.
7,8.	Total number of persons in household, punch as a two digit number.
10.	Number of affinal ties, punch the number as a one digit number
11,12.	Number of reorganizations in household from 1962-1964, punch the actual number as a two digit number.
14.	Number of reorganizations during study period, punch as a one digit number.
16.	Number of persons contributing to household income, punch the one digit number.

In IBM Column(s)	Punch according to the following schedule
18.	Sex of person contributing most to household income, Male = 1; Female = 2; Equal between male and female = 3.
20.	Percentage of income contributed by major contributor -- if 3 was punched above, punch 0 here. less than 20% = 1 20-29% = 2 30-39% = 3 40-49% = 4 50-59% = 5 60-69% = 6 70-79% = 7 80-89% = 8 90-100% = 9
22.	Total household income, dollar amounts, 1964, 0-499 = 1 500-999 = 2 1,000-1,999 = 3 2,000-2,999 = 4 3,000-3,999 = 5 4,000-4,999 = 6 5,000-5,999 = 7 6,000-6,999 = 8 7,000 plus = 9
24.	Per capita household income, in dollars, 1964, 0-99 = 1 100-199 = 2 200-499 = 3 500-999 = 4 1,000-1,499 = 5 1,500-1,999 = 6 2,000-2,499 = 7 2,500-2,999 = 8 3,000 plus = 9
26.	Total household income simplified, Low ($0-$1,499) = 1 Mid ($1,500-$3,499) = 2 High ($3,500 plus) = 3
28.	Per capita household income simplified, Low ($0-$499) = 1 Mid ($500-$999) = 2 High ($1,000 plus) = 3
30.	Total household income source pattern, Skilled wage-labor = 1 Land-leasing = 2 Welfare and Unskilled wage-labor = 3 Other = 4 1 and 2 = 5 1 and 3 = 6 1 and 4 = 7 2 and 3 = 8 2 and 4 = 9 3 and 4 =10 1,2, and 3 =11 1,2, and 4 =12 1,3, and 4 =13 2,3, and 4 =14 all =15

Typed by Judy L. Munsell