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SCIENCE AND RELIGION IN THE THOUGHT OF SIR THOMAS BROWNE

by

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Certainly, it is heaven upon earth to have
a man's mind move in charity, rest in
providence, and turn upon the poles of truth.

FRANCIS BACON, "Of Truth."

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INTRODUCTION

In this paper I attempt to show the nature of both the science and religion of Sir Thomas Browne, for in my opinion neither has been justly estimated. One of the main reasons for this misinterpretation has been the failure to treat the two subjects as inter-related. Too often it has been assumed that Browne was bound by evident logic to make a choice between them, or at the very least to keep the two neatly isolated in separate compartments of his mind. Therefore, the critic who is impressed by the "new philosophy" is apt to look upon Browne's religious professions either as insincere or as disqualifying him from the ranks of the advancers of learning. To those who recognize the importance of his religious thought, the question of his science tends to become incidental or obtrusive.

I believe that through a close study of his scientific and religious writings it can be shown that no such choice or compartmentation was necessary for Browne or for his critics. In Browne science and religion not only lay side by side in married amiability, but as in all successful marriages reinforced one another. Religion was made more firm by the evidence gathered in the laboratory, while science drew upon religion for a certain fine detachment and poise. Browne is

not a battlefield upon which conflicting tendencies raged, but rather a man in whom the spirit of religion and the flesh of science fuse to form a whole. Such at least is the thesis I shall defend.

In developing this conception of Browne, I may have been guilty at times of something approaching literary evangelism. Perhaps on occasion I have somewhat overstated my case. If that be true, my only defence is that one cannot read Browne for long without coming to love him, this side idolatry. He has been subjected for so long to the charges of quaintness and oddity that I cannot repent of my enthusiasm. If the mean can be attained only by the play of extreme upon extreme, such an attitude as mine probably does no great harm.

Since this is an essay in thought and processes of thought, I have made no effort to discuss Browne in terms of style or literary accomplishment. Nor can I claim anything approaching an exhaustive treatment of his writings. My emphasis has been upon Vulgar Errors and Religio Medici, although his other writings have been drawn upon to illustrate specific points.

PART I

THE SCIENCE OF SIR THOMAS BROWNE

CHAPTER 1

AN ANALYSIS OF EARLY MODERN SCIENCE

1. The Problem.

Because of the great importance of science in our own day, we seem to be drawn irresistably to the study of the youth of that discipline in the sixteenth and seventeenth centuries. Great or small, any figure who had a share in the scientific activity of that age is sure to be carefully studied and evaluated. It is undeniable that in some way Sir Thomas Browne was concerned with science. When we examine the evaluations made of him, however, we soon discover that the number of opinions as to his true place in science is approximately equal to the number of his critics.

One group of critics accepts Browne as a minor luminary in the galaxy of Baconian scientists. They are apt to assume in his science that breach between the spiritual and physical worlds which was one of the most important effects of the scientific advance. Gosse, for example, finds the key to Religio Medici in this proposition:

> if a man of science will hold the truth of the Christian religion sincerely in mystical matters, he may take as his reward the right to examine the material world of nature with all the scepticism

> which his experimental heart desires. Theology and science in water-tight compartments, with no possibility of interchange between them.[1]

Others insist that he was by no means a "true" scientist. Praz declares categorically that Browne was interested only in "quaint monstrosities of art and nature."[2] This is the interpretation most commonly found in brief summaries of Browne's career. In one of the standard anthologies we find a technique of contrasts:

> The physician William Harvey discovered the circulation of the blood during this period, and gave the world his great De Motu Cordis, but the physician Thomas Browne was composing "A Dialogue Between Two Twins in the Womb Concerning the World They Were to Come Into." It was a time when the successors of Galileo were recharting the heavens and laying the foundations of a new astronomy, but Browne's contribution to the new science of cosmology was only the fantastic, "Dialogue Between an Inhabitant of the Earth and of the Moon."[3]

Some of these critics will admit that Browne had a certain interest in science, but deny him entry to the halls of the blessed.

A third major segment of critical opinion derives from T. S. Eliot's re-evaluation of the metaphysical poets and his concept of the "unified sensibility." According to this theory Browne is characterized by the ability to live in varied and separate worlds, one of which happens to be science. Willey says:

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[1]Edmund Gosse, Sir Thomas Browne (London, 1905), p. 29.

[2]Mario Praz, "A Review of the Works of Sir Thomas Browne, vols. V & VI (ed. Keynes)," English Studies, XIV (1932), 169.

[3]Robert P. Tristram Coffin and Alexander M. Witherspoon (eds.), Seventeenth-Century Prose and Poetry (New York, 1946), p. 355.

> Many different worlds or countries of the mind then lay close together--the world of scholastic learning, the world of scientific experiment, the worlds of classical mythology and of Biblical history, of fable and of fact, of theology and demonology... of activity and contemplation; and a cultivated man had the freedom of them all.[1]

Superficially this is an extremely attractive idea, since it has the advantage of including at a gulp all of Browne's multifarious activities. However, unless it is handled with great care, we find that it answers none of the questions that interest us; it tends to avoid the issue.

Each of these theories has been defended at considerable length. Obviously they cannot all be true. There is no reason why such conflicting estimates should exist today, for we have at our disposal enough material dealing with the early history of science to reach fairly definite conclusions.

Unfortunately few critics have made full use of this valuable material. Frequently they assume entirely too much homogeneity in science, assume that it was an internally consistent movement. Douglas Bush, in speaking of the antagonism between science and religion during the period, makes this significant remark: "'Science' hardly needs definition, but the word 'religion' does, since it means so many things in the seventeenth century."[2] Since Bush is a capable and conscientious scholar, this initial assumption forces him into

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[1]Basil Willey, The Seventeenth Century Background (New York, 1953), p. 50.

[2]Douglas Bush, "Two Roads to Truth: Science and Religion in the Early 17th Century," ELH, VIII (1941), 82.

a rather awkward corner. Browne is to be regarded as a "pre-scientist," a term which adds little to the clarification of an already involved problem.

In my opinion, the assumption that science needs no explanation is one of the roots of the confusion. Therefore, in this paper I will review the main elements of seventeenth century science on the contrary assumption, namely that it is likely to prove quite as complicated in its ramifications as religion.

A second important reason for the confusion surrounding Browne's science is the lack of historical imagination in many Browne studies. It is easy from our vantage point of some two hundred years to look back at the work of the early scientists and note much that appears ridiculous. It is easy to emphasize these errors and misconceptions and write amusing and cultivated little essays. However, if we intend to give this early work a fair evaluation, we must recognize the difficulties which faced the pioneer investigators. We must judge them in terms of their materials and opportunities. My intention is to study Sir Thomas' science in the light of his own time. By so doing, I hope to throw the figure of Browne into new relief as a scientist, while at the same time introducing conceptions which will make the gap between his science and his religion disappear.

In dealing with the development of science two major distinctions should be carefully made. The first is the difference between mathematical science and empirical science;

the second, a recognition of the fact that sciences differ with regard to subject-matter. Upon the nature of the subject-matter depend both the method to be followed by the scientist and the rate of growth of the science. These are factors of the utmost importance in evaluation.

2. Mathematical and Empirical Science.

There is some disagreement about the nature of science as a whole, but some attributes are generally recognized. At least until the decline of the Newtonian physics, the following characteristics of physical science, here culled from Needham, were taken for granted:

1. Abstraction.

> Anyone who is at all intimate with the method of pure science realizes that its fundamental procedure of classification and indexing is the assertion of the abstract, the assertion of the group or class, and the absolute forgetting...about the individual differences which have gone into the class.[1]

2. Quantitative approach.

> The scientific worker is not interested in mere facts or mere phenomena, he is interested in precisely defined facts and exactly described phenomena. But precision is impossible without sets of numbers or symbols, and logic tends more and more to become mathematical logic.[2]

3. Explicit or implicit determinism.

> The principle of determinism can theoretically be dispensed with by the scientific worker, but in

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[1] Joseph Needham, The Great Amphibium (New York, 1932), p. 18.

[2] Ibid., p. 26.

> practice it never is. Some form of determinism must, for his purpose, hold good everywhere.[1]

4. Anti-teleological method.

> The concept of purposiveness is distasteful to the scientific worker, for in the world of science it is impossible to see why anything should want to be other than what it is. Nor has anyone so far suggested a mathematical formulation for a final cause which should prove of any practical value in investigating nature.[2]

It is in terms similar to these that we all tend to think of science, and these are the terms we hold in our mind unconsciously when thinking of early science. Now the most interesting thing about these identifying marks is that they are all based upon a mathematical mode of thinking. The main current of science is that which has sprung directly from mathematics. Whitehead says:

> Apart from this progress of mathematics, the seventeenth century developments of science would have been impossible. Mathematics supplied the background of imaginative thought with which the men of science approached the observation of nature. Galileo produced formulae, Descartes produced formulae, Huyghens produced formulae, Newton produced formulae.[3]

The greatest achievement of the period, according to Whitehead, was the creation of "a scheme of scientific thought framed by mathematicians, for the use of mathematicians."[4]

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[1] Ibid., p. 30. [2] Ibid., p. 147.

[3] Alfred North Whitehead, Science and the Modern World: Lowell Lectures, 1925 (New York, 1948), p. 32.

[4] Ibid., p. 57.

Galileo's declaration may well be taken as summing up the core of the new science:

> Philosophy is written in that great book which ever lies before our eyes--I mean the universe--but we cannot understand it if we do not first learn the language and grasp the symbols in which it is written. This book is written in the mathematical language, and the symbols are triangles, circles, and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.[1]

This mathematical view of nature differs from Pythagorean concepts in that its formulations must be exact. As Galileo again makes clear:

> Neither doth this suffice[i.e., the knowledge that falling bodies descend with accelerated velocity] but it is requisite to know according to what proportion such acceleration is made; a problem that I believe was never hitherto understood by any philosopher or mathematician....[2]

Now in order for exact mathematics to be applied to the universe several assumptions are necessary, assumptions from which a whole new metaphysical system took being. Nature in all its manifestations must be conceived of as a perfectly orderly system. Burtt quotes and comments on Galileo's views:

> Nature presents herself to Galileo...as a simple, orderly system, whose every proceeding is thoroughly regular and inexorably necessary....Nature

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[1]Edwin A. Burtt, The Metaphysical Foundations of Modern Physical Science (New York, 1925), p. 64, quoting Opere Complete di Galileo Galilei, IV, 171.

[2]Ibid., p. 70, quoting Galileo's Two Great Systems.

> is "inexorable," acts only "through immutable laws which she never transgresses."[1]

In addition the subject-matter of science must be amenable to mathematical treatment. Galileo divides that which is in the world into the primary and the secondary; the former category embraces the mathematically expressible, while the second includes all of the qualities remaining. This bifurcation was further strengthened by Galileo's adoption of atomism. Atoms, possessing none but mathematical qualities, cause secondary experience by operating upon the senses of man. What is real, therefore, is the world of primary quality.

Burtt notes that this is the beginning of a process by which man is "read out of the universe." He explains:

> Till the time of Galileo it had always been taken for granted that man and nature were both integral parts of a larger whole, in which man's place was the more fundamental....Obviously man was not a subject suited to mathematical study. His performances could not be treated by the quantitative method, except in the most meagre fashion....Hence the real world must be the world outside of man; the world of resting and moving terrestial objects.[2]

Finally, new assumptions regarding causality were necessary. Galileo was almost exclusively interested in the study of bodies in motion. The Aristotelian definition of motion as the actualization of a potency was of no use whatever to him, since such a change could not be stated in mathematical terms. In order to formulate a quantitative definition of motion Galileo was obliged to emphasize and re-

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[1] Ibid., p. 64.

[2] Ibid., p. 69.

define the formerly unimportant concepts of space and time. He came to the position that the real world is the world of bodies moving in space and time. Both space and time could be measured, and movement measured in terms of force. But this mathematical treatment could only answer the how of movement, not the why. Consequently Galileo explicitly abandoned the whole concept of final cause as a scientific principle.[1]

In place of the old world where qualitative kinds of being were arranged in ascending static levels directed toward God as Final Cause, we now have a universe in which God is conceived primarily as First Efficient Cause. However, since He must be thought of as working entirely through forces, He ceases to have much direct contact with the world of reality.

Descartes, another mathematician of considerable importance, one of the founders of analytical geometry, contributed to the development of this system. I will not attempt a summary of Descartes' philosophical formulations, but will merely record the result, the famous dualism:

> On the one hand there is the world of bodies, whose essence is extension; each body is a part of space....--a geometrical world--knowable only and knowable fully in terms of pure mathematics. ...the whole spatial world becomes a vast machine....On the other hand, there is the inner realm whose essence is thinking...a realm which is not extended, and is in turn independent of the other, at least as regards our adequate knowledge of it.[2]

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[1] Ibid., p. 81 and pp. 89 ff. [2] Ibid., p. 111.

It is not my purpose to determine how fully Galileo and Descartes accepted this mechanical world as the only real world. Whitehead points out that:

> the revival of philosophy in the hands of Descartes and his successors was entirely coloured in its development by the acceptance of the scientific cosmology at its face value. The success of their ultimate ideas confirmed scientists in their refusal to modify them as the result of an enquiry into their rationality.[1]

This is what we are interested in, namely, the fact that with the continued success of the new science men came more and more to look at the mechanist view of the world as the real one. By the end of the century the predominant world view was that of the mathematicians:

> The gloriously romantic universe of Dante and Milton, that set no bounds to the imagination of man as it played over space and time, had now been swept away. Space was identified with the realm of geometry, time with the continuity of number. The world that people had thought themselves living in--a world rich with colour and sound... was crowded now into minute corners in the brains of scattered organic beings. The really important world outside was a world hard, cold, colourless, silent, and dead.[2]

While we must recognize that the constructions of the mathematicians were the most important achievements in science during the century, we must not be drawn to think them the only ones. Men such as Gilbert, Harvey and Boyle made important contributions on the front-lines of science, while others,

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[1]Whitehead, op. cit., p. 19.

[2]Burtt, op. cit., p. 236. Cf. Whitehead, op. cit., p. 56.

such as Lord Bacon, performed equally important methodological tasks. Yet none of these men belonged to the mathematical tradition.

The tone of this scientific current is set by Bacon's statement:

> Those, therefore, who determine not to conjecture and guess, but to find out and know; not to invent fables and romances of worlds, but to look into, and dissect the nature of this real world, must consult only things themselves.[1]

The purpose of these empirical scientists was to look upon the world with newly sharpened eyes, to observe accurately, and to experiment. This, of course, they shared with the precise physicists, but they did not, like the latter, see their task in mathematical terms. Whitehead points out that Bacon consistently treats science in qualitative rather than quantitative terms.[2]

For our purposes the importance of this purely empirical attitude lies in the fact that it demanded no completely new view of the universe. Compared with the rigidity and precision of mathematical thought, these men lived in a loosely organized and inconsistent metaphysical world.

Boyle, for example, pleads for scientists:

> to set themselves diligently and industriously to make experiments and collect observations, without being over-forward to establish principles and axioms, believing it uneasy to erect such theories,

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[1] Willey, op. cit., p. 33, quoting Bacon's Preface to De Augmentis.

[2] Whitehead, op. cit., p. 46.

> as are capable to explicate all the phenomena of nature, before they have been able to take notice of the tenth part of those phenomena, that are to be explicated.[1]

And there he stops. For his laboratory work he is willing to accept the mechanist universe because it proves to be a useful and productive premise. However, he does not feel obliged to carry the view out of the laboratory. As a sincere Christian he could not accept the idea of a self-contained and self-efficient universe. But as Fisher reminds us, he never did offer any explanation as to the real constitution of the universe.[2] These larger problems simply did not concern him, "because there is a multitude of considerable things to be discovered or performed in nature" first.[3]

I think that this difference in attitude can be explained by the fact that the empiricist is not driven by the inexorable logic of the mathematician. Be that as it may, we certainly cannot deny Boyle the title of scientist. In many ways his work was rendered more valuable by this indifference to philosophical formulations. As Fisher puts it:

> By resigning, devoutly and sincerely to be sure, all major philosophical problems to the divines of the Church, by this calm acceptance of Christian dogmatism, Boyle kept the scientific nose to the

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[1]Burtt, op. cit., p. 182, quoting Boyle's Works, I, 302.

[2]Mitchell Salem Fisher, Robert Boyle, Devout Naturalist: A Study in Science and Religion in the Seventeenth Century (Philadelphia, 1945), p. 81.

[3]Ibid., p. 57, quoting Boyle's Excellence of Theology.

> experimental grindstone and did not permit the scientist to wander too far out of the laboratory. This Christian allegiance prevented him from subscribing to the more radical metaphysics of the mathematicians.[1]

William Harvey is an even more interesting example of the pure empiricist, but it will be more convenient to treat him as a biologist.

3. Physics and Biology.

In discussing the achievements of science in the seventeenth century Whitehead makes this significant remark:

> There were, of course, great advances in biology within the century, chiefly associated with Italy and the University of Padua. But my purpose is to trace the philosophic outlook, derived from science and presupposed by science....Now the scientific philosophy of this age was dominated by physics... it is certain that the root ideas of the seventeenth century were derived from the school of thought which produced Galileo, Huyghens and Newton, and not from the physiologists of Padua.[2]

This is virtually to admit that the physicist and the biologist live in different worlds. The reason for this is not far to seek, if we think of the difference of the material upon which each works. The physicist is concerned with inorganic, the biologist with organic matter, and the latter is immensely more complicated. If we confine our attention to the problems and achievements of the physicists alone, we prejudice completely any treatment of the early biologists and medical researchers.

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[1] Ibid., p. 35. [2] Whitehead, op. cit., p. 41.

The introduction of living matter into the field of study of the scientists had the following results, which must be taken into account by the student of science:

1. The mathematical technique of the physicist proved to be ill-suited to the study of living organisms.

2. Investigation into the basic materials of life could be carried out only partially until more perfect instruments were at the disposal of the researcher. The instruments needed by the biologist were much more complex than those needed by the physicist.

3. The science of biology, which is actually a complex of many separate sciences, could not make many significant advances until the simpler constituent sciences had been brought to a certain level of perfection.

Each of these points must be treated more fully in order that several important implications may be drawn out.

Both in application and results the quantitative techniques of the physicists proved troublesome in biology. Needham, a present-day biologist, reminds us that:

> experimentation, the active interference with the course of nature and the subsequent observation of the resulting system in comparison with systems in which no such interference has taken place, was a characteristically nineteenth-century product as far as biology and embryology were concerned. Only at the present day, indeed, are we beginning to appreciate the statistical and other difficulties attending upon the full application of the experimental method to living organisms, and the manifold obstacles which prevent obedience to the rule that only one variable be modified at one time. But this is no matter of reproach against the older embryologists. Knowledge of form must necessarily precede knowledge of change of form....[1]

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[1] Joseph Needham, A History of Embryology (Cambridge, 1934), p. 212.

Some suggestion of the amount of preliminary work to be done can be gained by reflecting that:

> as late as 1675, there was exhibited among other rarities in the Anatomy School at Oxford a siren's hand; a catalogue of 1709 lists a sea-horse's head, a unicorn's horn, and the thigh bone of a giant.[1]

It shows a serious lack of historical imagination to treat such facts as amusing examples of the credulity of bygone, unscientific ages. Doran puts the point strikingly:

> Without any clear concept of species, or accurate knowledge of the process of generation and of the workings of heredity, there is no reason why an Elizabethan [and this applies to the seventeenth century Englishman as well, though perhaps to a lesser degree] should have found anything inherently incredible in the griffin....So far as a creature like the unicorn is concerned, it is not at all less probable, even on modern standards of structure, than the antlered hart....For myself I find the unicorn much less improbable than the giraffe.[2]

The observation that even in our own day the "abominable snow-man" of the Himalayas, a monster every bit as unscientific as any of the Elizabethan wonders, is receiving more or less serious consideration, should make us aware that much of our vaunted knowledge of the world is still a matter of mere observation rather than scientific deduction.

From these remarks we can readily see that the kind of work most needed in the seventeenth century stage of biology

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[1]Madelaine Doran, "The 'Credulity' of the Elizabethans," Journal of the History of Ideas, I (1940), 160.

[2]Ibid., pp. 162 f.

falls under two headings; the gaining of knowledge of form, which could only be accomplished by endless patient dissections; and extensive and world-wide observation, together with the cataloguing and classification of the manifestations of life observed. The latter was such an extensive program that it was not possible to make real progress until well into the eighteenth century. Linnaeus did not publish his Systema Naturae until 1735. And, of course, this phase of biological science has continued into our own day.

Bearing in mind the complexities of organic material, we are not surprised to find that those biologists who sought to apply physical methods at such an early stage were frequently frustrated. Shyrock, in viewing the state of physiology at the end of the seventeenth century, says:

> The quantitative procedures that achieved such splendid results in mechanics proved disappointing in physiology. Some phenomena did not seem measurable; and others, when measured, brought contradictory results.[1]

In yet another respect the formulations of the physicists were not accepted entirely by the biologists. We have already seen that the mathematical physicists rejected final cause in science. Those empiricists who were not biologists followed suit. Bacon, for instance, says:

> For the handling of final causes mixed with the rest in physical inquiries, hath intercepted the severe and diligent inquiry of all real and physical causes, and given men the occasion to stay upon these

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[1]Richard Harrison Shyrock, The Development of Modern Medicine (New York, 1947), p. 18.

> satisfactory and specious causes, to the great arrest and prejudice of further discovery. For this I find done not only by Plato, who ever anchoreth upon that shore, but by Aristotle, Galen, and others, which do usually likewise fall upon the flats of discoursing causes.[1]

Here again we find biology set apart from its fellows. The biologists were by no means so emphatic or sure about the rejection. Harvey is typical of them when he writes:

> To those who repudiate the circulation because they neither see the efficient nor the final cause of it, and who exclaim, cui bono? I have yet to reply.... And first I own I am of opinion that our first duty is to inquire whether the thing be or not, before asking wherefore it is, for from the facts and circumstances which meet us in the circulation admitted, established, the ends and objects of its institution are especially to be sought.[2]

The fact is simply that in the study of dynamically organized systems, the concept of purpose or end is sometimes of great use. Needham says:

> Harvey told Boyle that he was led to certain important considerations by meditating upon the final cause of the valves in the veins; and every biologist acts in the same way at the present time. But the important thing is not to give the last word to teleology.[3]

I do not wish to press this point too far, but it is another

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[1]Francis Bacon, The Advancement of Learning, in The Philosophical Works of Francis Bacon, trans. and prepared by Ellis and Spedding (Robertson Ed.; London, 1905), p. 96. Hereafter cited as Philosophical Works.

[2]William Harvey, A Second Disquisition to John Riolan, in An Anatomical Disquisition on the Motion of the Heart & Blood in Animals, trans. Robert Willis (Everyman ed.; London, n.d.), p. 149.

[3]Needham, A History of Embryology, p. 41.

indication that biology, because of its very nature, had to discover its own road to science, and that in so doing it found itself not infrequently out of step with the physicists.

Furthermore, we should recognize that the progress of biology was in part dependent upon advances made outside the field. Because physical matter could be treated in mathematical terms, the physicists were able to make great progress with relatively simple apparatus. The biologists, on the contrary, because they could not provide themselves with this invaluable aid, were forced to rely upon observation and description. Such work, of course, was only as accurate as the instruments used. The microscope, that indispensable tool in the study of minute organisms, cell structure, and embryology, is a good example in point. It did not become common until about 1660. Hooke did not publish his Micrographia until 1665, and Leeuwenhoeks's first observations were not communicated to the Royal Society until 1674.[1] These dates must be borne in mind when we are dealing with earlier figures.

The third cause for the slow rise of the biological sciences, their dependence upon the relative perfection of other sciences, does not directly concern us here because none of the other sciences was advanced enough in the seventeenth century to render biology much aid. I mention this fact here for the

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[1]Marjorie Nicolson, The Microscope and English Imagination (Smith College Studies in Modern Languages, XVI, No.4, 1935), 7 ff.

sake of completeness in the analysis. Chemical biology, for example, could make little or no progress until organic chemistry had been established in the nineteenth century.

We can easily test the justice of this analysis of biology by turning to the actual method of the scientists themselves. William Harvey is one of the most famous of all English medical scientists, and even a cursory examination of his work shows the validity of the points I have made.

Foster summarizes Harvey's technique as:

> the patient examination of anatomical features, if possible a comparison of those features in the same organ or part in more animals than one, the laying hold of some explanation of the purpose of those features suggested by the features themselves, and the devising of experiments by vivisection or otherwise, which should test the validity of that explanation.[1]

The key concepts here are painstaking observation, the formation of an explanation, and experimental verification. There is no suggestion whatever of a quantitative bent in Harvey. On this point Foster says:

> Although Harvey could not be ignorant of the exact mathematical and physical knowledge which was being gathered up in his time, he...makes little or no use of it in his great work. That was based exclusively on the teachings of anatomy and the results of experiments on living animals; he never made use of the new mathematical or even the new physical methods.[2]

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[1] Sir Michael Foster, Lectures on the History of Physiology during the Sixteenth, Seventeenth and Eighteenth Centuries (Cambridge, 1924), p. 52.

[2] Ibid., p. 74.

This is a point of some importance because Harvey is sometimes rather carelessly thrust into the company of the quantitative workers on the basis of the well-known passage:

> When I surveyed my mass of evidence, whether derived from vivisections...or from the arrangement and intimate structure of the valves in particular, and of the other parts of the heart in general, with many things besides, I frequently and seriously bethought me, and long revolved in my mind, what might be the quantity of blood which was transmitted...and not finding it possible that this could be supplied by the juices of the ingested element... I began to think whether there might not be A MOTION, AS IT WERE, IN A CIRCLE.[1]

While it is perfectly true that this is a quantitative consideration, it is far different from the physicists' attempt to investigate quantity in exact and measurable terms. The important part of Harvey's work was in accumulating the "mass of evidence," in making extensive vivisections and studies of form. When this was done, the quantitative considerations were merely common sense.

Time after time in his writings Harvey emphasizes the need for close observation:

> still in reference to things sensible, things that come under the cognizance of the senses, no more certain demonstration...can be adduced than examination by the senses, than ocular inspection.[2]

His reasoning was always of a common sense variety and always closely allied to observation:

> Aristotle counsels us better when in treating of the generation of bees, he says:"Faith is to be given to reason, if the matters demonstrated agree with

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[1]Harvey, The Motion of the Heart & Blood in Animals, p. 56.

[2]Harvey, A Second Disquisition to John Riolan, p. 152.

> those that are perceived by the senses; when the things have been thoroughly scrutinized, then are the senses to be trusted rather than the reason." Whence it is our duty to approve or disapprove, to receive or reject everything only after the most careful examination.[1]

In common with the empiricists Harvey had little patience with those who asked for a complete and coherent system:

> To those who object to the circulation as throwing obstacles in the way of their explanations of the phenomena that occur in medical cases (and there are persons who will not be content to take up with a new system, unless it explains everything, as in astronomy)....I shall not answer farther here.[2]

His remark that Bacon wrote of science like a Lord Chancellor is famous, and suggests, I believe, not only his distrust of amateurs, those "inexperienced and ignorant of anatomy, and making no appeal to the senses,"[3] but also of contemporary theorists in general. Cohn writes of Harvey:

> of his relation to his contemporaries of the seventeenth century it is more difficult to speak.... [The record] gives the impression of a far greater continuity with the past than of intimate sympathy with his own world. His ever present intellectual companions were Aristotle and Galen....In his writings there is no mention of a single contemporary English author.[4]

The picture of Harvey which emerges even from these brief remarks is rather clear cut. He had excellent professional training and had learned the technique of observation and experiment well. He did not attempt to do more than such a

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[1] Ibid., p. 159. [2] Ibid., p. 150. [3] Ibid., p. 159.

[4] Alfred E. Cohn, "The Development of the Harveian Circulation," Annals of Medical History, New Series, I (1929), 35.

technique permitted, and was apparently indifferent to those who did attempt more. This indifference to the rest of science is perhaps not typical, but again it is an indication of the independence and even isolation of the biological sciences during the century.

4. The Tradition of Medical Science.

The more we reflect upon the differences between the physicists and the empirical biologists, the more we come to suspect that they derive from totally different traditions. Narrowing our view from biology as a whole to the particular branch of medicine, we find that this is probably a correct supposition. The medical historian Castiglioni says:

> Important as were the contributions of great thinkers like Descartes and Bacon, it is open to question how much they directly influenced their medical contemporaries. The spirit was already in the air. Vesalius had already revolutionized anatomy, and Pare had modernized surgery; Harvey's physiological studies were well under way, and Paracelsus had launched medical reform. The philosophers were characteristic figures and leading exponents of their age rather than important pioneers and guides of medicine.[1]

Osler sees the rise of modern medicine in the fifteenth and sixteenth centuries as the result of the work of "medical humanists," men inspired by a triple interest--literature, medicine, and natural history. These men reinstated Galen and corrected the mistakes of the Arabian school by reviving the

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[1]Arturo Castiglioni, A History of Medicine, trans. E. B. Krumbhaar (New York, 1947), p. 510.

Greek art of observation. Necessarily their work was slow, for they had to discover what had been lost and systematize it before they could progress. But it is from this group that the impulse to go beyond the ancients arose.[1] Cumston takes a slightly different view. He traces the origins to the fifteenth century:

> Several of the Scholastic physicians either maintained with the Scotists that the soul had not need for any adjuvant forces, and that it acted by itself, or they left aside these questions of doctrine and, by observation and experience, tried first to verify the teachings of Galen and then to overthrow them.[2]

These accounts are probably complementary rather than contradictory, and in any event both men agree in attributing to medical research a primarily medical impulse, and in noting as the predominant characteristic of the revival, observation.

When we come into the sixteenth century we find that during that period and well into the seventeenth century the great medical center of Europe was the University of Padua. It is not without interest to us that Gilbert, Harvey and Browne all studied there.[3]

The first great figure produced by the Paduan medical school was Vesalius (1514-1564), who completely reoriented

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anatomy with the publication of his De humani corporis fabrica in 1543, and set the tone for the continuing tradition of Paduan observation. His most striking characteristic, according to Osler, was "an insatiate desire to see and handle for himself the parts of the human frame."[1] Even after he had abandoned university life he felt this urge. To his friend Fallopius he writes in 1561:

> I still live in hope that at some time or other, by some good fortune I may once more be able to study that true bible, as we count it, of the human body and of the nature of man.[2]

The anatomical work of Vesalius was continued at Padua by Fallopius and later by Fabricius, under whom both Gilbert and Harvey studied, and who made those studies of the valves in the veins upon which Harvey so brilliantly built.

This great school taught, if we may gather as much from the work of its two greatest figures, Vesalius and Harvey, primarily observation and experiment. There was apparently no suggestion of the application of mathematics to medicine, and little or no interest in the new metaphysics.

While this anatomical school of Padua was the most important medical influence in the early seventeenth century, the other prominent schools and discoverers show a similar empirical background. The iatro-chemical school which derived

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Surgery, as has been mentioned, was revolutionized by Pare, whom Castiglioni characterizes as "this man of genius, indefatigable worker...endowed with but little culture, but with a magnificent spirit of observation."[1] Again no hint of mathematical influences. Indeed it was not until the latter part of the century that we find a school of medicine arising which is definitely affected by the mathematical physics. This, the iatro-mechanical school, was really not very well established until Borelli published his De moto animalius in 1680.

Nor should even a capsule account of seventeenth century medicine neglect to mention the strong reaction against all schools and theories which is represented in England by Thomas Sydenham (1624-1689). Sydenham, abandoning the numerous medical theories then current, laid down the proposition that all disease could be described as natural history, and went back to Hippocrates and accurate observation of symptoms as the primary consideration of the doctor. His extreme empir-

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> In writing therefore such a natural history of diseases, every merely philosophical hypothesis should be set aside, and the manifest and natural phenomena, however minute, should be noted with the utmost exactness.[1]

This technique had obvious limitations, but from it grew a tradition of great clinical teaching which had important and lasting effects.

On the basis of this evidence, both theoretical and practical, we can but conclude that biology and medicine grew from different soil than physics, and that any treatment of science which does not make this distinction is bound to fall into confusion. The marks of the great figures in biological fields are observation and an empirical technique. They must not be confused with their more strikingly successful physicist contemporaries nor judged by the same standards.

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CHAPTER 2

THE SCIENTIFIC METHOD AND ACHIEVEMENTS OF BROWNE

1. The Medical and Biological Background of Browne's Science.

I consider Browne a scientist in the Paduan tradition of empirical anatomy and biology. The evidence that can be adduced to support this contention is found both in Browne's biography and in the actual evidence of his work.

Sir Thomas was by education and profession a physician. He studied medicine at Oxford from 1623 to 1629. During the years 1630-1633 he continued his medical studies at the great European universities, Montpellier, Padua, and Leyden. Our knowledge of these later studies is painfully meager, but we do know that he received an M.D. degree from Leyden in 1633. He then returned to England and practiced for a short while in Yorkshire, where he wrote Religio Medici. In 1637 he received an M.D. degree from Oxford.[1] By 1636 Browne had taken up residence in Norwich, where according to a contem-

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porary report, "he was much resorted to for his admirable skill in physick."[1]

Vulgar Errors was first published in 1646, having been composed "by snatches of time, as medical vacations and the fruitless importunity of uroscopy would permit us."[2] For the rest of his life Browne practised his profession and conducted his experiments in Norwich.

It is indeed a pity that we know so little about his stay at Padua. We do know that he had an intense and idealistic interest in medicine as a young man. In Religio Medici he speaks thus of his profession:

> I am not only ashamed but heartily sorry, that, besides death, there are diseases incurable; yet not for my own sake or that they be beyond my art, but for the general cause and sake of humanity, whose common cause I apprehend as mine own.[3]

To such an earnest young man the six years he spent at Oxford must have seemed sterile. Allen has given us a depressing picture of medical education in England during this period. Lectures and disputations were poorly attended because the material presented was obviously several hundred years behind

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The contrast between this sort of education and the great medical schools on the Continent must have deeply impressed Browne. Since the best days of Montpellier were over, and those of Leyden had not yet come, it was Padua, still fresh with the memories of Vesalius and Fabricius, which must have exerted the most influence upon him.[2]

Of course, this is conjectural, but it is reasonable. Once in a while we seem to catch a hint of more concrete evidence for such a supposition. There is Browne's constant admiration for Harvey and Gilbert, both fellow Paduans and both doctors, and his lifelong devotion to anatomy.[3] Also

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Needham has suggested that Browne and Harvey were in closer touch with one another than has generally been assumed, on the basis of a reference Browne made in 1646 to "Dr. Harvey's excellent discourse of generation" which was not published until 1651.[1] But these glimpses, tantalizing though they be, are not enough to give definite confirmation to our belief.

However, when we turn to Browne's actual scientific work, we cannot but be impressed by his marked leaning toward biological subjects. Merton, who has gathered a great mass of evidence on this subject, tells us that Browne had large animal collections, that he was regarded by many contemporary scientists as an authority on natural history, that he made amazingly accurate bird studies, and that he studied throughout his life the anatomy of as many animals as he could lay his hands on, including a whale. He concludes that "Browne's desire was to become a master of his profession, of all connected with life and death."[2]

The same emphasis may be noted in the scientific notes gathered from his commonplace books by Keynes. Browne devotes to anatomy some 13 pages; to natural history, 97; to coagulation, 25; to boiling, 5; and to the motion of bodies only 4 pages. Since the notes on coagulation were closely related to his researches in embryology, we may say without any doubt

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that Browne's practical scientific interest was almost completely biological.

Not only is this evident in the amount of the material but in its quality as well. The notes concerning biological subjects are full of personal observations, accounts of experiments, and suggestions for future research. Notes such as the following, which indicate a practical laboratory interest, are numerous:

> [of digestion in pickerels] one kept in a cesterne lived six days, the roach in the maws not half digested.
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> Whether a vesication will do anything upon a dead cold body.
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> Observe the membrane of the lungs whether it bee very porous as Blasius delivers.[1]

In contrast, his few pages on motion in bodies are only a summary of Galileo's findings, with little suggestion of the active interest so evident in the other sections.[2]

It is evident from these considerations that Browne's major interests lay in the biological sciences, and accordingly we must apply to him the standards of the biologist.

2. The Method to be Used in Evaluating Browne's Science.

But granting Browne an inclination toward biology, we have yet to determine whether he was a good biological scientist or merely a doctor interested in scientific matters

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> The virtuoso stops at the very point where the genuine scientist really begins....the special kind of curiosity on which it [virtuosity] thrives [is]...wonder and admiration for the rare, the strange and the incredible.[1]

Virtuosity is, in effect, the charge which Praz has brought against Browne.

As has been made clear, we cannot expect the same kind of results nor the same degree of precision from the seventeenth century biologist that we might reasonably demand from a physicist contemporary. To prove Browne a genuine biological scientist it is necessary to show that he was working with some success on problems which concerned biology at the time, and that his method of investigation was not behind that of his fellows in the field.

The material to be used in evaluating Browne's work will be drawn from Vulgar Errors and the notebooks. The method I will follow is rather involved, but is rendered so by the nature of the material. The steps of the investigation are:

> 1. Preliminary. First Vulgar Errors must be placed in proper perspective by discovering Browne's aim in writing the book, the range of material he intended to cover, and the portions of the book we should be interested in. We must review the theoretical basis of the work.

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3. Evaluation. With a body of evidence before us we will be able to evaluate Browne's method in terms of biological procedure and make a final judgment concerning his position as a scientist.

4. Defense of Evaluation. To conclude the investigation I will defend my evaluation by reviewing the opinions of scientists, both contemporary with Browne and modern, as to the value of Browne's scientific work. I will also present and answer the objections of those critics who disagree with my conclusions.

3. Vulgar Errors: The Theoretical Basis and Limits.

In Book I of Vulgar Errors Browne lays down his principles and makes an analysis of the kinds and sources of error. Because this analysis bears certain resemblances to Bacon's Idols, scholars have paid more attention to the question of Browne's debt to Bacon that to what Browne himself says. In Appendix I the Bacon-Browne relationship is dealt with in some detail. Suffice it at this point to say that the dependence of Browne upon Bacon is highly questionable. However, the matter is not of much importance except as it distracts our attention from Browne's own statements, which are extremely important in placing Vulgar Errors in the correct light.

According to Browne, human error has two main sources.

1. The common infirmity of human nature. This is the "first and father cause of common error." As the primary example of this failing Browne cites the fall of Adam and Eve:

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> They were deceived through the conduct of their senses, and by temptations from the object itself; whereby although their intellectuals had not failed in the theory of truth, yet did the inservient and brutal faculties controll the suggestion of reason: pleasure and profit already overswaying the instructions of honesty, and sensuality perturbing the reasonable commands of virtue.[1]

Browne traces man's erroneous disposition up to the flood, and concludes with the observation:

> we have been erroneous ever since. And being now at the greatest distance from the beginning of error, are almost lost in its dissemination, whose ways are boundless, and confess no circumscription.[2]

This source of error is Browne's recognition of general human fallibility. He chooses Adam and Eve as examples because they were the most perfect of all human beings, and their limitations mark the maximum of man's unaided perfectibility. Since error is seen in them, it is necessarily a part of the human constitution. This infirmity is seen, not as a primarily logical weakness, but rather as the inability of the reason to function properly because of the influence of the senses and appetites.

2. The erroneous inclination of the people. This source of error depends upon the fact that the uneducated, having no "principle of knowledge," cannot assent to the truth but by accident. They depend upon the brute evidence of their uninstructed senses and pass "their days in perverted apprehensions and conceptions of the world, derogatory unto God and the wisdom of the creation."[3] Not only do their weak

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> They were deceived through the conduct of their senses, and by temptations from the object itself; whereby although their intellectuals had not failed in the theory of truth, yet did the inservient and brutal faculties controll the suggestion of reason: pleasure and profit already overswaying the instructions of honesty, and sensuality perturbing the reasonable commands of virtue.[1]

Browne traces man's erroneous disposition up to the flood, and concludes with the observation:

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understandings make them the victims of all sorts of intellectual delusions, but also the power of the appetite over their action is proportional to the degeneracy of their reason. Moreover, their individual weaknesses are multiplied by aggregation until the people, as a collectivity, is "error itself." Unscrupulous men take advantage of the ignorant and deceive them through superstition, astrology, fortune telling, and other frauds. On the other hand, so fickle are the people that prudent governors must deceive them for their own good. As long as ignorance exists, society is a gigantic lie.

Browne does not confine his denunciation to the poor, but says:

> whosoever shall resign their reasons, either from the root of deceit in themselves, or inability to resist such trivial deceptions from others, although their condition and fortunes may place them many spheres above the multitude, yet are they still within the line of vulgarity, and democratical enemies of truth.[1]

This general analysis of the causes of error is little more than an attempt to justify the ways of reason to man. Browne reveals himself as a defender of rationality, arguing that only by exercising his reason can man avoid the dangers of the "legendary body of error." But at the same time, by admitting the imperfect nature of man, Browne refuses to grant reason the ability to reach absolute truth.

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These causes lay the foundation of the total argument, but they do not take us very far in a practical analysis of error. Browne next turns to the more immediate sources of error, which are the following:

1. Mistake.[1] A mistake is "a misconception of things either in their first apprehension, or secondary relations," and may be either verbal or real. Verbal mistakes are forms of equivocation. Under this heading are included:

> all ironical mistakes, for intended expressions receiving inverted signification; all deductions from metaphors, parables, allegories, unto real and rigid interpretations.

Real mistakes are false conceptions of things, and are the result of four kinds of logical errors, which Browne derives from Aristotle:

1. petitio principii--argument from false premises.

2. a dicto secundum quid ad dictum simpliciter--argument from premises which are either only partially or conditionally true and inferring from them absolute conclusions.

3. a non causa pro causa--argument from false or partial causes.

4. fallacia consequentes--the error of confusing contingency with causality.

Mistakes may be detected and corrected by the exercise of reason.

2. Credulity.[2] This is the error of giving "easy assent," of not examining things sufficiently when they are presented to us, allowing ourselves to be convinced by insufficient

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proof. On the other hand, the diametrical position of "obstinate incredulity, whereby we will not acknowledge assent unto what is reasonably inferred" is also to be avoided. The mean must in all cases be followed.

3. Supinity.[1] This failing is closely allied to credulity and is the failure to make the necessary effort to obtain truth. Some:

> neither make experiment by sense, nor enquiry by reason, but live in doubts of things, whose satisfaction is in their own power; which is, indeed, the inexcusable part of our ignorance, and may, perhaps, fill up the charge of the last day. For, not obeying the dictates of reason, and neglecting the cry of truth, we fail, not only in the trust of our understandings, but in the intention of man itself.

4. Obstinate adherence unto antiquity.[2] This is the "mortallest enemy unto knowledge." Obstinate adherence to antiquity is foolish for the following interesting reasons:

1. The ancients examined and refuted the doctrines of their predecessors, "Aristotle the most of any."

2. The past was once the present, and we in turn shall be the past. Therefore, the past as such has no claim to special reverence.

3. The testimonies of antiquity frequently contain palpable errors.

4. Many ancient writers have no authority of themselves, since they merely transcribe the results or conjectures of earlier writers.

5. Often the ancients corrupt the natural into the marvelous. Browne believes, for example, that in reality Medea possessed only a "receipt to make white hair black."

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everyday notions. This is nothing but an affectation.

> 7. We are not consistent in our attitude toward the ancients. While we follow them without question in some things, we abandon them in others; for example, in matters which "our enlarged navigations can now assert beyond all dubitation." This being the case, "it may not be presumptuous to examine them in others."

These considerations open the whole question of authority to Browne. He carries the discussion into the next source of error.

5. Dependence upon any authority.[1] Authority is only an aid we use until we have advanced far enough to do without it:

> For our advanced beliefs are not to be built upon dictates, but having received the probable inducements of truth, we become emancipated from testimonial engagements, and are to erect upon the surer base of reason.

In mathematics authority carries no weight whatever, and in natural science only a minimum. In general:

> when verities are only supported by their authorities; but being neither consonant unto reason, nor correspondent unto experiment, their affirmations are unto us no axioms.

6. Endeavours of Satan.[2] Satan acts to abet and intensify man's natural errors:

> For maligning the tranquility of truth, he delighteth to trouble its streams; and, being a professed enemy unto God (who is truth itself) he promoteth any error as derogatory to his nature, and revengeth himself in every deformity from truth.

His main efforts are directed toward making us believe there is no God, that there are many gods, or that he is God.

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Taken as a whole this analysis of error serves to define the place of the scientist in society. The idea that the study of nature was forbidden knowledge persisted into the seventeenth century and had to be faced time and again by investigators. Here, by making the enquiry into the truth of all things a religious duty, by connecting the devil with everything which hinders the pursuit of truth in all fields, Browne has established the work of the scientist as a perfectly legitimate activity.[1]

But while this defense includes the activity of the scientist, it is not specifically directed toward that end alone, but rather toward the defense of all intellectual activity. Indeed, science is used but little in the development of the separate points. For example, in the seven reasons for rejecting the authority of antiquity, we find that none of the arguments is specifically scientific. The first four reasons are based upon that close examination of ancient writings which was characteristic of the humanists in general. The fifth reason is partially scientific, but

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the examples cited are mostly literary. The last two reasons are general notions of the time, namely the reaction against Ciceronianism and the effect of explorations.

The importance of the general scope of Browne's interests can hardly be over-emphasized. While he was a doctor and a scientist, those activities by no means monopolized his time. In his commonplace books we find notes and essays on a thunderstorm, tutelary angels, naval battles (a special interest because his son Tom was a naval officer), antiquities, hawks and falconry, scriptural criticism, cymbals, burrows, oracles, comparative philology--the list might be extended almost indefinitely. He was a man of almost universal interests, and of surprising competence in many fields.

Living in an age still partially dominated by the ideal of universal knowledge, Browne naturally enough drew no hard and fast lines between his various studies. When he came to write Vulgar Errors, he did not have the intention of writing a science book as we understand it. Instead he planned to investigate error wherever it might be found. He says:

> arts and learning want this expurgation; and if the course of truth be permitted unto itself, like that of time and uncorrected computations, it cannot escape many errors.[1]

While the work is not rigidly divided as to subject matter by its sections, still a glance at the divisions Browne makes are of some interest in suggesting the range of

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material he covered and the relative amount of space he devoted to each part:

I.	General principles	107 pages.
II.	Minerals and vegetables	117
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Obviously a great portion of the work does not constitute science at all. It is a compendium of error composed by a universal scholar.

We must not fall into the supposition that Browne is foolish enough to think that he can make authoritative statements concerning all of these subjects. He believes that if the greatest mass of information possible can be collected, and placed before the world in the most truthful terms of which he is capable, it will at least offer a base from which other men can work. Therefore, he says:

> we are not magisterial in opinions, nor have we dictator-like obtruded our conceptions; but, in the humility of enquiries or disquisitions, have only proposed them unto more ocular discerners. And therefore opinions are free; and open it is for any to think or declare the contrary.[1]

It is a tentative beginning, not a completed project.

Browne realizes, as his general principles suggest, that for truth to be discovered and established most effectively it is not enough merely to point out specific errors. Men must learn why previous errors were made and why they flourished. That is why he analyzes with such care the

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types of error. It has not been recognized to my knowledge how often in his particular discussions Browne refers to his general principles. For example, of the mandrake he says:

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In treating of the beaver biting off its testicles when pursued he demonstrates that "the error is to expect a verity in apologues, and believe as serious affirmations, confessed and studied fables."[2] In other words Browne is as much interested in the reasons for the error as for the mere truth or falsity of the proposition itself. Much of the material in Browne which is regarded as mere quaintness is in reality an attempt to explain the growth of error, an empirical investigation into the psychology of error.

This interest leads him down strange paths. Time and again we find him explaining the source of an error in terms of hieroglyphs. He explains, for instance, the origin of the basalisk legend as "a misunderstanding of the hieroglyphic intention." The Egyptians, he says, considered the basalisk to be the king of snakes, and used it for a symbol of eternity.[3]

Chalmers has made a full investigation of this matter. He tells us that in the Renaissance there was great confusion regarding the nature of hieroglyphs:

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Undoubtedly because of this general confusion and misunderstanding Browne was frequently wrong in fact about the significance of Egyptian hieroglyphs. But this was a mistake of the age and hardly to be avoided until archeology had advanced considerably. If we recognize these facts, and interpret hieroglyph as symbol, Browne's method is sound enough, even though his conclusions are sometimes shaky.

This attention to the process of error also made him conscious of the difficulties of terminology. He objects in one place to the naming of plants after saints:

> For hereby apprehensions are made additional unto their proper natures; wheron superstitious practices ensue, and stories are framed accordingly, to make good their foundation.[2]

Constantly he is aware that what we denominate by a given name is not the same creature which was given that name by the ancients.[3] Browne was dealing here with problems which he could not possibly solve, problems which we are still struggling with. It is impressive enough that we was aware of the complexity of language and made some attempt to understand it.

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5. Examples of Browne's Scientific Method.

To illustrate Browne's science at work I have chosen to treat three articles in some detail. They have been selected from subjects clearly meant as science, in accordance with the principle previously announced. One article, that on the mandrake, has been selected to show the work of Browne as a part of continuous biological tradition. Another, the essay on coral, is included because it shows Browne's method when dealing with a subject beyond the competence of seventeenth century science. These articles are, as far as I am aware, quite typical, and have not been selected because of any particular excellences. In order however to place a check on what might be unconscious selection on my part, I have chosen the third example, the treatment of the salamander, precisely because it has been held up to ridicule by several

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critics, and presumably represents Browne at his worst.

Example 1. Of the Mandrake.[1]

As early as the sixteenth century naturalists were beginning to reform their science. Conrad Gesner, whose works were familiar to Browne, was one of the first to appeal to observation. Gesner, and his English contemporaries, such as Topsell, Moffett and Gerard, rejected the authority of Pliny when they had observational proof that he was wrong.[2]

Browne made a considerable advance over such a procedure by making general studies of the trustworthiness of authorities, and rejecting almost totally those who like Pliny were only transcribing the results of others. Of Pliny Browne writes:

> Now what is very strange, there is scarce a popular error passent in our days, which is not either directly expressed, or deductively contained in the work....Wherein notwithstanding, the credulity of the reader is more condemnable that the curiosity of the author; for commonly he nameth the authors from whom he received those accounts, and writes but as he reads...[3]

Browne is making the very important point that a secondary authority has no force in itself.

In addition to this important advance, Browne's work is superior in other ways to that of his forerunners. The

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[1]Ibid., pp. 359-365.

[2]Doran, op. cit., pp. 154-159.

[3]Vulgar Errors, II, 238.

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In addition to this important advance, Browne's work is superior in other ways to that of his forerunners. The

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[1]Ibid., pp. 359-365.

[2]Doran, op. cit., pp. 154-159.

[3]Vulgar Errors, II, 238.

Herball or General Historie of Plantes (1597) of Gerard reviews the legends concerning the mandrake, that it grows under gallows, that it has the shape of a man, and that it gives a deadly shriek when pulled up. Gerard comments on these stories:

> they are all and euery part of them false and most untrue; for myselfe and my seruants also haue digged up, planted and replanted verie many: & yet neuer could either perceiue shape of man or woman, but sometimes one straight roote, sometimes two, and often sixe or seuen branches coming from the main great roote....[1]

He goes on to say that "idle drones" have imposed upon the people by manufacturing roots in the shapes of humans.

If Browne were really concerned only with the truth or falsity of this legend, he would only have had to refer to Gerard. But in fact he spends very little time proving the legend false, taking that more or less for granted. As for the supposed resemblance to man, that is brushed aside as "not to be made out by ordinary inspection, or by other eyes, than such as, regarding the clouds, behold them in shapes conformable to pre-apprehensions."

What he is really interested in are the reasons for such a legend in the first place. He discards the idea that it could have arisen from the occasionally observed "far-derived similitude it holds with man," because other plants have the same characteristic. Next he ventures the philological

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explanation that "illiterate heads have been led on by the name, which, in the first syllable, expresseth its representation." The common view held by herbalists that plants were either male or female might also have aided the error. Browne notes that such a designation is false because:

> if that be male which generates in another, that female which procreates in itself; if it be understood of sexes conjoined, all plants are female; and if of disjoined and congressive generation, there is no male or female in them at all.

This distinction, which was not completely understood until Linnaeus finally established it in 1732, is the basis of the Linnaean system of classification.[1] Browne agrees with Gerard that the main reason for the persistence of the legend is the activity of the quacks.

In speaking of the supposed screaming of the plant and the danger therefrom to the hearer, Browne conjectures that "what begot, at least promoted, so strange conceptions" might well be the magical reputation of the plant, which was reported to have been used by Circe. He proceeds to show that other plants have had the same reputation, moly for instance. These legends support one another:

> parallels or like relations alternately relieve each other; when neither will pass asunder, yet are they plausible together; their mutual concurrences supporting their solitary instabilities.

Browne is here searching for general rules which will clear the ground for the new botany which will come. Instead

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of the methodless investigations of the earlier workers, he had adopted rules which can destroy whole nests of legends at a blow, as in the case of the magical plants. Procedures such as this speeded up the task of observation and classification considerably.

In other cases Browne is able to argue from structure that a creature is impossible. Of the griffin he says:

> the invention is monstrous....for though there be some flying animals of mixed and participating natures, that is, between bird and quadruped, yet are their wings and legs so set together, that they seem to make each other, there being a commixtion of both, rather than an adaptation or cement of prominent parts unto each other; as is observable in the bat, whose wings and fore-legs are contrived in each other.[1]

This is, of course, the proper distinction, and the argument shows a considerable background of dissection and meditation upon function. The existence or non-existence of the creature is not too important, but the evidence of awareness of structure is. Here again Browne is on the right road in terms of our discussion of biology, that is, he is advancing the study of form.

Example 2. That coral is soft under water but hard in air.[2]

According to his usual custom Browne first cites those who have held this view. He believes that such a transformation is unlikely. To prove this he appeals to experiments

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made in Tunis by Baptista de Nicole which clearly showed the legend to be false. Browne had disposed of the legend in this manner, but the subject of coral interests him. He quotes the theory of another investigator who believes that coral is formed by mineral incrustations on plants. Browne says of this:

> Whether all coral were first a woody substance, and afterwards converted, or rather some thereof were never such, but from the sprouting spirit of salt were able even in their stony nature to ramify and send forth branches, as is observable in some stones, in silver and metallic bodies, is not without some question.

The fact that both theories happen to be wrong is beside the point, since the problem of coral was quite beyond the power of seventeenth century biology to solve. The important thing to notice is that Browne has not only answered the original question by experimental citation, but has also refused to accept without strong reservations a plausible explanation. Instead he has suggested an alternative and has finally left the question open. This is eminently satisfactory scientific procedure.

Nor is his own conjectural explanation without experimental background. From the notebooks we learn:

> The water distilled out of the root of bryonia alba mixed with sal nitre will send forth handsome shootes, but the neatest draughts are made in the sand or scurvie grasse water; you make a thin'd solution therein of sal Armoniac & soe lette it exhale, for at the bottom will remain woods & rowes of filicular shaped plants in an exquisite & subtle way of draught....[1]

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In other words Browne's suggestion was based upon experiment, and in the then state of knowledge was a genuine possibility.

Example 3. That a Salamander lives in the fire.[1]

Browne first gathers all the evidence on this subject from the ancients and presents it. He distinguishes carefully between citations from observation:

> For experimental conviction, Matthiolus affirmeth, he saw a salamander burnt in a very short time

and mere opinions:

> the contrary assertion of Aristotle, it is but by hear-say, 'as common opinion believeth'

Next he attempts to explain the growth of the opinion by suggesting that the salamander's humidity may enable it to extinguish a small coal, and that this phenomenon became exaggerated into the false belief "that it perseveres and lives in that destructive element." Browne adds that the legend has gained credence because of the existence of an unburnable substance called salamanders' wool. He demonstrates that this substance is mineral, and discusses asbestos briefly and accurately. He has not only disposed of the legend, but has given reasons for its existence, and has recognized the true nature of asbestos.

In none of these essays does Browne make any earth-shaking discoveries, but throughout there is a steady movement in the right direction, and it is mainly by such incre-

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mental progress that science advances.

6. Browne's method in general.

It is clear from the examples of Browne's work which I have given that he is at a far remove from the mathematical physicists. There is little or no suggestion of the quantitative in his writings. As we have seen from our summary of his general principles, Browne does not accept a mechanist universe, since he admits the action of spiritual agencies in the world. However, there is no evidence to my knowledge that he ever allowed this belief to influence his experiments or ever fell back upon a spiritual explanation for physical phenomena. Like Boyle he is a mechanist in the laboratory, whatever he may be outside it.

We have also seen from the general principles that the determinants Browne used in his work were experiment and reason. By reason Browne undoubtedly meant only "the pooled experience of mankind, what is plausible and acceptable to any thinking person."[1] Browne puts a good deal of trust in logical rules which serve to strengthen reason. Beyond this he does not go; he makes no approach to a mathematical mode of thought. His conception of reason is similar to that of Harvey.

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As for experiment, I have given enough evidence to show that Browne was a confirmed experimentalist. He did not, it must be admitted, ever concentrate upon one definite problem and attempt a systematic solution, but rather spread his experiments out over a vast range of material. While this kept him from being a great scientist, it does not put him in the ranks of the amateurs, for the simple reason that the state of biology demanded just such wide and extensive ground-clearing before more fundamental work could be attempted. Therefore, in as far as Browne used reason and experiment as his scientific tools, he cannot be denied the title of biological empiricist.

Most critics would be willing to admit as much if put to the test, but would claim that by his dependence upon authority he loses his claim to the title. We have seen that in his general principles Browne spoke out strongly against adherence to authority and built his case upon reasonable and persuasive grounds. We have also seen that he carried this principle into practice by pointing out the difference between primary and secondary authority and by making distinctions in citations from experimental knowledge.

This may be true, his critics may say, but why did he mention the authorities at all? In the first place, since Browne was dealing with definite problems, it was only proper for him to cite those with whom he was either agreeing or disagreeing. It does not seem to have occurred to many that in those cases where Browne proves demonstrably that an

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opinion is false, he thereby discredits those who have held it on insufficient grounds.

But in a more fundamental sense, the ancients, whether they were right or wrong, were all that the early investigators in biology had to work with. It is easy for us to speak of a complete break with the past, but in practice such a procedure is not possible. The physicists could make a comparatively clean break, because mathematics gave them a framework within which to work, but the biologists were forced to work with what was available. Harvey, we have learned, was a constant reader of Aristotle and Galen. The only genuine question we may ask with regard to Browne's use of authorities is, "Did he accept the evidence of authorities in place of observation and investigation, or to such an extent that his experimental impetus was dulled or negated?"

I can find no significant evidence that Browne was unduly submissive to the older writers. Hutchinson, a modern biologist, supports me in this view when he writes:

> Most of them [the critics of Browne] do not realize that the ordinary scientific paper or advanced textbook contains a mass of references, and that it would be impossible for any scientist to make significant progress solely from his own results....Browne uses most of his authorities just as a modern investigator would....[1]

I do not, therefore, see how we can reasonably deny that Browne was a genuine biological scientist on the basis of his method.

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7. The Defense of the Evaluation: Browne's Critics.

Those who do not consider Browne a true scientist must not only be able to answer the arguments I have presented, but must also be prepared to run counter to scientific opinion both in Browne's own day and in ours. I will give only one example from many to show that in seventeenth century England Browne's position as a scientist was not doubted, but it is a particularly illuminating one. Robert Boyle, the greatest empirical scientist of his day, said:

> having been informed that the learned Dr. Browne somewhere delivers, that aquafortis will quickly coagulate common oil, we poured some of those liquors together, and let them stand for a considerable space of time...without finding in the oil the change by him promised....Whereupon, being unwilling that so faithful and candid a naturalist should appear fit to be distrusted, we did again make the trial....[1]

After repeating the experiment over a period of several weeks with fresh reagents, Boyle found that Browne had been correct. Surely the fact that a man of undoubted scientific importance held Browne in such high esteem as a scientist is impressive evidence that he was much more than a virtuoso.

Modern biologists agree with Boyle. They write of Browne with the utmost seriousness. After reading the experiments on coagulation contained in the commonplace books, Needham says:

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> The only conclusion that can be drawn from these remarkable observations is that it was in the "elaboratory" in Sir Thomas' house at Norwich that the first experiments in chemical embryology were undertaken....it is time to recognize that his originality and genius in this field shows itself to be hardly less remarkable than in so many others.
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> He may therefore be regarded as the father of the static aspect of physico-chemical embryology....[1]

Hutchinson is hardly less emphatic. He agrees completely with Needham's judgment on the coagulation experiments, and adds as a second major contribution the "assembling and comparing of all those lozenge-shaped forms in nature which comprises the third chapter of the Garden of Cyrus."[2] Both of these contemporary biologists are interested in tendency rather than result. Hutchinson remarks:

> Browne was so far out on the periphery of contemporary knowledge that it was almost impossible for him or anyone else to make much sense of the observations. He always seems to have been interested in things which were too difficult for him, the common fate of the biologist.[3]

Contrasted with these eulogistic estimates of Browne's work made by scientists are the opinions of the great majority of Browne critics. It is not possible to answer all of their objections specifically. I will treat one of them, Dunn, in detail, not because he deserves special treatment, but merely because he happens to be one of the most recent writers on Browne. He represents all of those critics who take Browne's

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What surprises us most in these critics is their oblivion to simple facts. For example, Dunn writes:

> Like Bacon he [Browne] makes a list of idols, and points out the stultifying effects of credulity and adherence to authority, but his own views furnish the most picturesque illustrations of these very vices....He had a patristic reverence for the printed word which experiment can hardly shake, and natural history is still for him to a considerable extent a matter of research in a library, of citing and weighing authorities....The hoary superstition that the salamander will live in fire is handled partly by deductive argument, partly by appealing from Aristotle, Nicander, and Pliny to Sextius, Dioscorides, Galen, Matthiolus, Scalinger and other worthies, so that by the end of the chapter the little creature has been turned into a literary myth.[1]

This is simply not true in point of fact. Browne does not appeal to the ancients at all, but merely presents previous views as a background to his own discussion. He takes evident pains to separate experimental evidence from conjectural citations. Dunn gives one the impression that Browne never does reject the legend, whereas he demolishes it completely. The strange assertation that the creature has been "turned into a literary myth" is puzzling. If it means anything at all, it means that Aristotle, Galen and Dioscorides are merely literary figures, of about as much scientific importance as Lewis Carroll. This is very naive.

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An even more striking example of indifference to fact is Dunn's assumption that the validity of a scientist's work depends upon his connection with physics. After mentioning Browne's entirely proper avoidance of the larger metaphysical problems of science, Dunn comments:

> But this attitude is not so scientific as it seems. For certainly it was in the realm of astronomical mathematics that the really great achievements were being accomplished at that very moment. Browne simply represents the majority in being unaware of it.[1]

The gist of this statement is that if Browne had been on his toes he would have devoted his attention to mathematical astronomy. If this is true, there is no justification for the existence of any of the early biologists, including Harvey.

Yet even with regard to astronomy Dunn shows a weak grasp of the issue involved. He assumes that in the seventeenth century any right-minded scientist would have rejected the Ptolemaic system when he says of Browne: "He revolves serenely in the old orbit that centered in the Ptolemaic astronomy and the cosmogony of Moses."[2] The truth of the matter is that the Copernican hypothesis was by no means the complete revolution of astronomical thought that is commonly assumed. The helio-centric construction merely simplified computations by reducing Ptolemy's eighty-some epicycles to thirty-four.[3] The advantage of the theory lay in the fact that it was math-

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[3] Francis R. Johnson, Astronomical Thought in Renaissance England: A Study of the English Scientific Writings from 1500 to 1645 (Baltimore, 1937), p. 102.

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Yet even with regard to astronomy Dunn shows a weak grasp of the issue involved. He assumes that in the seventeenth century any right-minded scientist would have rejected the Ptolemaic system when he says of Browne: "He revolves serenely in the old orbit that centered in the Ptolemaic astronomy and the cosmogony of Moses."[2] The truth of the matter is that the Copernican hypothesis was by no means the complete revolution of astronomical thought that is commonly assumed. The helio-centric construction merely simplified computations by reducing Ptolemy's eighty-some epicycles to thirty-four.[3] The advantage of the theory lay in the fact that it was math-

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[1] Ibid., p. 96. [2] Ibid., p. 8.

[3] Francis R. Johnson, Astronomical Thought in Renaissance England: A Study of the English Scientific Writings from 1500 to 1645 (Baltimore, 1937), p. 102.

ematically more satisfying, both from the aesthetic and computational viewpoints. There was no observational proof for the validity of the theory, nor did the Ptolemaic system fail to explain all observations which could be made at that time. On the other hand, there were serious scientific objections to the new theory. It was pointed out that such a system should result in stellar parallax. This could not be observed at the time, nor indeed until 1838 when Besel, Struve, and Henderson possessed instruments accurate enough to make the measurements.[1]

Since Browne was not concerned with astronomical calculations, he was perfectly justified in adopting a conservative attitude. He would undoubtedly have been at fault if he had denied the possibility of the new system, but what he says himself is quite different:

> if any affirm the earth doth move, and will not believe with us, it standeth still; because he hath probable reasons for it, and I no infallible sense, nor reason against it, I will not quarrel with his assertion.[2]

There could be no more proper scientific attitude concerning an unsettled question, and especially one whose solution was not relevant to his own investigations.

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Another fine example of the dangers of this sort of thinking is Praz's comment on that very volume in which the biologists find Browne's most important scientific work:

> It is as quaint and futile as one of those emblem books which were so popular at the time....to most modern readers it will appear a vain expense of spirit.[1]

There is little point in multiplying examples, for my point is sufficiently evident. We must now turn to the significance of what we have learned. Except in so far as truth is preferable to error, the recognition of Browne as the "father of the static aspect of physico-chemical embryology" does not seem very important. Yet from the recognition of the nature of Browne's activity as a biologist, we may derive insights of great importance for our study.

8. The Significance of Browne's Biology: Progress.

Biology provides us with the clue to one of the most puzzling questions regarding Browne's science, his apparently

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inconsistent feelings toward it. On some occasions he speaks of science with Baconian optimism. In an often quoted passage he says:

> Let thy studies be free as thy thoughts and contemplations: but fly not only upon the wings of imagination; join sense unto reason, and experiment unto speculation, and so give life unto embryon truths, and verities yet in their chaos....What libraries of new volumes aftertimes will behold, and in what a new world of knowledge the eyes of our posterity may be happy, a few ages may joyfully declare; and it is but a cold thought unto those who cannot hope to behold this exantlation of truth, or that obscured virgin half out of the pit....[1]

At other times he seems to doubt the brave proposition that a little more effort will reveal all. In the "Epistle Dedicatory" to The Garden of Cyrus he says:

> The field of knowledge hath been so traced, it is hard to spring any thing new. Of old things we write something new, if truth may receive addition, or envy will have any thing new; since the ancients knew the late anatomical discoveries, and Hippocrates the circulation.[2]

Does it not seem likely that in the first instance he is thinking of the progress of science as a whole, and in the second of his own special field, where progress was disappointingly slow? Because of the nature of his work the biologist realized the vast difficulties which science had yet to overcome.

Unlike Bacon, then, Browne was not entirely convinced that his work would lead to complete certainty. Another sig-

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In order to understand the real motives of his science, it is necessary to study Browne's point of contact between science and religion.

9. The Significance of Browne's Biology: Religion.

We have already touched upon Browne's religious motivation in the section on his analysis of error, where we learned that the search for truth is a duty as well as a right. This idea is stated most beautifully in the Religio:

> The world was made to be inhabited by beasts, but studied and contemplated by man: 't is the debt of our reason we owe unto God, and the homage we pay for not being beasts....The wisdom of God receives small honour from those vulgar heads that rudely stare about, and with a gross rusticity admire his works. Those highly magnify him, whose judicious inquiry into his acts, and deliberate research into his creatures, return the duty of a devout and learned admiration.[1]

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"book of God" throughout this paper suggest. The difficulty lies in the fact that the physicists in their reading of this book were forced gradually to read God out of the universe. The empiricists, while not facing the problem in its most rigorous form, were travelling the same road. Boyle, for example, has in a sense put science and religion into separate compartments. However, Browne, because of his biology, is forced to neither of these expedients, but is able to fuse religion and science together and consequently preserve a unified universe.

The process by which he does this is extremely interesting, because it actually involves science on two planes. We have already seen that in his ordinary scientific work Browne accepted the mechanist universe in a limited sense. He defines nature as:

> that straight and regular line, that settled and constant course the wisdom of God hath ordained the actions of his creatures, according to their several kinds.[1]

This was the course Browne followed in his work--"the ordinary and open way of his providence, which art and industry have in good part discovered."[2] This was the path that led historically to less and less interest in God.

On the other hand we have learned that Browne was principally concerned with science on another plane, with problems which he could not understand. His researches led

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The precise point where Browne's biology merges with his divinity is found in the passage:

> I am sure that there is a common spirit that plays within us, yet makes no part of us; and that is the spirit of God; the fire and scintillation of that noble and mighty essence, which is the life and radical heat of spirits and those essences that know not the virtue of the sun....This is that gentle heat that brooded on the waters, and in six days hatched the world: this is that irradiation that dispels the mists of hell....Truly without this, to me there is no heat under the tropick; nor any light, though I dwelt in the body of the sun.[1]

The indwellingness of God in the world is virtually identified by Browne with life itself. Even the figures used in the passage--radical heat, gentle heat that brooded, hatched--reflect his embryology. We recall also how often Browne speaks of life in terms of light. In Hydriotaphia, for instance, "Life is a pure flame, and we live by an invisible sun within us."[2]

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[2] Hydriotaphia, III, 494. This identification of God with life and light is orthodox Christian belief. See St. John 1:4, "In him was life; and the life was the light of men." Also I John 1:5, "This then is the message which we have heard of him, and declare unto you, that God is light, and in him is no darkness at all." The important point is that through his biological researches Browne experienced these metaphors as the literal truth. These concepts became the means by which he tied together the main strands of his interests and beliefs.

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If the flame of life is identified with the vivifying inspiration of God, then the gulf between spirit and matter is bridged. If God is necessarily present within the little world, the microcosm, he is present in the inorganic world as well, and "is that spirit, by which each singular essence not only subsists, but performs its operation."[1] In this respect the universe of Browne is profoundly non-mechanistic.

By this identification of the biological mystery of life with the theologic mystery of God, Browne makes science itself a powerful means of promoting within his mind high wonder and awe before the incomprehensible nature of God. This is the true source of wonder in Browne, not the rather futile flutterings of the gentlemen collectors. "The whole creation," he exclaims, "is a mystery and particularly that of man."[2]

What Browne has found, whether consciously or unconsciously it is difficult to determine, is a perfect balance between the world of necessity which the scientist lives in and the world of value that man must inhabit. Against the dangers of blind, indolent faith and the formless world of the irrational he maintains the validity of reason and science. Against the presumption of the unchecked scientific spirit he asserts the ultimately unknowable nature of the universe which is revealed by science itself.

We will discuss this position from the point of view of religion later. From the scientific standpoint such an

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The fusion of science and religion in Browne gave him an imperturbability which is in marked contrast to many of his thinking contemporaries. Drummond, for example, writes:

> The Element of Fire is quite put out, the Aire is but Water rarified, the Earth is found to move, and is no more the Center of the Universe, is turned into a Magnes; Starres are not fixed, but swimme in the etheriall Spaces....Thus Sciences by the diverse Motions of this Globe of the Braine of Man, are become Opiniones, nay, Errores, and leave the Imagination in a thousand Labyrinthes. What is all wee knowe compared with what wee knowe not?[1]

This is a rather touching passage in its sense of loss, the suspicion that man has been cut loose from all moorings to drift in an endless and senseless sea. There is no sign of such panic in Browne, for he has not placed his hopes in the fragile basket of progress.

No finer conclusion to this study of Browne's science can be devised that the following memorable and unjustly neglected passage in which he sums up his scientific creed:

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It is the religious hope for "the arithmetic of the last day" which gives this passage its remarkable balance. Perhaps no more finely balanced estimate of the worth of reason and the limitations of our reasoning apparatus has ever been made. Here the science of Browne finds both its warrant and its culmination.

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PART II.

THE RELIGION OF SIR THOMAS BROWNE

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CHAPTER 3.

A BACKDROP FOR BROWNE'S RELIGION

1. The Problem.

Any discussion of Browne's religion must be concerned primarily with the Religio Medici, for it constitutes the most complete expression of his religious philosophy that we possess. Yet the Religio has been a puzzle to critics ever since it first found its way into print in 1642. Shortly thereafter the work was given European currency when John Merryweather translated it into Latin. Reactions both in England and on the Continent were various, and reflected that uncertainty concerning Browne's intention which the book still elicits. At one extreme Alexander Ross denounced it on grounds of heresy and pro-Catholic inclination, while in the same year the Roman Church placed the volume on the Index Expurgatorius.[1] In an age expert in the art of theological distinctions, the book remained uncategorized.

In recent times the question of Browne's adherence to this or that communion has not been of pressing interest, but the lack of agreement regarding the religious content of the

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Religio has persisted. Gosse, having decided that the work is a clever attack upon religion by a Baconian scientist, treats in a cavalier manner the religious ideas expressed. He says, for example:

> Somebody seems to have reminded him that he had dealt exclusively with faith, and that he ought to say something about charity. Accordingly, he added a sort of appendix...in which he jots down a number of reflections which had escaped his memory....[1]

Most modern commentators are more sympathetic than Gosse, but they still tend to view the work as a composite of contradictions, unimportant from an intellectual standpoint, and saved from chaos only by Browne's instinctive charity and incomparable style. Dunn is perhaps typical when he calls it a "labyrinth," and goes on to say:

> The book is apparently a succession of moods which run the gamut of orthodox submission, persistent skepticism, mystical flights, scientific and philosophic argument, idle curiosity, and Stoic world-weariness--all imbedded in a discursive, intimately personal narrative.[2]

It is my belief that the Religio has more internal consistency than has been generally realized, and that it is built upon a carefully thought-out, mature religious philosophy.[3]

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[1]Gosse, op. cit., p. 47.

[2]Dunn, op. cit., p. 43.

[3]Browne has been accused of quaintness in religion as well as in science. Cf. Leslie Stephen, Hours in a Library (London, n.d.), II, 20. "He regards all opinions less as a philosopher than as a poet. He asks, not whether a dogma is true, but whether it is amusing or quaint. If his imagination or his fancy can take pleasure in contemplating it, he is not curious to investigate its scientific accuracy...." One is tempted to ask Stephen to explain to us the "scientific accuracy" of the Redemption.

I also believe that it is a manifestation of a religious tradition which can be identified, rather than an entirely haphazard and completely personal confession. In order to see both the logic and the tradition of the work it is necessary to give it a serious reading, while at the same time bearing in mind Browne's own injunction that his metaphors should not be taken too literally.[1]

Now one of the difficulties involved in presenting the book in its proper religious and historical perspective is the exceedingly complex nature of its background, involving as it does those immense upheavals in the history of Europe, the Renaissance and Reformation. On the one hand, too little attention paid to precedent events and attitudes will result in a failure to show the work as part of a tradition and as a solution to pressing religious problems. On the other hand, there is the obvious danger that the background, if not carefully controlled, may overshadow completely that which it is intended merely to introduce. In order to solve this problem it is necessary to discover some methodological scheme which will guarantee adequate attention to important historical motives, while keeping them in subordination to the main interest.

If we strike deeper than mere doctrinal considerations, we may think of religion as a man's response to the totality of his experience, involving a final assignment of value to

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[1] *Religio*, II, xxxii.

the many activities of which he is capable. Religion in these terms is the embodiment of a man's deepest thought concerning his purpose and end. Each man's response will be different, depending upon his temperament and his general and religious environment, but certain large patterns can be abstracted from the experience of the race.

One such set of patterns is the distinction William James has made between the sick soul and the healthy-minded soul. What we are here dealing with is apparently a congenital inclination. James says:

> Some persons are born with an inner constitution which is harmonious and well balanced from the outset. Their impulses are consistent with one another, their will follows without trouble the guidance of their intellect, their passions are not excessive, and their lives are little haunted by regrets.[1]

These are the healthy-minded. Just as mysteriously and inevitably there are others:

> whose existence is little more than a series of zigzags, as now one tendency and now another gets the upper hand. Their spirit wars with their flesh, they wish for incompatibles...and their lives are one long drama of repentance and of effort to repair misdemeanors and mistakes.[2]

This is, I believe, a valuable and fruitful distinction, but one somewhat marred by an unfortunate terminology. As James makes clear in his discussion, the healthy-minded attitude is in no way superior to that of the sick soul. Still it is

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[1]William James, The Varieties of Religious Experience: A Study in Human Nature (New York, 1925), p. 168.

[2]Ibid., p. 169.

difficult to escape the prejudicial flavor of the terms. For this reason I will use the terms divided soul and single soul unless James is quoted directly. These new labels embody no fresh insight into the matter, but are certainly more colorless--a manifest virtue in abstractions.

My intention is to investigate the operation of these two types of temperament in the religious environment of Christianity within certain time limits. To do this I will devote attention to typical figures rather than the period as a whole. Since I do not believe that seventeenth century religion can be understood without reference to the preceding century, I have selected two dominant sixteenth century figures, Luther and Erasmus, to exemplify the divided and single souls respectively. Bunyan and Browne will represent seventeenth century developments of these attitudes. The choice of Luther and Erasmus scarcely needs explanation. Bunyan was chosen as a counter-poise to Browne because the two men are of about equal weight. Neither was a major figure in his own time, and both occupy at least roughly comparable places in English literature.

I need hardly add that the treatment given these four men is unequal. Luther, Bunyan, and Erasmus are used merely to establish a background for Browne. They constitute a system of resemblances and contrasts against which the figure of Browne can be measured and compared. Consequently no attempt has been made to treat them comprehensively.

2. The Divided Soul: Martin Luther.

According to James the divided soul is overwhelmingly conscious of evil:

> Evil is no mere relation of the subject to particular outward things, but something more radical and general, a wrongness or vice in his essential nature, which no alteration of the environment, or any superficial rearrangement of the inner self can cure and which requires a supernatural remedy.[1]

This perception makes the divided soul impatient of natural good. The natural life and the spiritual life are separate and cannot be joined; one must be accepted, the other rejected.[2]

Martin Luther in his Commentary on St. Paul's Epistle to the Galatians (1531) is an excellent example of this type of soul.[3] The divided nature of his being is seen clearly when he speaks of his efforts as a monk to live according to the Law:

> In spite of all, my conscience was always in a fever of doubt. The more I sought to help my poor stricken conscience the worse it got. The more I paid attention to the regulations the more I transgressed them.[4]

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[1] Ibid., p. 134. [2] Ibid., pp. 166 ff.

[3] I do not mean to suggest that this religious outlook is original with Luther. Indeed, if we are correct in saying that the divided soul is a basic human personality type, such an outlook must have existed in one form or another since the founding of Christianity. In this regard St. Paul and St. Augustine come immediately to mind, and the influence upon Luther of both Pauline and Augustinian thought is undeniable. However, one need not start with the flood.

[4] Martin Luther, A Commentary on St. Paul's Epistle to the Galatians, trans. Theodore Graebner (Grand Rapids, Mich., n.d.), p. 199.

Accordingly his statement and solution of the religious problem are of the greatest interest in exhibiting the reaction between this type of personality and Christian theology.

Luther was conscious of a deep chasm between the body and soul, the Law and Faith, the world and religion. These various manifestations of the essential dichotomy of man's nature are intrinsically antagonistic. The world is evil, for:

> everything in it is subject to the malice of the devil....As long as a person is in the world he cannot by his own efforts rid himself of sin, because the world is bent upon evil. The people of the world are the slaves of the devil.[1]

This being true, every human activity shares in the general condemnation. Reason is marked out for special attention. In one place Luther says:

> But faith won the victory and routed reason, that ugly beast and enemy of God. Everyone who by faith slays reason, the world's biggest monster, renders God a real service, a better service than the religions of all races...can render.[2]

This bitter attack is made upon reason because men can reach by it a certain degree of moral perfection which only serves to hide from them their essential corruption. Luther makes this clear by saying:

> Take the talents of wisdom and integrity. Without Christ, wisdom is double foolishness and integrity double sin....when the world is at its best the world is at its worst....The wiser, the better men are without Christ, the more they are likely to ignore and oppose the Gospel.[3]

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[1] Ibid., p. 22. [2] Ibid., p. 99. [3] Ibid., pp. 22 f.

Likewise it is a mistake to think that Luther's denunciation of good works and the Law is merely aimed at corruptions of practice then existing. His attack is much deeper and aims at the practice itself. Of this he writes:

> This sentence affects not only those popes, cardinals, bishops and monks who were notoriously wicked....It strikes, also, those who lived in all sincerity to please God and to merit the forgiveness of their sins through a life of self denial. Even those will be cast out....[1]

The divided soul, then, is marked by its inability to accept any compromise and an absence of any scale of proportion. Because such a soul aims at absolute perfection, anything less than perfection is seen as evil. The most wicked pope is no more damnable than the upright monk. This lack of proportion is another sign of the deeply anti-intellectual nature of divided-soul psychology. It also explains why the complete rejection of the world is so necessary to this sort of temperament, for without the ability to make qualifications a soul must suffer untold agonies in such an imperfect world as ours.

The divided soul must enter the world of spirit. James calls the process by which this shift is effected conversion. He cites complete self-surrender as the most important factor in the change.[2]

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[1] Ibid., p. 192.

[2] James, op. cit., p. 210.

Luther's spiritual program is directed toward the production of this surrender of self by the assiduous cultivation of the sense of sin. The very source of the spiritual dilemma, the vivid consciousness of imperfection, becomes the means by which a solution is reached. Scripture is employed to force man into the recognition that he is "the kind of sinner who is congenitally unable to do any good thing."[1] This is the period of trial and anguish, the dark night of the soul, when "all...things cry out against us. The Law scolds us, sin screams at us, death thunders at us, the devil roars at us."[2] The most terrible and effective of all the agonies of the soul is its sense of complete isolation. God is far away and angry; the sinner is naked and helpless before His wrath.

This sense of sin and virtual despair of salvation becomes progressively greater until a point is reached where the pretensions of the self have been totally demolished and the sinner has come to accept his worthlessness without demur. Now the soul is ready for the enlightening stroke of grace, the moment of conversion in which it may accept unconditionally Christ the Saviour. It is justified by faith in Christ. The effect of this sudden inflow of certainty is a joy proportional to the depth of the precedent despair. From this joy proceeds a feeling of power and purpose. "Armed with

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[1]Luther, op. cit., p. 64.

[2]Ibid., p. 159.

this conviction," says Luther, "we are enlightened and may pass judgment upon all life and its manifestations."[1] This conversion is the central fact in the religious life of the divided soul.

It is important, however, not to exaggerate the effects of this experience. While the center of energy has undoubtedly shifted, the antagonistic elements continue to act upon the newly-born man. The battle against the flesh ends only in death. Reason, for example, continues to be a problem, for "our reason always thinks it too easy and cheap to have righteousness, the holy Spirit and life everlasting by the mere hearing of the Gospel."[2] That is to say, reason looks askance at the emotional nature of the re-birth.

Consequently, the same technique used to produce the conversion continues to operate throughout life in a tempered manner. The Law constantly keeps the believer aware of the destructive duality within him, in order that he may cling ever more closely to his salvation in faith. One distinctive note of this life is its unremitting effort; it is a life of warfare and striving. The unity reached by the divided soul exists only on the condition of a continually

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[1] Ibid., p. 19.

[2] Ibid., p. 95.

maintained tension, a high degree of spiritual intensity.[1]

From the nature of this spiritual discipline emerge two important consequences, an emphasis upon the individual and the subjective conviction of salvation. We have already seen the importance of the sense of aloneness in the sinner, who must stand directly before God in order for the proper pitch of abnegation to be reached. There is no place in such a plan for an intermediary, such as the Church, or for intercessors, such as the saints. The Church is considered a vehicle of damnation along with reason and natural morality, since in a sense it protects the sinner from the wrath of God.

Yet it is obvious that there must be some agency whereby the sinner may be convinced of his sin, and assured of his salvation through Christ at the proper moment. This channel of communication is the Bible, which necessarily assumes a position of the greatest importance. On this point Luther is explicit:

> Let us do everything to advance the glory and authority of God's Word. Every tittle of it is

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[1]From this necessity for constant spiritual tension springs, I believe, the extreme scrupulosity of the Puritan. An excellent example of the degree to which this discipline was carried is found in the diary of Richard Rogers: "my wife and I rideinge to London, and by the way not setting our selves to passe the time profitably--although we prayed also profitably togither before we went foorth--we wandringe by litle and litle in needlesse speach, somewhat of my former fervency was abated. Although in the whole iorney was no great default comitted, yet because there was not a continuance in the first beginning...." M. M. Knappen (ed.), Two Elizabethan Puritan Diaries by Richard Rogers and Samuel Ward (Chicago, 1933), p. 58.

> greater than heaven and earth. Christian charity and unity have nothing to do with the word of God.[1]

The subjective certainty of salvation induced by the conversion process is extremely powerful. From it stems the strength and effectiveness of the Christian. Because this certainty protects the believer from the terrors he has previously experienced, nothing must be allowed to question it. Inflexibility of doctrine is a natural consequence. Luther declares:

> The least little point of doctrine is of greater importance than heaven and earth. Therefore we cannot allow the least jot of doctrine to be corrupted....our doctrine, God be praised, is pure because all the articles of our faith are grounded on the Holy Scriptures.[2]

That this certainty is based upon subjective experience is evident when we find Luther answering the objection that Scriptures may be interpreted in other ways, in these words:

> I don't care if you quote me a thousand Scripture passages for the righteousness of works....I have the Author and Lord of the Scriptures on my side.[3]

The combination of this rigid certitude with the conception of life as warfare results in a curious feeling that opposition is a sign of truth.[4] Luther exhibits this trait

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[1] Luther, op. cit., p. 212.

[2] Ibid., p. 209. [3] Ibid., p. 113.

[4] Cf. William Haller, The Rise of Puritanism (New York, 1938), pp. 142 ff. Haller shows in great detail how this conception of pilgrimage and warfare runs through Puritan preaching. It is of course conventional, but it is also the best possible symbolism for the religious philosophy of the Puritan mind. I do not suggest that this is a view held only by the Puritans. St. Ignatius of Loyola undoubtedly was influenced by a similar conviction. I do believe that it is a characteristic of the divided soul.

when he writes:

> [Paul says] "if I were anxious for the favor of men I would flatter them. But what do I do? I condemn their works. I teach things only that I have been commanded to teach from above. For that I bring down upon my head the wrath of Jews and Gentiles. My doctrine must be right. It must be divine.... any other doctrine must be false and wicked."
>
> With Paul we boldly pronounce a curse upon every other doctrine that does not agree with ours. ...Whosoever teaches a gospel contrary to ours, or different from ours, let us be bold to say that he is sent of the devil.[1]

This is an impregnable position. The feeling of certainty rests ultimately upon the strength of the emotional experience of conversion. Since reason has been rejected entirely, argument is of no avail, and opposition is taken as a sign of Divine favor. The weakness of such a doctrine lies in the fact that it is so subjective. One man's subjective certainty is as good as another man's, and unity among the members of the Church becomes increasingly impossible.

Once the primacy of faith has been established, good works are welcomed by Luther:

> After we have taught faith in Christ, we teach good works. "Since you have found Christ by faith," we say, "begin now to work and do well. Love God and your neighbor. Call upon God, give thanks unto Him, praise Him, confess Him. These are good works. Let them flow from a cheerful heart...."[2]

All of the works of practical charity are encouraged, all of the practical duties of a Christian. It is undeniable, how-

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[1]Luther, op. cit., p. 33.

[2]Ibid., p. 66.

ever, that charity is completely subordinated to faith. Luther exclaims:

> Let others praise charity and concord to the skies; we magnify the authority of the word and faith. Charity may be neglected at times without peril, but not the Word and Faith....[1]

This in brief is the spiritual pattern most characteristic of the Reformed Churches. Of course not all Lutherans or Calvinists were divided souls, for the system crystallized into a conventional theology, and was moreover affected by many economic and political motives. However, this system constituted the framework of Protestant religious thought and found its greatest champions in men obviously belonging to the divided-soul type of personality.

John Bunyan, for example, exhibits all the characteristics of the divided soul, and acknowledges a specific debt to Luther when he writes:

> Only this methinks I must let fall before all men, I do prefer this book of Martin Luther upon the Galatians, (excepting the holy Bible) before all the books that ever I have seen, as most fit for a wounded conscience.[2]

Bunyan shows in both his life and writings the strength and weaknesses of this approach to religion in its most extreme form.

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[1] Ibid., p. 207.

[2] John Bunyan, Grace Abounding to the Chief of Sinners, in Grace Abounding and The Pilgrim's Progress, ed. John Brown (Cambridge, 1907), p. 41. Hereafter referred to as Grace Abounding. The text is that of the 1688 edition.

3. The Divided Soul: John Bunyan.

The first thing that strikes our attention in reading Bunyan's spiritual autobiography, Grace Abounding, is that the division in his soul was at least partially caused by the religious tradition in which he was reared.[1] One can see in Bunyan's relation of his youthful days strong evidence of a nature extremely susceptible to outside influences. Harrison points out that:

> he was abnormally fascinated by words and verbal rhythms, both those which he heard and those which he created for himself, though the first manifestation of self expression took the form of "cursing, lying and blaspheming the holy name of God."[2]

Given this sort of imagination, it is more than likely that his childhood fears of hell and his "terrible dreams" were planted in his mind by overzealous parents and friends, and lay there germinating until they grew to shake to pieces the quiet of his early manhood.

However this may be, the turning point in Bunyan's life shows strikingly the nature and power of his auditory imagination. On one Sunday Bunyan heard a sermon on the evil of breaking the Sabbath. He was impressed, but later put the

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[1]It has been objected that Grace Abounding is primarily a set-piece in a religious tradition rather than a true spiritual confession. To enter into this question would be to go beyond the bounds I have set for myself. The genuineness of Bunyan's experience has been ably defended by Talon. Henri Talon, John Bunyan: The Man and His Work, trans. Barbara Wall (Cambridge, Mass., 1951), pp. 20-25.

[2]G. B. Harrison, John Bunyan: A Study in Personality (New York, 1928), p. 11.

matter out of his head and played at cat. However, the feeling of guilt induced by the sermon externalized itself:

> a voice did suddainly dart from Heaven, into my Soul, which said, Wilt thou leave thy sins, and go to Heaven; or have thy sins, and go to Hell?[1]

From that time on Bunyan experienced a deepening sense of sin. He entered into that travail of spirit chronicled so powerfully in Grace Abounding that it is painful to read even now.

First there was an outward reformation of life. Then more serious attention paid to the inner state, occasioned by the talk of:

> poor women sitting at a door...talking about the things of God...about the new birth, the work of God on their hearts...[women who] did condemn their own Righteousness, as filthy and insufficient.[2]

Following this was a period of extensive Bible reading which resulted in doubts as to his election. However, Bunyan's spiritual ordeal did not begin in dreadful earnest until he came into close contact with Pastor Gifford in Bedford, from whom he learned:

> to see something of the vanity, and inward wretchedness of my wicked heart, for as yet I knew no great matter therin, but now it began to be discovered unto me, and also to work at that rate as it never did before.[3]

Once started the fire of wretchedness raced through Bunyan. He sank into the deeps of the dark night:

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[1]Bunyan, Grace Abounding, pp. 11 f.

[2]Ibid., p. 16. [3]Ibid., p. 27.

> I saw I had an heart that would sin, and that lay under a Law that would condemn.
> .....
> Sin and corruption, I said, would as naturally bubble out of my heart, as water would bubble out of a fountain....I thought, none but the Devil himself could equalize me for inward wickedness, and pollution of mind....Sure, thought I, I am forsaken of God.[1]

This spiritual trial did not proceed in an entirely regular manner. Bunyan rose to heights and fell into depths again and again, seemingly unable to reach the level of certainty which would save him.

Undoubtedly this strange oscillation was caused by his auditory imagination operating on the Bible. Bunyan has justly been called "the martyr, but also the glorified child of Puritanic scripturalism."[2] He accepted the Scriptures without any critical examination and without any sense of proportion or context.[3] The texts became to him incantations reverberating rhythmically in his mind. For example, after hearing a sermon on the text "Behold, thou art fair my Love." Bunyan's imagination operated in this way:

> these words began to kindle in my spirit, Thou art my Love, Thou art my Dove, twenty times

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[1] Ibid., pp. 27 and 28.

[2] Edward Dowden, Puritan and Anglican (New York, 1901), p. 248.

[3] Bunyan shows the typical divided-soul apprehension of the world in terms of black and white, as well as his limited view of the Bible, when he says: "Those that the Scriptures favour, they must inherit bliss; but those that they oppose and condemn, must perish for evermore....Wo be to him against whom the Scriptures bend themselves." Grace Abounding, p. 75.

> together; and still as they ran in my mind, they waxed stronger and warmer, and began to make me look up...still I replied in my heart, But is it true? But is it true?[1]

The repeated phrases, common throughout Bunyan, are indicative of the almost magical sway words had over him. This meant that he was completely at the mercy of every chance text, be it consolatory or damning.

This phenomenon has led some critics to say with Pratt:

> Poor Bunyan eventually got out of his trouble in the same way he got into it--that is to say by the obsession of scriptural verses....Nothing happened, apparently, except that the comforting verses came into his mind more often and stayed longer, and the terrifying ones gradually lost their hypnotic power.[2]

I believe this is a weak argument, for there is no reason why the terrifying texts should ever have lost their power unless Bunyan had changed within. I submit that because of his curiously involved imagination the ordinary type of conversion was not sufficient, that a greater negation of self was necessary, a more complete shift of interest. In other words he had to undergo the process of conversion in its most extreme form.

The machinery by which this was effected was the famous denial of Christ. The temptation to deny Christ came to him in these terms:

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[1]Bunyan, Grace Abounding, p. 30.

[2]James Bissett Pratt, The Religious Consciousness: A Psychological Study (New York, 1921), p. 144.

> Sell him, sell him, sell him, sell him, sell him, as fast as a man could speak: Against which also, in my mind, as at other times, I answered No, no, not for thousands thousands thousands, at least twenty times together.[1]

Finally:

> after much striving, even until I was almost out of breath, I felt this thought pass through my heart, Let him go, if he will; and I thought also that I felt my heart freely consent thereto.[2]

This was the great sin, the sin unpardonable, which was necessary to reduce the fortress of Bunyan's heart. This was the sin which Bunyan was not even sure he committed, but which he considered greater than the sin of David who "shed blood to cover his Adultery;" greater than that of Manasseh who "burnt his Children in the fire in Sacrifice to Devils; and made the Streets of Jerusalem run down with the blood of Innocents." In fact, says Bunyan, "me-thought this sin was bigger than the sins of a country, of a kingdom, or of the whole World."[3]

While Pratt is correct in saying that Scriptural obsession caused this temptation, we must add that this same obsession made it necessary. After the most terrible spiritual struggles imaginable, Bunyan at length won through to belief in Christ and his own salvation. The elation which came to him was almost unbelievable:

> I never saw those heights and depths in Grace and Love, and Mercy, as I saw after this temptation... I had two or three times...such strange apprehensions

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[1]Bunyan, Grace Abounding, p. 43.

[2]Ibid., pp. 43 f.

[3]Ibid., pp. 51 f.

> of the Grace of God; that I could hardly bear up under it, it was so out of measure amazing.[1]

After this great trial Bunyan's spiritual life was relatively serene.

Here we have a classic case of conversion, exhibiting that inward absorption and loss of proportion and measure which we have seen are characteristic of the divided soul. The other main marks of such a soul are most clearly seen in Bunyan's great spiritual odyssey, The Pilgrim's Progress.

There is no doubt concerning the bifurcation of world and spirit in the allegory. The world, under the name of the City of Destruction, is to be rejected entirely. Evangelist's message is simple, "Fly from the Wrath to come."[2] Christian later states his mission by saying, "I am come from the City of Destruction, which is the place of all evil, and am going to the City of Zion."[3] Faithful makes the same choice when he rejects the world in the person of Adam the First.[4]

The rejection of intellect is not so obvious in Bunyan's work, for he was not a trained theologian nor an educated man. Yet in one place Shame objects to the "ignorance, and want of understanding in all natural Sciences" on the part of professors. Faithful answers this charge by declaring that "Shame

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[1] Ibid., p. 77.

[2] John Bunyan, The Pilgrim's Progress (Part I) in Grace Abounding and The Pilgrim's Progress, ed. John Brown (Cambridge, 1907), p. 144. The text is that of the edition of 1688.

[3] Ibid., p. 185.

[4] Ibid., p. 196.

tells me what Men are, but it tells me nothing what God or the Word of God is."[1]

More in evidence is the strenuous nature of the calling. Speight points out:

> The dangers of sleep (used, of course, as in the New Testament, to suggest the relaxation of vigilance) are reiterated throughout the story. It is when he sleeps in the arbour of the hill called Difficulty that Christian loses his roll....In the grounds of Doubting Castle it is while they are asleep that Christian and Hopeful are caught by Giant Despair.[2]

The most vivid example of this masculine conception of spiritual life is the scene in the Interpreter's House where the valiant man is seen enrolling himself as a Christian:

> The which when he had done, he [Christian] saw the Man draw his Sword, and put an Helmet upon his Head, and rush toward the door upon the armed Men, who laid upon him with deadly force: but the man, not at all discouraged, fell to cutting and hacking most fiercely....he cuts his way through them all, and pressed forward into the Palace....So he went in, and was cloathed with such Garments as they. Then Christian smiled, and said, I think verily I know the meaning of this.[3]

Again, we have seen that in divided-soul psychology the primary emphasis is upon the workings of the inner state, although there is a recognition of good works. In Pilgrim's Progress the long incident involving Talkative illustrates Bunyan's insistence upon doctrine carried out into practice. Christian says:

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[1]Ibid., p. 199.

[2]Harold E. B. Speight, The Life and Writings of John Bunyan (New York, 1928), p. 112.

[3]Pilgrim's Progress, p. 164.

> For as the Body without the Soul is but a dead Carkass; so Saying if it be alone, is but a dead Carkass also. The Soul of Religion is the practick part.[1]

This statement must be qualified by the usual recognition of the pre-eminent importance of the re-birth, for "there is none righteous, there is none that doth good...every imagination of the heart of man is only evil...."[2] Therefore, while Faithful and Hopeful are major characters in the allegory, Charity, the other member of the great triumvirate of virtues, is merely a maiden in the House Beautiful, together with Prudence, Piety, and Discretion.[3]

Perhaps the most distressful episode in the book for the modern reader is the condemnation of Ignorance, who is a good example of the single soul. Ignorance believes:

> That Christ died for sinners, and that I shall be justified before God from the Curse through his gracious acceptance of my obedience to his Law... Christ makes my Duties that are Religious, acceptable to his Father by virtue of his merits.[4]

It is not difficult to guess what sort of treatment this man receives at the hands of Christian and Hopeful, who alternately rail and snigger in a most disgusting manner. At the end of their talk Ignorance says firmly:

> That is your Faith, but not mine; yet mine, I doubt not, is as good as yours: though I have not in my head so many whimsies as you.[5]

Nothing could be more typical of the single-soul personality to which we now turn.

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[1] Ibid., p. 205. [2] Ibid., p. 262. [3] Ibid., p. 176.

[4] Ibid. p. 266. [5] Ibid., p. 267.

4. The Single Soul: Erasmus of Rotterdam.

According to James the single soul tends to solve the problem of evil by neglecting it. He is content:

> to allow the world to have existed from its origin in pluralistic form, as an aggregate or collection of higher and lower things and principles, rather than an absolutely unitary fact.[1]

It can readily be seen that such an attitude in an extreme form is not compatible with Christianity, for any Christian system must insist upon the reality of evil; otherwise the fall of man and the Redemption have no real meaning. What we might expect to find in the reaction between Christian doctrine and the single-soul mentality would be the minimization of the problems which the existence of evil poses.

The divided soul characteristically sees life in terms of black and white and is constantly faced with the necessity of making decisions which involve large rejections. The single soul lives in a world of pluralities and gradation. Instead of the problem of acceptance and rejection, it concerns itself with the problem of reconciliation and compromise. Its most characteristic technique is the avoidance of ultimate formulations and a suspension of judgment.

Erasmus is an excellent example of what we may call the single-soul approach to Christianity or Christian naturalism. This approach was, I believe, common to the trans-alpine humanists. But I will not press this point. In any event

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[1]James, op. cit., p. 132.

we shall see that the Erasmian solution to the religious problem of the sixteenth century was remarkably like the resolution reached a century later by Browne, despite the many differences in their characters and in the historical situations.

Luther once made a rather penetrating analysis of Erasmus which shows the unbridgeable gap between the two types of character:

> I am reading our Erasmus, and my esteem for him diminishes every day. It suits me indeed that he constantly and eruditely condemns both monks and priests for their inveterate and stupid ignorance; but yet I fear that he does not promote the cause of Christ or the grace of God, of which he is more ignorant than Faber Stapulensis. With him the purely human is of more account than what is divine.... the opinion of one who attributes everything to the will of man is far different from that of one who recognizes nothing except grace....[1]

The principle charge here, that Erasmus was not exclusively concerned with spiritual matters, is perfectly true. Erasmus was first of all a scholar. His chief interest and activity lay in the world of learning, to the furthering of which he devoted himself with considerable fervor. When he said:

> I have given myself up entirely to Greek; and as quickly as I get any money I shall first buy Greek authors, and after that clothes.[2]

he was telling substantially the truth. To Luther this was a

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[1]Christopher Hollis, Erasmus (Milwaukee, 1933), p. 202, quoting De Wette, Luthers Briefe (Berlin, 1825), I, 52.

[2]John Joseph Mangan, Life, Character and Influence of Desiderius Erasmus of Rotterdam (2 vols.; New York, 1927), I, 128, translating Eras. Ep. 124 (Allen edition). Hereafter all letters designated Eras. Ep. refer to the Allen edition.

clear sign of irreligion, for it showed entirely too much contact with evil. To us the conclusion is not so evident, for we can conceive of a religion that is not incompatible with an active interest in human pursuits.

Perhaps nothing is quite so strikingly suggestive of the difference between the two men as their attitudes toward monasticism. As we have seen, Luther entered the religious life in order to find his salvation. Not only did he submit to the ordinary disciplines, but he even lived a more rigorous life than was demanded. His struggles with his soul were prodigious.

For reasons too complicated to enter into, Erasmus in later life, especially in the famous Letter to Grunnius, claimed that he had been forced into the monastery at Steyn against his will. The opinion of modern scholars is that this is not true, that Erasmus became a monk because at the time it appeared to be his only opportunity for a life of study. Hyma contrasts the attitude of the ordinary monks with that of Erasmus by saying:

> They had a vocation, namely the monastic career, a life devoted to spiritual exercises; Erasmus, on the other hand, wanted time for study.[1]

There is no doubt that both Luther and Erasmus were temperamentally unfit for the monastic life. Both men also

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[1]Albert Hyma, The Youth of Erasmus (Ann Arbor, Mich., 1930), p. 155.

made violent attacks on the institution. Luther's attack, however, was more fundamental and far reaching. He objected to monasticism because in his eyes it was a device of the devil to keep men from recognizing the futility of works. Erasmus' castigation of monks was entirely different in nature. He was entirely concerned with abuses which had crept into the Church, not with the institutions themselves. In 1534 he wrote:

> What sort of perversity is it then to hate a monk simply because he is a monk? Do you profess yourself to be a Christian yet turn away from those who are most like Christ? You will say at once, I know, that many of them differ from this description. But we shall set the seal of our approval on no kind of life whatever if we hate the good members on account of the wicked ones. What is left then? What but to love men, to make the best of them, to shut our eyes to their lighter failings, to endeavour to remedy their graver ones rather than to make them worse, and to venerate their Order itself and its rule.[1]

In other words, Erasmus was using the same lash applied to abuses by Chaucer and any number of the faithful in ages past.

In the beginning Erasmus did not realize the real import of Luther's movement. We find him writing to Bude in the early part of 1521:

> Aleander has been with me for some time past, but so far his conversation is distressing to me, because he is so full of this matter of Luther's, in which he has certainly showed himself to be brave and energetic. When he has settled this

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[1]Hollis, op. cit., p. 292, translating from Opera Omnia (Leyden, 1703-6), col. 1463BB ad. fin.

> business, for it is now almost settled, I shall be at liberty to enjoy his company, which is as delightful as it is erudite.[1]

But when it became evident that the affair would not be settled, when the Reformation became a clear and unavoidable fact, Erasmus, like all men of the time, was forced to think about fundamental religious problems and to take a stand. Because of his great reputation he was naturally enough courted by both sides. He did not wish to become involved in an active way, for he despised religious controversy. However, when it became impossible for him to remain aloof, he aligned himself on the side of the Church. In 1521 he wrote to the Bishop of Tuy:

> I acknowledge Christ, Luther I know not; and I acknowledge the Roman Church, which I hold not to differ from the Catholic Church....Sedition I have always abhorred, and would that Luther and all the Germans had the same abhorrence.[2]

Yet Erasmus did not become a rabid defender of a Church of many faults. His final position is best summarized in a statement he made in the Hyperaspites:

> I have never been an apostate from the Catholic Church. I know that in this Church...there are many who displease me, but such I see also in your Church. One bears more easily the evils to which one is accustomed. Therefore, I bear with this Church until I shall see a better....And he does not sail badly who steers a middle course between two several evils.[3]

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[1] Mangan, op. cit., I, 238, translating Eras. Ep. 1233.

[2] Hollis, op. cit., p. 221, translating Eras. Ep. 1195.

[3] J. Huizinga, Erasmus (New York, 1924), p. 210.

This is a moderate and conservative declaration. The reasons which led Erasmus to adopt it show clearly the differences between the divided and single souls.

Allen has noted the most obvious difference between Luther and Erasmus:

> [Luther's] heart was set, in his chamber and in his pulpit, on cultivating a sense of sin...Erasmus found high value in simple goodness...but his prayer was for a sense of ignorance. Reason to him was God's best gift to man, and for reason to have her perfect work, man must gather knowledge.[1]

Erasmus is a rationalist, but like most rationalists of his day has come to defend rationalism by setting limits to it. Like Luther he is suspicious of orthodox theology. The reason for this suspicion is that scholasticism, one of the greatest rationalistic adventures of all time, had become degenerate and had fallen into senility. Erasmus objects to this perverted use of reason in a letter to Colet:

> we have with much assurance, laid down certain laws in accordance with which God has performed His mysterious works; when at times it were better to accept the fact, but to leave the method to the Omnipotence of the Almighty. Add to this that for the sake of showing our cleverness we often debate questions which pious ears will hardly tolerate, as when we query whether or not God could assume the form of a devil or of an ass.[2]

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[1] P. S. Allen, Erasmus--Lectures and Wayfaring Sketches (Oxford, 1934), p. 59.

[2] Hollis, op. cit., p. 51, translating Eras. Ep. 108. Erasmus' last point is clearly a reference to one of Occam's questions. Friedell argues that by carrying nominalism to its furthest reaches this thinker gave scholasticism its death blow. Egon Friedell, A Cultural History of the Modern Age, Vol. I, Renaissance and Reformation, trans. Charles F. Atkinson (New York, 1933), pp. 88 f.

Again, in a commentary on Timothy he writes:

> We dispute how the Father differs from the Son, and both from the Holy Ghost, whether it be a difference of fact or a difference of relation, and how three can be one when neither of the three is the other.... Hundreds of such questions are debated by distinguished theologians, and the objects of them are better unknown than known. It is all vanity.[1]

But whereas Luther rejected rational theology together with reason, Erasmus only rejected what he considered to be useless subtleties, while maintaining stoutly the validity of reason within proper limits. To adopt a distinction used by Friedell in another context, Erasmus had a supreme confidence in divine reason, while Luther exhibited a profound despair of human reason. There is a great deal of difference in the two views. As a scholar Erasmus argues from natural principles and the good of society; as a Christian, from the ethical basis of Christianity. Both of these are essentially rationalistic lines of argument, for ethics is a subject which may be treated by reason.

The keystone of Erasmus' religious thought is the necessity for unity within the Church. To his mind all merely theological considerations must be sacrificed that this unity be preserved. His insistence upon the necessity for unity stems in large part from his recognition of the importance of society. He sees peace and concord as the natural order of

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[1]Meyrick H. Carre, Phases of Thought in England (Oxford, 1949), p. 185, quoting from Erasmus on 1 Timothy 1.6.

things; points out how "the unreasonable beasts do live everyone his kind civilly and in good agreement."[1] Man too, considered as a part of nature, is formed for peace, since physically he is so weak that he has no safeguard other than:

> confederations and mutual necessity. Necessity created cities; and necessity hath taught the society and fellowship that is among them, that they, joining their strength and power together, should repel the violence of wild beasts and robbers....[2]

Society, according to Erasmus, is a slow growth in and through time by which men, utterly weak in themselves, by corporate action attain a certain tenuous security. However, not too far distant is the waiting terror of lawlessness. Erasmus is supremely conscious of the delicate balance upon which civilization rests. He compares the dangers of lawlessness with the danger of the sea in his own Lowlands:

> in like manner as it lieth in our power to keep out the sea, that it break not in upon us; but when the sea is once broken in, it passeth our power to restrain it within bounds. So either of them both once let in, they will not be ruled, as we would, but run headlong whithersoever their own rage carrieth them.[3]

From a purely natural point of view, then, men must live in peace if society is to survive. Ethical Christianity supports this view. Christ lived, preached and died nothing but

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[1]Erasmus, The Complaint of Peace, trans. Thomas Paynell (1599), ed. W. J. Hirton (New York, 1946), p. 9.

[2]Ibid., p. 11.

[3]Erasmus, Against War, trans. Richard Tavenener(?), ed. J. W. Mackail (Boston, 1907), p. 20.

peace and the unity of Christian men. And this unity must be translated into action:

> If it be but a tale that is told of Christ, why do we not openly put him out of our company?....But if he be, as he is in very deed, the true way...why doth all the manner of our living differ so far asunder from the true example of him?....Let us not in titles and signs, but in our deeds and living, plainly express him.[1]

Erasmus' positive religious views are best seen in his treatise The Immense Mercy of God (1524), the thesis of which is that "eternal salvation is prepared for all men through the mercy of God."[2]

Starting again with a consideration of the natural world, but this time infused with the glory of God, Erasmus finds the "very gnats and spiders proclaim the boundless virtue of the creator."[3] Man is again pictured as weak, worthless, wretched. Yet man viewed from another angle is also wonderful. "What keenness of perception," Erasmus exclaims, "what symmetry of limbs, what adaptation of organs to manifold uses."[4] And where Luther speaks of the "monster" reason, Erasmus magnifies it as man's chief glory:

> What is there so deep hidden in the secrets of nature either in heaven or on earth, which the wit of man cannot observe, apprehend, and fathom? It is a great thing that many may from the position and movement of the stars foretell things that will

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[1]Erasmus, Against War, p. 62.

[2]Erasmus, The Immense Mercy of God, trans. under the direction of P. Radin (San Francisco, 1940), p. 6. Hereafter referred to as Immense Mercy.

[3]Ibid., p. 10.

[4]Ibid., p. 30.

> come to pass ages hence; but it is still greater that from created things is apprehended the virtue and divinity of that great craftsman....[1]

By viewing man as both worthless and glorious Erasmus shows the single-soul application of the technique of synthesis. The result is a blending which prevents on the one hand pride, and on the other despair; a mood whereby the mind recognizes its dependence upon God without falling into emotional excesses. It is also characteristic of the single soul that the action of man's mind on natural objects is looked upon as a "great thing."

Turning to Scripture Erasmus cites passage after passage from both Testaments, weaving a great tapestry of mercy which covers the earth:

> The Gospel...that fountain, or rather sea, of mercy overflowing into all the nations of the whole world, washing away and destroying...the ills of all mortals.[2]

But Christ as an ethical teacher is the final authority:

> Again search all his teaching; of what else does it savor but the immense mercy of God? In how many parables he impresses the same thing upon our minds....What else does the very name of Jesus, that is Savior, promise the sinner, but salvation and mercy? If he had come avowing himself a judge, every man had good cause to fear for himself; but as it is, he calls himself savior, and do you despair of salvation?[3]

The teaching of Erasmus is shot through with this joy. There is no need for the dark night of the soul, because the world is not seen as evil. Nor does Erasmus emphasize faith, but

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[1] Ibid., p. 31. [2] Ibid., p. 45. [3] Ibid.

rather the actions of our everyday lives. The mercy of God does not eliminate justice. We are given the mercy of faith on the condition that we repent our sins and amend our lives:

> But if you would be heard, see that you hearken to him in your turn. He cries in the person of the needy and the infirm members of his body. If you stop your ears here, he in his turn will not hearken unto you, when you cry to him. He is ministered unto in the person of his little ones; in them too he is hungry, sick and afflicted; in them he is slighted and offended.[1]

The God of Erasmus is both merciful and rational. He created man with a mind and it is by the action of that mind that man is saved, by ethical behaviour. Charity is the most important Christian virtue.

The negative aspects of Erasmus' humanist position are a steady and continuous battle against all which encourages dissension or promotes a narrowing of Christianity. Here Erasmus is no respecter of person or party. To Luther he writes:

> You wish to be taken for a teacher of the Gospel. In that case, however, would it not better beseem you not to repel all the prudent and well-meaning by your vituperation, not to incite men to strife and revolt in these already troubled times?[2]

And again he objects to Luther:

> but this annoys every good man as well as myself, that by reason of that arrogant, shameless and seditious disposition of yours, you disturb the

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[1] Ibid., p. 63.

[2] Robert H. Murray, Erasmus and Luther: Their Attitude to Toleration (London, 1920), p. 344, quoting Omnia Opera (Basel, 1540), X, 1558.

> whole world by your destructive dissension....It is the public calamity and the irremediable confusion of everything that distress me.[1]

Of the hierarchy of the Church he writes just as forcefully:

> The professors of the absolute religion are not ashamed; bishops are not ashamed; cardinals and vicars of Christ are not ashamed to be the authors of that thing which Christ so greatly hath detested.[2]

He is constantly surprised that men will not see the evident advantages of peace and concord. He cannot understand the intensity surrounding him. With a kind of pathos he pleads:

> In times past, the Rhine separated the French man from the German, but the Rhine doth not separate a Christian from a Christian. The mountains Pyreanean divide the Spaniard from the Italian [sic], but the same divide not the communion of the Church. The sea divideth Englishmen from Frenchmen, but it divideth not the society and fellowship of religion.[3]

Indeed his vast humanity extends into a region unheard of by most of his contemporaries:

> Trow ye it a good Christian man's deed to slay a Turk? For be the Turks never so wicked, yet they are men, for whose salvation Christ suffered death. ...Succour the Turks and where they be wicked, make them good if ye can....[4]

Nor could Erasmus really understand how men could become so violent concerning theological matters. Utterly foreign to him was the world of the theologian Surin so vividly described

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[1]Hollis, op. cit., p. 260, translating Eras. Ep. 1688.

[2]Erasmus, Complaint of Peace, p. 33.

[3]Ibid., p. 46.

[4]Erasmus, Against War, p. 56.

by Huxley:

> But this debility never prevented him from concentrating his attention on theological notions and the phantasies to which these notions gave rise. Actually it was his obsession with these images and abstractions which so disastrously cut him off from the natural world....He had forced himself to live in a world where words and reactions to words were more important than things and lives.[1]

Erasmus could never forget "things and lives." His approach to theological problems is best exemplified by the De libero arbitrio diatribe (1524) which he was forced by circumstances to write against Luther. With the technicalities of the question of free will we cannot be concerned. What is important is that Erasmus treats the question mainly on reasonable and practical grounds. Would God have left his own Church in darkness for so many centuries? Does human life have any meaning if man is a mechanical slave? Do God's justice and mercy have any real meaning if we do not accept the freedom of the will?[2] The whole treatment is cautious, for Erasmus believes:

> There are sanctuaries in the sacred studies which God has not willed that we should probe, and if we try to penetrate there, we grope in ever deeper darkness the farther we proceed, so that we recognize...the inscrutable majesty of divine wisdom....[3]

Theologic argument is useless because man is dependent upon his reason and reason will not reach so far. Ultimate

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[1]Aldous Huxley, The Devils of Loudun (New York, 1952), p. 304.

[2]Huizinga, op. cit., pp. 206 ff.

[3]Ibid., p. 148.

problems must be left mysterious. Erasmus' thought is marked by:

> a consciousness of the indefiniteness of the ground of all things...the awe of the ambiguity of all that is. If Erasmus hardly ever gives an incisive conclusion, it is not only due to cautiousness....Everywhere he sees the shadings, the blending of the meaning of words.[1]

This ability to be content with uncertainty is another mark of the single soul.

In order to set limits on theologic thinking Erasmus constantly appeals to reason in relation to social life, that is, to common sense. His practical measuring stick is always social unity.

It is well worth noticing that unity may be achieved in two ways; there is the unity of exclusion and the unity of expansion, of differences held in suspension. Erasmus by his insistence upon simple and necessary doctrines with a minimum of definition represents the latter. But this kind of rationally reached unity presupposes a Church, for there must be some uniting authority. The Church historically had shown itself capable of containing within itself a wide variety of opinion without losing its identity. For this reason Erasmus remained true to it.

On the other hand, the divided-soul theology represents the unity of exclusion, with the theoretical limit a church for every believer. Since the important thing is the individual's direct apprehension and emotional response to the

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[1] Ibid.

Divinity, the Church tends to become increasingly less important.

Erasmus had no conception of the anguish a divided soul like Luther experienced, nor of the subjective certainty it could attain. He knew, however, that he should fight against the terrifying kind of subjectivity illustrated by Luther's statement:

> I, Martin Luther, slew all the peasants in the rebellion, for I said they should be slain; all their blood is on my head. But I cast it on our Lord God, who commanded me to speak in this way.[1]

In Liber de sarcienda ecclesiae (1533) he still pleads for union despite the fact that by that time the separation was virtually complete:

> How then is the schism to be healed?....we must all do what lies before us, without ambition or quarreling, in that spirit of accomodation which makes for concord: only taking care not to compromise away the great foundations of life. We must firmly resolve not to part lightly with the tradition of the past which has been sanctioned by long use and general agreement; and to make no change except under pressure of necessity or for evident benefit. The Freedom of the Will is a thorny question which it profits us little to debate; let us leave it to the professed theologians. But we can agree that man of his own power can do nothing and is wholly dependent upon the mercy of God....[2]

The controversial points of worship--the Mass, confession, fasting, relics, etc.--are to be considered in a spirit of charity, bearing in mind always the inner spiritual meanings

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[1]Murray, op. cit., p. 251, quoting Werke (Erlangen Ed.), LIX, 284.

[2]Allen, op. cit., p. 89. Allen here translates a large section of the work.

such forms may express:

> But those who do not share this belief must not mock the simplicity of others....Christ loves simple souls and will hear our vows even if the Saints do not.[1]

But all was to no avail. Men were in no mood to listen to the language of reason and compromise.

In brief the religious thought of Erasmus is notable for its charity and moderation. He appeals to both parties to recognize that their differences are not nearly so important as the Christianity they hold in common. His appeal is to the rational and the ethical. He was not able to understand the deep passionate religious feelings of the divided soul; that was outside the range of his own experience.

The single soul is almost diametrically opposite to the divided soul. In place of the importance of the inner state and an emphasis upon faith, it substitutes the importance of society and emphasizes charity. The subjective certainty and spiritual intensity of the divided soul is foreign to the single soul, which is centered upon reason and the ability not to push through to final conclusions. Instead of a life of spiritual warfare the single soul aims at a life of concord.

As the history of Erasmus and Luther shows, these two kinds of soul can neither understand one another nor come to any kind of agreement.

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[1] Ibid., p. 40.

CHAPTER 4.

BROWNE'S RELIGION IN PRINCIPLE AND PRACTICE

1. Introduction.

In the last chapter I pointed out the differences between the divided and single souls. My contention now is that Browne belongs to the single-soul category and that he has a great deal in common with Erasmus.[1] However, since there are a great many things to be said about Browne, I do not wish to continue my analysis in terms of these divisions. The correspondences between Browne's attitudes and the single-soul approach to religion will be evident to the reader from what I have previously said of Erasmus. To continue a point-by-point analysis would be to become tedious.

The Religio is an involved book. I do not mean to suggest that Browne is such a penetrating thinker that his statements are loaded with profound thought. Rather he is here, as in Vulgar Errors, a discursive and universal scholar touching upon a multitude of subjects in the course of the

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[1]Hyma says, "Since Erasmus in a large measure personified Transalpine humanism, his conduct and his writings are the most convincing proof of the integrity of the movement." Albert Hyma, Erasmus and the Humanists (New York, 1930), p. 3. While I shall not develop the point fully, I believe that Browne is directly in the tradition of Transalpine humanism. Cf. Christian Morals, IV, 107.

work. We cannot afford to follow the many excursions of his mind, lest we lose the main outlines. Therefore, the procedure I will adopt in investigating Browne's religion will consist of these steps:

1. A brief discussion of the immediate background of Browne's religious thought.

2. Browne's religious profession, its validity and implications.

3. The religious technique of Browne in Religio.

4. The sceptical nature of this technique.

5. The practical effects of Browne's fideistic scepticism, that is, his charity.

6. A discussion of the supposed mysticism of Browne.

2. The Religious Problem Confronting Browne.

I believe that in its essential features the religious problem which faced Browne in the seventeenth century was remarkably like that which confronted Erasmus some hundred years earlier. Of course, the theatre of action was much smaller, numerous complications had set in, and Browne was by no means called upon to play the important part which Erasmus, all unwilling, was forced to take upon himself. Yet despite these differences it is not difficult to see again the two extremes of corporate authority and individual freedom in the Anglican Church of Laud and the body of opposition which we designate Puritanism for convenience sake.

The Laudian party is similar to the Roman Church in that it represents the principle of unyielding and rigorous authority motivated by the desire for unity. Laud's constant dream,

the mainspring of his action, was always the unity of the Church.

> The archbishop shut from his vision all save the ideal of a unified Church of England which was to assume its true role as part of the great catholic Church which was dispersed throughout the world. His end was the union of this great body of Catholicism and he discerned correctly that Puritanism formed the most important obstacle to the attainment of his high purpose.[1]

The sincerity of the man is undeniable. He says:

> I press "unity" hard upon you: pardon me this zeal. O that my thoughts could speak that to you that they do to God; or that my tongue could express them but such as they are; or that there were an open passage that you might see them, as they pray faster than I can speak for "unity."[2]

Unfortunately it was precisely this zeal which led Laud into an absolutely intolerant program of action. In principle or inclination he was not without a measure of tolerance. Jordan summarizes his position:

> Men must bring a temperate mind to the consideration of spiritual problems and disputes if true unity is to be retained, and they must be willing to lay aside their private opinions in the interests of public peace and concord. If real uncertainty exists in a matter of faith, it is lawful for the Christian to determine his own judgment on the question, but he must hold his opinion peaceably and quietly until the Church has determined the controversy with exactness.[3]

And yet his practical efforts to secure and maintain unity were based upon a principle of exclusion; the quite laudable aim

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[1] W. K. Jordan, The Development of Religious Toleration in England (1603-1640) (Cambridge, Mass., 1936), p. 140.

[2] Ibid., p. 132 (note), quoting Works, I, 160.

[3] Ibid., pp. 132 f.

narrowed to a mere consideration of outward rites. Because of this narrowing, the effort was doomed from the start.

It is not quite so easy to show that the Puritans are the analogues of those reformers who emphasized individual freedom, for the Puritans (Presbyterians) believed firmly in the necessity of Church unity, only they had in mind a Church of the Geneva model. However, as Jordan points out, the movement opposing Laud was in effect a confederation of many elements:

> Under the pressure of the Anglo-Catholic [or Laudian] attempt to drive dissent and disaffection from the Church of England, these protest groups appeared for a season to possess cohesion and a common programme, but directly the pressure of the dominant groups was relaxed in 1640-1641 Puritanism exploded into numerous fragments.[1]

Therefore, while any individual segment of this loose coalition might embody strong strivings toward unity, as the Presbyterians certainly did, the group as a whole possessed only the external unity of opposition. Here as in the Protestant Churches of the early Reformation the centrifugal force toward disunity and multiplication of sects is marked and inherent.

Even if we neglect the influence of the sectarians for purposes of analysis, the differences between the Laudian Church and the Calvinist Church are illuminating. The former quite consciously identifies itself with the traditional

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[1] Ibid., p. 194.

church and looks upon itself as a link in a continuous chain. The latter is based upon the rock of subjective experience.

The Calvinists viewed man as completely evil. At the Winchester Assembly they said that men are "utterly indisposed, disabled, and made opposite to all good, and wholly inclined to all evil."[1] They also, of course, accepted the doctrine of predestination in its most rigorous form. Logically this view should have resulted in a completely non-evangelical, tolerant, and perhaps fatalistic church, since man could neither save himself nor cooperate in his salvation. In practice such was not the case. The truth seems to be that only very unusual men can live in such a vacuum. In practice:

> The Calvinist congregations soon enjoyed complete conviction that they were of the Elect. This subjective certainty of grace inevitably followed a period of doubt and misgiving in the spiritual life of the individual Calvinist, and gave to him a spiritual strength and a religious certainty which seems almost incomprehensible....[2]

Here again we have the now familiar conversion pattern. Whether affected by the doctrine of predestination or not, the result in all cases seems to be a virtual identification of the will of the believer with the will of God. And as we have noted previously, under such terms compromise is impossible because it assumes the form of the Unchangeable changing and is a blasphemy.

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[1]John Hunt, Religious Thought in England from the Reformation to the End of the Last Century (3 vols.; London, 1870-73), I, 201.

[2]Jordan, op. cit., p. 203.

Nor should we neglect as an obstacle in the way of Christian unity the ingrained Puritan hostility to Rome. Grierson emphasizes this when he writes:

> The more positive "notes" of Puritanism, doctrinal and practical, Salvation by Faith in the Imputed Righteousness of Christ, the condemnation of the drama as such, [etc.] ...were coloured and intensified by the central hatred of Rome, of everything which the Medieval Church had sanctioned or condoned....[1]

In Puritan terms there was no possibility of finding a common meeting ground with Rome, and consequently Christendom was irrevocably split apart.

From this brief survey it is evident that while both extremes were in fact intolerant, the Laudian Church at least offered the base for a policy of true tolerance and unity. The moderate could give unqualified support to neither movement, but would lean toward the Establishment. This inclination is even more likely when we realize that the Church of England, which was only temporarily and partially under the control of Laud, had a long tradition of tolerance and moderation. One need think only of the great Elizabethan divines such as Hooker in this regard. This tradition was carried on into the seventeenth century by a group of Anglican ministers and bishops who opposed both the Laudians and the Puritans. Jordan condenses the thought of these men (Hall, Ussher, etc.)

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[1]Herbert J. C. Grierson, Cross Currents in English Literature of the XVIIth Century: or, The World, the Flesh & the Spirit, Their Actions & Reaction (London, 1929), p. xiii.

in these words:

> They regarded the Christian communion as embracing all men who erected their faith upon the Apostles' Creed...this definition embraced all the Christian groups with the possible exception of the Socinians ....The national Church was left with the sanction of requiring conformity for the purposes of order, but the possibility of persecution was very nearly extinguished.[1]

If we think of Browne as belonging to roughly the same tradition as Erasmus, as solving his problem in a similar way, we would expect to find him tending toward the Laudian position and resting in a less extreme and more liberal Anglicanism. This, we will find, is Browne's actual position.

3. Browne's Religious Profession.

Concerning his religious affiliation Browne says directly:

> There is no church whose every part so squares unto my conscience, whose articles, constitutions, and customs, seem so consonant unto reason, and as it were, framed to my particular devotion, as this whereof I hold my belief--the Church of England; to whose faith I am a sworn subject, and therefore, in a double obligation, subscribe unto her articles, and endeavour to observe her constitutions.[2]

This confession of faith has been questioned by many critics. Gosse, for instance, sees in it:

> a cunning in his apparent innocency. It would not have been worth while for him to compose a long treatise merely to assert that he is in accordance

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[1] Jordan, op. cit., p. 149.

[2] Religio, II, 6.

> with the Church of England. He makes this confession ...rather glibly in order that under the shelter of it he may insinuate some more subtle reservations.[1]

Surely this is poor, if not completely vicious, reasoning. No one argues that the treatise intends "merely to assert that he is in accordance with the Church," but is that any reason to suppose that the declaration is in itself untrue?

This is an important point, for Browne's statement is so explicit that if we decide it is not true, he is nothing more than a hypocrite. In the first place it is obvious that Browne does not believe that such a statement of faith exhausts the possibilities of Christianity. To Browne the Church of England is not merely the political establishment of the Tudors; it is the Catholic Church reformed of its abuses, but still in communion with the other branches of the Church Universal. The bond between Christians is greater than the difference raised between the several communions. He makes this plain:

> We have reformed from them, not against them; for omitting those improperations and terms of scurrility betwixt us...there is between us one common name and appellation, one faith and necessary body of principles common to us both; and therefore I am not scrupulous to converse and live with them....[2]

Browne's wide vision of Christianity extends even beyond the confines of Europe, "Strabo's cloak," to embrace the ancient

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[1] Gosse, op. cit., p. 28.

[2] Religio, II, 4.

schisms within the fold of the Church:

> For we cannot deny the church of God both in Asia and Africa....Nor must a few differences, more remarkable in the eyes of man, than, perhaps, in the judgement of God excommunicate from heaven one another....'Tis true, we all hold there is a number of elect, and many to be saved; yet take our opinions together, and from the confusion thereof, there will be no such thing as salvation, nor shall any one be saved....[1]

Therefore, the title which Browne most honors and aspires to is "the honorable style of a christian." And even this is in a sense too confining for his universal tolerance, which causes him to add:

> neither doth herein my zeal so far make me forget the general charity I owe unto humanity, as rather to hate than pity Turks, Infidels, and (what is worse) Jews; rather contenting myself to enjoy that happy style, than maligning those who refuse so glorious a title.[2]

There are certainly dangers in such broad conceptions, the most important of which is that tolerance may slip over into indifference, and recognition of similarities turn into an inability to see differences. Along these lines liberal Christianity has become transformed in many cases into deism or even vaguer forms of belief.

I believe I can demonstrate that this relaxation did not occur in Browne. To do this we must examine closely the reservations which Browne makes to his act of submission. These are found in:

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[1] Ibid., II, 81. [2] Ibid., II, 1 and 2.

> Whatsoever is beyond as points indifferent, I observe according to the rules of my private reason ...neither believing this because Luther affirmed it, nor disapproving that because Calvin hath disavouched it. I condemn not all things in the council of Trent, nor approve all in the synod of Dort. In brief, where the Scripture is silent, the church is my text; where that speaks 't is but my comment; where there is a joint silence of both, I borrow not the rules of my religion from Rome or Geneva, but from the dictates of my own reason.[1]

This is perfectly orthodox Anglicanism. It is an avowal of the same principle we have seen enunciated by Laud, than whom no Anglican could be more orthodox. Browne's choice of examples is illuminating, since his general tendency is certainly toward Laudian and Arminian thought and away from Calvinism.[2]

The other major passage expressing Browne's reservations is:

> In philosophy where truth seems doublefaced, there is no man more paradoxical than myself: but in divinity I love to keep the road; and though not in an implicit, yet a humble faith, follow the great wheel of the Church....[3]

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[1] Ibid., II, 6.

[2] Browne's religious philosophy is remarkably like that of the Remonstrants at Dort. Jordan summarizes the arguments of Episcopius at Dort: "The Remonstrants...are convinced that there are mysteries and obscurities in religion which can never be resolved, and that dispute and persecution in these matters can accomplish nothing more than the destruction of Christianity. These obscure matters have nothing to do with salvation....Christians should be content so long as the fundamentals of faith are maintained." Jordan, op. cit., p. 339. It is tempting to wonder if Browne might not have come into direct contact with Arminian thought when he was at Leyden in 1633.

[3] Religio, II, 9.

In this statement Dunn detects "a note of sly satisfaction" and Gosse, the battle cry of a hard pressed scientist.[1] I see nothing of the sort. Instead of trying to read between the lines, we should ask if Browne did follow the "wheel of the Church" in practice? Within the perfectly legitimate bounds which he had set off, he did. In two cases at least we find him submitting to the judgment of the Church in matters concerning which his natural inclinations tend toward a different conclusion. The first of these is prayers for the dead, "Which I did never positively maintain or practice, but often wished it had been consonant to truth, and not offensive to my religion."[2] The second is the condemnation of virtuous pagans, which Browne assents to despite his contradictory feelings.[3]

Furthermore in discussing certain Biblical points he is careful to observe, "These are no points of faith; and therefore may admit a free dispute."[4] Finally, Browne makes the declaration:

> This is the tenour of my belief; wherein, though there be many things singular, and to the humour of my irregular self, yet, if they square not with maturer judgements, I disclaim them, and do no further favour them than the learned and best judgements shall authorize them.[5]

Browne remembers what many of his critics seem to forget,

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[1]Dunn, op. cit., p. 42. Gosse, op. cit., p. 29.

[2]Religio, II, 12. [3]Ibid., II, 77.

[4]Ibid., II, 33.

[5]Ibid., II, 85. Cf. "To the Reader," II, xxxii.

namely that perfect conformity is really impossible to anyone but an automaton, and especially in the Church of England, always marked by a certain fine indefiniteness. Browne realizes that a man may enjoy a limited singularity without:

> offence or heresy; for there are yet, after all the decrees of councils, and the niceties of the schools, many things, untouched, unimagined, wherein the liberty of an honest reason may play and expatiate with security and far within the circle of a heresy.[1]

What is not to be tolerated is the action of those who:

> have not only depraved understandings, but diseased affections, which cannot enjoy a singularity without a heresy, or be the author of an opinion without they be of a sect also.[2]

This is the sort of conduct which destroyed unity in the Church. Those who through a love of innovation will not "be confined unto the order or economy of one body" break away from the Church, and then:

> knit but loosely among themselves; nor contented with a general breach or dichotomy with their church, do subdivide and mince themselves almost into atoms.[3]

Browne does not believe that the reconciliation of the Christian churches is a practical possibility; he expects as soon to see "a union in the poles of heaven."[4] Consequently the intelligent man will effect this union within himself, in that little world, the microcosm; while outwardly he will remain true to the English Church in order to combat the process

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[1] Ibid., II, 13. [2] Ibid., II, 12. [3] Ibid., II, 13.
[4] Ibid., II, 5.

of fatal disintegration as much as possible.

Another reason for believing in the sincerity of Browne's Anglicanism is his sympathy toward ceremonial. In this he is like George Herbert, of whom Dowden writes:

> Herbert's feeling for order and beauty was satisfied by that middle way between splendour and plainness which he found in the Anglican Church....He needed grace and refinement as incentives, and he needed for repose some chastened order made sensible. The parish music of voices accompanied with viol and flute sufficed to lift him above all temporal cares....[1]

Browne writes:

> At my devotions I love to use the civility of my knee, my hat, and hand, with all those outward and sensible motions which may express or promote my invisible devotion.[2]

Later he says:

> Whatsoever is harmonically composed delights in harmony, which makes me much distrust the symmetry of those heads which declaim against all church-musick.[3]

He is completely out of sympathy with the cold austerity of Puritan worship. On the other hand, he believes that ceremonies easily degenerate into superstition and for that reason must be carefully regulated. His aesthetic sense is one that could find perfect rest in the Anglican worship.

The importance of recognizing Browne's sincerity in his Anglican profession lies in the fact that here we find a good example of a phenomenon common in Browne, the balancing of

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[1] Dowden, *op. cit.*, pp. 107 f.

[2] *Religio*, II, 4.

[3] *Ibid.*, II, 106.

divergent tendencies. On the one hand his religious thought ranges where it will; on the other it keeps within the circle of the Church. The ranging gives life and vitality to his religion, while the adherence to the limits of the Church prevents his active imagination from losing itself in formlessness.[1] Each tempers the other, and paradoxically, makes the other stronger and more effective.

4. The Religious Technique of Browne in Religio.

The religious importance of Religio is not to be found in the results Browne reaches, for these are for the most part orthodox enough. What attracts our attention is the process by which Browne reaches these conclusions. It is a mazy path, and like all of Browne's thought is full of branchings. However the main lines are clear enough, and well worth the effort of tracing.

Browne collects his divinity from two books, the Bible and Nature.[2] As we have seen one way of reading the book of

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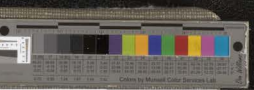
[1]The importance of recognizing this conformity to the Church is seen by considering the criticism of Paul Elmer More, who recognizes the tendency toward speculation in Browne and its dangers. "He is one of the purest examples of the religious imagination severed from religious dogma or philosophy....There is, one must repeat, in this romantic wonder ...an insidious danger which in later times we have seen degenerate into all kinds of lawless and sickly vagaries." Paul Elmer More, Shelburne Essays, Sixth Series (New York, 1909), p. 172. This may be true enough, but More fails to see the tendencies in Browne which counteract and limit the free exercise of his religious thought.

[2]Religio, II, 19.



Nature is his science, when he is concerned with "that straight and regular line." However in addition to this regular order there is also in Nature:

> another way, full of meanders and labyrinths, whereof the devil and spirits have no exact ephemerides; and that is a more particular and obscure method of his providence; directing the operations of individual and single essences: this we call fortune; that serpentine and crooked line, whereby he draws those actions his wisdom intends in a more unknown and secret way: this cryptic and involved method of his providence have I ever admired....[1]

In these two "lines" of Nature Browne has brought to a point the whole difference between the materialistic scientist and the religious believer. Both positions can be supported by strong arguments. The usual response to this situation is the demand to know which view is the correct one. Upon the answer given depends a great deal; on the one hand the validity of scientific method, on the other the freedom of the will. Browne's answer is a simple, but rather disconcerting one--both are true, both are simultaneously in effect.

This answer disturbs the critics. They immediately write Browne down as a mystic and suppose that they have made the situation clear. A much more fruitful procedure is an attempt to discover how Browne reaches such a conclusion and how he can be content with a paradox for an answer.

In essence the method is a skillful balancing of all the possible responses to experience. We have already noted the balance of free enquiry and obedience to the Church. On a

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[1] Ibid., II, 22 and 23.

larger scale the free exercise of reason in his scientific and scholarly thinking is countered by his "considerations Metaphysical" or study of Scripture. Throughout his thought runs this bringing together of opposites.

Everyone is familiar with the passage:

> As for those wingy mysteries in divinity, and airy subtleties in religion, which have unhinged the brains of better heads, they never stretched the pia mater of mine. Methinks there be not impossibilities enough in religion for an active faith. ...I love to lose myself in a mystery; to pursue my reason to an O altitudo![1]

Critics have always been interested in this passage, but it is not generally appreciated that "to pursue my reason to an O altitudo" is a technique to minimize the effects of excessive rationalism, and is recognized by Browne as such. He says:

> by acquainting our reason how unable it is to display the visible and obvious effects of nature [here, as the context makes clear, in the sense of metaphorical descriptions of divine mysteries], it becomes more humble and submissive unto the subtleties of faith: and thus I teach my haggard and unreclaimed reason to stoop unto the lure of faith.[2]

From this general statement of intention Browne goes on to make the technique more explicit when he says:

> In my solitary and retired imaginations...I... forget not to contemplate him and his attributes ...especially those two mighty ones, his wisdom and eternity. With the one I recreate, with the other I confound, my understanding.[3]

This is one of the most important passages in the Religio. In contemplating the wisdom of God Browne is led to adore that wisdom, and is also encouraged to use his own reason.

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[1] Ibid., II, 13. [2] Ibid., II, 15. [3] Ibid.

It is from these contemplations that he formed his conviction, previously cited, that study of the world is a debt we owe God.

But counteracting this activity are the contemplations of eternity. By forcing reason and faith together, by mulling over the great and incomprehensible mysteries of eternity and trinity, by training the mind to believe and at the same time question statements in Scripture, the intellect is brought time and again to the realization of its limits. The result is that knowledge of ignorance which Erasmus reached by other disciplines.

This is an important point, perhaps the key point, in an understanding of Browne. It has frequently been described as mysticism, but such a designation overlooks the contemplation of God's reason and the results flowing therefrom. The question of mysticism in Browne is a difficult one. Here I must defer the discussion until further pertinent evidence has been presented.

Browne makes important use of those contemplations of eternity which "confound" his understanding. In the first place he quickly comes to the realization that nothing can be said of eternity, "for who can speak of eternity without a solecism."[1] From this admission follows his solution of the important question of predestination. He argues:

> in eternity, there is no distinction of tenses; and therefore that terrible term predestination, which

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[1] Ibid.

> hath troubled so many weak heads to conceive...is in respect to God no prescious determination of our estate to come, but a definitive blast of his will already fulfilled, and at the same instant that he first decreed it; for, to his eternity, which is indivisible, and altogether, the last trump is already sounded.[1]

Later he treats the same subject in even more striking terms:

> I was not only before myself but Adam, that is, in the idea of God, and the decree of that synod held from all eternity. And in this sense, I say, the world was before the creation, and at an end before it had a beginning. And thus I was dead before I was alive; though my grave be England, my dying place was Paradise; and Eve miscarried of me, before she conceived of Cain....[2]

What is this but to destroy all meaning in the question of predestination, or to use modern terminology, claim that it is a pseudo-question?

It must be emphasized here that this is a rationalistic line of thought. Browne has the ability to clothe his abstractions in highly imaginative robes, but that does not destroy the reasonable basis of the thought. Granting the existence of God, all that Browne has said of him can be deduced logically. Browne's great virtue in this regard is that he really accepts the illimitable power of God. He says:

> We do too narrowly define the power of God, restraining it to our capacities. I hold that God can do all things: how he should work contradictions, I do not understand, yet dare not, therefore, deny.[3]

In other words when we say that God is infinite, we mean that He is infinite. If the logical implications of this proposition end in human contradictions and paradoxes, we must

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[1] Ibid., II, 16. [2] Ibid., II, 84. [3] Ibid., II, 41.

accept them.

It is in these terms that Browne is able to accept the original paradox we discussed, that the world is mechanistic and also non-mechanistic, that God operates by immutable laws and also by His personal interest, His Hand.

5. Scepticism in Browne.

If we must have a single term to describe Browne, the most apt one is sceptic. To the question, "What do we know?" Browne cheerfully answers, "Nothing, really." We are apt to shy away from the word sceptic, because it brings to our mind's eye the picture of jesting Pilate; it carries the implication of the scoffer. These impressions are not central to the idea of scepticism, but are accretions which may easily be scraped away. Margaret Wiley, in an extremely interesting study, offers this definition:

> scepticism follows a broadly marked-out pattern. This includes, in whatever order, a sense of the inadequacy of human knowledge, a consequent sensitivity to dualisms and contradictions, a belief in the wholesome effect of doubt, and a conviction that where knowledge falters, a right life can supply the only legitimate confidence known to man.[1]

This definition, with a few modifications, describes Browne and Erasmus very well. But Browne himself furnishes his own proof:

> though our first studies and junior endeavours may

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[1] Margaret Wiley, The Subtle Knot: Creative Scepticism in Seventeenth-Century England (London, 1952), p. 59.

> style us Peripateticks, Stoics, or Academicks, yet I perceive the wisest heads prove, at last, almost all Scepticks, and stand like Janus in the field of knowledge.[1]

What we must bear in mind is that scepticism is a process rather than a result. Browne uses it as the road to faith. He says, "Since I was of understanding to know that we know nothing, my reason hath been more pliable to the will of faith."[2]

It is this fusion of faith and scepticism which is so important in Browne. The great danger in scepticism is that, since it can reach no conclusions, it is liable to degenerate into indifference and loss of values. However, this tendency is checked in Browne by faith. This is illustrated by his conception of human life. Our beginnings are obscure but God is in us: "Thus we are men, and we know not how; there is something in us that can be without us, and will be after us...."[3] And:

> our ends are as obscure as our beginnings: the line of our days is drawn by night, and the various effects therein by a pencil that is invisible; wherein, though we confess our ignorance, I am sure we do not err if we say, it is the hand of God.[4]

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[1] *Religio*, II, 104. Cf. *Christian Morals*, IV, 81: "Some truths seem almost falsehoods, and some falsehoods almost truths; wherein falsehood and truth seem almost aequilibriously stated, and but a few grains of distinction to bear down the balance. Some have digged deep, yet glanced by the royal vein; and a man may come unto the pericardium, but not the heart of truth....And this moves sober pens unto suspensory and timorous assertions...."

[2] *Religio*, II, 14.

[3] *Ibid.*, II, 54.

[4] *Ibid.*, II, 82.

In this faith we find the reason for Browne's cheerful admission of his ignorance. Although our researches in both philosophy and divinity are limited and our results probably wrong, it is no great matter, for:

> it is but attending a little longer, and we shall enjoy that, by instinct and infusion, which we endeavour at here by labour and inquisitions.[1]

We have come upon the same thought in his scientific thought. Now we have discovered another road by which he reaches this key concept, the arithmetic of the last day.

Bredvold, recognizing the purpose of Browne's scepticism, has termed it fideistic scepticism. The adoption of scepticism as a means of defending Christianity is certainly a form of fideism. However, here we must be careful to realize that there are degrees in fideism. For example, Bredvold cites Augustine as one of the most important fideistic influences in the sixteenth and seventeenth centuries:

> he has stimulated in all ages a religious feeling which, in its fervent leaning on a personal God, was not only unintellectual but often anti-intellectual. This pietism of Augustine found its disciples in medieval Catholicism, in Protestantism in general, and particularly Calvinism, and in the Jansenist movement in France in the seventeenth century. The Augustinian doctrine of grace, according to which the intellectual as well as the moral faculties of man are in their present fallen state totally useless toward salvation, had both in Augustine and among his followers an effect

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[1] Ibid., II, 105.

parallel to philosophical scepticism.[1]

Now if we say that fideism includes within itself Augustine, Calvinism, and the sceptics Montaigne and Browne, it is clear that it is one of those broad concepts which can have real meaning for us only when qualified as to degree and intensity. Browne, as we have learned, is not anti-intellectual to any great degree.

Again, even within the ranks of the sceptics we must pay heed to degree. The obvious example which comes to mind is the difference between Browne and Montaigne. I will not attempt a full comparison, for that would constitute a paper in itself. A few examples will have to suffice. The Apology for Raimond Sebond, which Bredvold calls "the classic and standard exposition of modern skeptical thought," certainly exhibits many similarities to Browne's thought.[2] Yet it is no less true that it is quite different in many respects.

Montaigne is much more thorough-going in his sceptical attitude than Browne. He says, for instance:

> The means I take...to subdue that frenzy, is to crush and tread under foot human pride and arrogance, to make them sensible of the inanity, the vanity and insignificance of man; to wrest out of their fists the miserable weapons of their reason;

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[1]Louis I. Bredvold, The Intellectual Milieu of John Dryden: Studies in Some Aspects of Seventeenth-Century Thought ("University of Michigan Publications in Language and Literature," XII [Ann Arbor, 1934]), 24.

[2]Ibid., p. 30.

> to make them bow the head and bite the dust under the authority and reverence of the divine majesty.[1]

In following out this procedure he makes the famous statement:

> When I play with my cat, who knows but that she regards me more as a plaything than I do her? We amuse each other with our respective monkey-tricks; if I have my moments for beginning and refusing, so has she hers.[2]

After relating a long series of animal stories, Montaigne concludes that man is in no way superior to the other beasts:

> I have said all this to establish the resemblance to human conditions, and to bring us back and join us to the majority. We are neither superior nor inferior to the rest. All that is under heaven, says the sage, is subject to one law and one fate....[3]

This completely anti-intellectual attitude leads Montaigne to expound upon the disadvantages of learning:

> I have in my time seen a hundred artisans, a hundred labourers, wiser and happier than the rectors of the University, and whom I had much rather resemble. Learning, in my opinion, has a place among the things that are necessary to life, like fame, nobility, dignity, or, at the most, like beauty, wealth and other such qualities, which are indeed serviceable to it, but remotely so, and more in fancy than by nature.[4]

Indeed, he goes further:

> If any man will sum us up according to our actions and behaviour, he will find many more excellent men among the ignorant than among the educated.[5]

I think it is obvious from what we have learned about Browne that these conclusions would be almost totally rejected

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[1]Montaigne, Apology for Raimond Sebond, in The Essays of Montaigne, trans. E. J. Trechmann (New York, 1946), p. 378.

[2]Ibid., p. 381.

[3]Ibid., p. 387.

[4]Ibid., p. 413.

[5]Ibid., p. 414.

by him. He would not consent to the equating of man with the beasts, nor would he admit the argument that ignorance is bliss. In this regard he is much closer, in my opinion, to the modified rationalism of Erasmus than to the complete scepticism of Montaigne.[1]

Again I would like to emphasize the fact, which may have become dim in the meanderings of the analysis, that the religious thought of Browne is the product of his contemplations of both God's eternity and His wisdom. Eternity comes into contact with the mind and produces scepticism. God's wisdom leads the mind to trust in God, to accept the conditions of life which He has established, and to respect human reason within certain limits. There is in Browne a fusion of fideism, scepticism and rationalism which cannot be designated by any one label. For the sake of convenience I will refer to his attitude as fideistic scepticism, with the understanding that what I really mean is this unnamable compound.

6. Fideistic Scepticism in Practice: Browne's Charity.

In practical matters we see many instances of the operation of Browne's scepticism. It is used to oppose controversy. Browne says:

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[1]Here I have emphasized points of difference. Browne and Montaigne agree in many important respects. Both are introspective, both believe in the unknowable nature of God and the futility of describing Him, and both are willing to rest in a suspension of judgment in theological matters. Cf. Apology for Raimond Sebond, pp. 451 ff. and p. 429.

> Could humility teach others, as it hath instructed me, to contemplate the infinite and incomprehensible distance between the Creator and the creature...it would prevent these arrogant disputes of reason.[1]

Therefore, he scorns controversy in Erasmian tones:

> The foundations of religion are already established, and the principles of salvation subscribed unto by all. There remain not many controversies worthy a passion, and yet never any dispute without, not only in divinity but inferior arts.[2]

If men would only come to face bravely their own ignorance, the tenuous basis of their chimerical structures, they could not in honesty rant and rave. Browne's expression of this fine principle is memorable:

> I could never divide myself from any man upon the difference of an opinion, or be angry with his judgment for not agreeing with me in that from which, perhaps, within a few days, I should dissent myself.[3]

And the same humility finds further expression in the splendid cadence of:

> No man can justly censure or condemn another; because, indeed, no man truly knows another. This I perceive in myself; for I am in the dark to all the world, and my nearest friends behold me but in a cloud....Further, no man can judge another, because no man knows himself.[4]

After having cleared the ground in this manner Browne is ready to introduce positive themes. He turns his attention again to the Providence of God: "I can perceive nothing but an abyss and mass of mercies, either in general to mankind, or in particular to myself."[5] So much in evidence for Browne

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[1] *Religio*, II, 77. [2] *Ibid.*, II, 91.

[3] *Ibid.*, II, 8. [4] *Ibid.*, II, 95. [5] *Ibid.*, II, 76.

are the signs of this overwhelming mercy that they throw into shadow the evidences of the justice of God. In all the trials of life, all the injustices of the world, there are marks of God's mercy:

> For God is merciful unto all, because better to the worst than the best deserve; and to say he punisheth none in this world, though it be a paradox, is no absurdity.[1]

But just because the world is full of God's mercies, man may by no means presume upon this. Those who depend upon faith alone have abandoned their reason; they are "insolent zeals" who:

> depending upon the efficacy of their faith... enforce the condition of God, and in a more sophistical way do seem to challenge heaven.[2]

Besides faith is needed "that other virtue of charity, without which faith is a mere notion and of no existence."[3]

Browne's conception of charity is one of the most beautiful aspects of his religious thought. He admits to a natural inclination toward charitable action, but insists that this mere impulse is not the true basis of charity:

> Now, there is another part of charity, which is the basis and pillar of this [charity toward men],

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[1] Ibid.

[2] Ibid., II, 84.

[3] Ibid., II, 85. Browne's humanistic approach to religion is seen clearly in the following passage which is in marked contrast with Luther's views: "Degenerous depravities, and narrow-minded vices! not only below St. Paul's noble Christian but Aristotle's true gentleman....Moses broke the tables without breaking of the law; but where charity is broke, the law itself is shattered, which cannot be whole without love, which is 'the fulfilling of it.'" Christian Morals, IV, 66.

> and that is the love of God, for whom we love our neighbor; for this I think charity, to love God for himself, and our neighbor for God.[1]

From this love flow the effects of visible charity:

> I give no alms to satisfy the hunger of my brother, but to fulfil and accomplish the will and command of God; I draw not my purse for his sake that demands it, but his that enjoined it....[2]

Browne's charity is virtually universal. He recognizes no national divisions, but treats all men as his brothers if their actions are good.[3] He cannot pray without including his friends, the tolling bell draws from him "prayers and best wishes for the departing spirit," and prayers for the salvation of his enemies he takes as a matter of course.[4] Even in his professional duties he thinks as much about the spiritual as the material benefit of his patients. But the most revealing expression of all, perhaps not to be surpassed in devotional literature is:

> I cannot behold a beggar without relieving his necessities with my purse, or his soul with my prayers. These scenical and accidental differences between us cannot make me forget that common and untoucht part of us both: there is under these centoes [patched garments] and miserable outsides, those mutilate and semi bodies, a soul of the same alloy with our own, whose genealogy is God as well as ours, and in as fair a way to salvation as ourselves.[5]

Indeed the only exception to his charity is that constant foe of the humanists, the mob:

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[1] *Religio*, II, 115. [2] *Ibid.*, II, 88.

[3] *Ibid.*, II, 86. [4] *Ibid.*, II, 100. [5] *Ibid.*, II, 115.

> I do contemn and laugh at...that great enemy of reason, virtue and religion, the multitude; that numerous piece of monstrosity, which, taken asunder, seem men, and the reasonable creatures of God, but, confused together, make but one great beast, and a monstrosity more prodigious than Hydra.[1]

This is an extended version of the charge Browne made in his analysis of error. The basis of the condemnation is the observation that the mob is un-human. Huxley echoes this view when he writes:

> For such is the nature of an excited crowd...that, where two or three thousand are gathered together, there is an absence not merely of deity, but even of common humanity. The fact of being one of a multitude delivers a man from his consciousness of being an insulated self and carries him down into a less than personal realm, where there are no responsibilities, no right or wrong, no need for thought or judgment or discrimination.[2]

The limits of tolerance for the humanist would appear to be the limits of responsible human action. This is another sign of Browne's rationalism.

Browne is careful to add to his strictures the qualification that the individual is not to be condemned. "I cannot contemn a man for ignorance, but behold him with as much pity as I do Lazarus."[3] He regards the giving of his knowledge an essential part of charity:

> To this (as calling myself a scholar) I am obliged by the duty of my condition. I make not therefore my head a grave, but a treasury of knowledge. I intend no monopoly, but a community in learning.

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[1] Ibid., II, 86.

[2] Huxley, op. cit., p. 317.

[3] Religio, II, 90.

> I study not for my own sake only, but for theirs that study not for themselves. I envy no man that knows more than myself, but pity them that know less.[1]

In brief, we find in Browne that same ethical spirit so pronounced in Erasmus, and the same emphasis upon God's mercy. This attitude, we have argued, is the result of the blend of scepticism, reason, and faith in the two men, both of whom belong to the single-soul type of personality.

7. Mysticism in Browne.

This interpretation of Browne's religion is in opposition to those who believe that he is a mystic. The great difficulty about any discussion of mysticism is that the word itself is difficult to define. As Helen White says:

> Verily, mysticism has come to mean so many things that it has ceased to mean much of anything. Nine-tenths of the people who use the word today mean little more than a vague emotional reaction in which awe and sense of strangeness play almost equal parts.[2]

Undoubtedly the best procedure for critics to take in the existing confusion regarding the meaning of the concept is

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[1] Ibid., II, 91. It is interesting to note how greatly the concept of the position of the scholar had shrunk since the time of Erasmus who could speak in lordly terms: "There have been men who were versed in this learning and by their eloquence settled the tumults of rulers, contended against the heretics....in poetry and prose sang out the praises of Christ and exhorted people to the contempt of the world and love of heavenly things." Erasmus, Chiliades (1526), trans. in T.C. Appelt, Studies in the Contents and Sources of Erasmus' Adagia (Chicago, 1942), p. 59.

[2] Helen C. White, The Mysticism of William Blake ("University of Wisconsin Studies in Language and Literature," No. 23 [Madison, Wisc., 1927]), p. 44.

either to substitute more precise terms for what they mean or else define mysticism in the sense in which they are using it. This is seldom done.

I do not believe that a legitimate definition of mysticism in Christian theology is difficult to find. Most technical books on mysticism give definitions similar to the following:

> "The experimental perception of God's Presence and Being" and especially "union with God"--a union, that is, not merely psychological, in conforming the will to God's Will, but, it may be said, ontological of the soul with God, spirit with Spirit.[1]

In these terms it is easy to see that Browne is not a mystic.[2] He aims at nothing like the goal of the mystic; rather it is precisely with the desire to conform his will to the Will of God that he concludes the Religio: "...dispose of me according to the wisdom of thy pleasure. Thy will be done, though in my own undoing." [3]

However, it may be objected that I am avoiding the

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[1]Dom Cuthbert Butler, Western Mysticism--The Teaching of SS Augustine, Gregory, and Bernard on Contemplation and the Contemplative Life (New York, 1924), p. 3. Butler gives many other definitions, but all relate to a definite union with God.

[2]Praz recognizes that Browne is not a mystic: "...he may love 'to lose himself in a mystery'...but he does not scale the heavens on the wings of a mystical purgation; he rather tries to comprehend them with a geometrical device, tries to explain the universe with an intellectual formula...." Praz's alternative is unfortunately just as misleading as the mistake he seeks to correct. Mario Praz, "Sir Thomas Browne," English Studies, XI (1929), 163.

[3]Religio, II, 117.

question at issue by adopting an unnecessarily limited conception of mysticism. My personal feeling is that only by narrowing the concept does it have any meaning, but I am willing for purposes of argument to admit a wider definition.

What I intend to show is that the meanings of mysticism which the critics use in speaking of Browne are so broad and vague that in most cases they carry no real signification. I will confine my attention to three points: (1) Christianity, (2) idealism, (3) eternity.

The first source of confusion is that critics fail to make any distinction between ordinary Christianity and mysticism. For example, Dunn calls both the O altitudo passage and Browne's charity "mystical."[1] In the first instance, as the context makes clear, Browne's declaration is only an elaborate expression of a basic Christian belief:

> Jesus saith unto him, Thomas, because thou hast seen me, thou hast believed: blessed are they that have not seen, and yet have believed.[2]

The point seems obvious, but it is not generally taken into account. In those places where Browne is merely expressing a belief common to all, or virtually all Christians, it is unwise to call him a mystic, unless we are willing to call all Christians mystics. But in that event the word has no independent meaning.

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[1]Dunn, op. cit., pp. 54 and 59.

[2]St. John 20:29.

There is also an idealist strain in Browne. At one point he says:

> The severe schools shall never laugh me out of the philosophy of Hermes, that this visible world is but a picture of the invisible, wherein, as in a portrait, things are not truly, but in equivocal shapes, and as they counterfeit some real substance in that invisible fabrick.[1]

What we have here is a conviction, the genesis of which has previously been described, that life is mysterious and cannot be explained in mechanical terms.

I do not believe that we can read much more than this sense of the mysterious into Browne's idealistic passages. We must always bear in mind Browne's own caution:

> There are many things delivered rhetorically, many expressions therein merely tropical....and therefore also many things to be taken in a soft and flexible sense, and not to be called unto the rigid test of reason.[2]

I think that much of the material in Browne which is cited as mystical falls under this heading, especially when idealism and Christianity come together. For example, there is the passage: "All that is truly amiable is God, or as it were a divided piece of him, that retains a reflex or shadow of himself."[3] Apparently this is pantheism, or something very close to it. However, we come across similar passages:

> There is surely a piece of divinity in us: something that was before the elements, and owes no homage unto the sun. Nature tells me, I am the image of God, as well as Scripture.[4]

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[1] Religio, II, 17.

[2] Ibid., II, xxxii.

[3] Ibid., II, 115.

[4] Ibid., II, 111.

and:

> That we are the breath and similitude of God, it is indisputable, and upon record of Holy Scripture.[1]

From these later passages I think it is evident that what Browne has in mind is the familiar notion that the soul of man is the breath of God. Genesis 2:7 reads:

> And the Lord formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul.

Undoubtedly this Christian notion in Browne becomes extended, because of his scientific concern with life, to all living matter, and probably to all matter. This line of thought was reinforced by his knowledge of Neo-Platonistic writings.

Now if a person wants to call this blend of idealism and Christianity a form of mysticism, I have no quarrel with him, as long as he makes clear what he means. It is surely not mysticism in the sense of direct apprehension of God, nor is it visionary. It is based upon a line, or the convergence of several lines of thought, and not upon any sort of intuition.

My third category is the most important because it relates to what most critics agree is one of the most important aspects of Browne, the O altitudo passage and attitude. I have already mentioned the Christian background of this passage. There is admittedly more to Browne's thought than that. Dunn comments:

> Our physician is revealing himself as a full-

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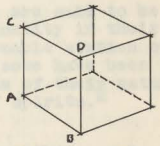
[1] Ibid., II, 49.

> fledged mystic, and we watch him in his first splendid flight. He is a new Tertullian, eager to explore the farthest reaches of that father's "odd resolution"--*certum est quia impossibile est*.[1]

The point I wish to make is that to follow out the implications of that resolution is not mysticism, but rationalism. Dunn, and other critics, fail to see that the rational treatment of the infinite gives results apparently non-rational. The infinite is simply not subject to the rules of the finite.

Nor is this true only in theology. We find that even in the queen of the exact sciences, mathematics, theorems of the infinite sound like "mystical" declarations. For example, "the infinity of even numbers is exactly as large as the infinity of all numbers."[2] Or an even more striking and paradoxical illustration: The number of points on line AB in the figure is equal to the number of points contained within ABCD, or within a cube of side AB![3]



I do not wish to press this analogy too far, but it does serve to demonstrate the paradoxical nature of infinity even when thought of in the most rigorously rational terms.

The principle *certum est quia impossible est* is merely an application of the logic of the infinite. Since God is

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[1]Dunn, *op. cit.*, p. 42.

[2]George Gamow, *One Two Three...INFINITY: Facts and Speculations of Science* (New York, 1953), p. 28.

[3]*Ibid.*, p. 31.

infinite, His actions belong to a different order from ours. These actions viewed from the point of view of finity appear impossible. The same sort of reasoning applies to Browne's statement concerning the circle of God:

> nothing can be said hyperbolically of God, nor will his attributes admit of expressions above their own exuperances. Trismegistus's circle, whose centre is every where, and circumference no where, was no hyperbole. Words cannot exceed where they cannot express enough.[1]

Rather than being mystical definitions, these are orthodox theological pronouncements. We have already seen how effectively Browne uses the tool of infinity.

Browne himself understood the nature of true mysticism. In Christian Morals he writes:

> For though human souls are said to be equal, yet is there no small inequality in their operations; some maintain the allowable station of men; many are far below it; and some have been so divine, as to approach the apogeum of their natures, and to be in the confinium of spirits.[2]

Later he says:

> And if...any have been so happy, as personally to understand christian annihilation, extacy, exolution, transformation, the kiss of the spouse, and ingression into the divine shadow, according to mystical theology, they have already had an handsome anticipation of heaven; the world is in a manner over, and the earth in ashes unto them.[3]

Browne makes no suggestion that he is one of these "divine" spirits. He may be called a mystic legitimately only in the limited sense of being partially an idealist. This is more than offset by his rationalism and his ethical emphasis.

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[1] Christian Morals, IV, 93 f. [2] Ibid., IV, 103 f.

[3] Ibid., IV, 114.

SUMMATION

This paper has attempted to establish Browne's position in science, and to answer those critics who treat him merely as a quaint and amusing figure. I have also tried to show how Browne's science merged with his religion; how he was able to avoid that bifurcation of the world which has plagued our civilization for several hundred years.

I have also sought to demonstrate that Browne's religion was no mere mouth-service, that his allegiance to the Church of England was sincere and founded upon reasonable grounds. We have traced his religious thought in some detail, and have been able to discover in it a definite pattern, the pattern of fideistic scepticism. And we have dismissed the charges of mysticism brought against Browne and maintained his rationality.

In the course of such an investigation much must be excluded. In writing I have had to fight against the temptation to explore more fully the thousand-and-one insights, suggestions, and proposals made by Browne. Consequently, while I believe that everything in this paper is true of Browne, I hasten to add that much has been omitted, much is still left to be done.

One problem is left for discussion. The "metaphysical"

interpretation of Browne has been mentioned. This is the contention that he had:

> the capacity to live in divided and distinguished worlds, and to pass freely to and fro between one and another, to be capable of many and varied responses to experience, instead of being confined to a few stereotyped ones.[1]

I remarked that this view must be treated with caution. The danger is that it is easy to assume that these "worlds" are on the same plane. Willey does this when he says:

> The peculiar irony of Browne, his wistfulness, the air of compassion with which he ponders all time and all existence, proceed from his detachment from each and all of the worlds he contemplates ....[2]

Bethell has objected strenuously to this interpretation:

> In fact it was utterly committed to the world of spiritual meaning and value: the other lesser worlds, "divided" but not isolated, were all mutually related and harmonised in a hierarchy of value which was accepted as no mere imposition of the interpreting mind but an accurate pattern of ultimate spiritual reality.[3]

With this latter view the conclusions of my investigation are in complete accord. We have seen how all of Browne's thought, both scientific and theological, converged on the "arithmetic of the last day." It is his religious trust which gives him his most impressive characteristic, the ability to rest contented on this side of certainty. He admits that this would not be possible without his Christian

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[1]Willey, op. cit., p. 50. [2]Ibid., p. 53.

[3]S. L. Bethell, The Cultural Revolution of the Seventeenth Century (London, 1951), p. 98.

faith:

> When I take a full view and circle of myself without this reasonable moderator, and equal piece of justice, death, I do conceive myself the miserablest person extant. Were there not another life that I hope for, all the vanities of this world should not entreat a moment's breath from me....I cannot think this is to be a man, or to live according to the dignity of humanity.[1]

His science, both in its ordinary aspects and in its contemplative heights, is based upon a religious motivation. His charity, philosophy, and profession of medicine all are moved and have life through the breath of God. Love of God and trust in God form the core of his being. There is no question of "detachment" in this.

It is fashionable to look for key passages in Browne, and I have been guilty of this myself. I cannot but give one more, the conclusion to Religio, which seems to me to contain Browne's deepest insight and which expresses the confidence which permitted him to range so far and so boldly.

> Bless me in this life with but the peace of my conscience, command of my affections, the love of thyself and my dearest friends, and I shall be happy enough to pity Caesar! These are, O Lord, the humble desires of my most reasonable ambition, and all I dare call happiness on earth: wherein I set no rule or limit to thy hand or providence; dispose of me according to the wisdom of thy pleasure. Thy will be done, though in my own undoing.[2]

Comment would be impertinent.

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[1] Religio, II, 57. [2] Ibid., II, 117.

APPENDIX I.

BROWNE'S DEBT TO BACON

The influence of Bacon upon Browne's science is usually argued in two ways:

1. That the inspiration of Vulgar Errors derives from Bacon.

2. That Browne's analysis of error is dependent upon Bacon's Idols.

Each of these positions is somewhat questionable, as the following paragraphs will show.

According to many critics Browne's impulse in writing his exposure of error derives from Bacon's suggestion:

> I advise be annexed another calendar, as much or more material, which is a calendar of popular error: I mean chiefly in natural history, such as pass in speech and conceit, and are nevertheless apparently detected and convicted of untruth....[1]

On the surface the suggestion of the critics seems quite plausible. However, when we examine Browne's own introduction to his work the plausibility fades. There Browne mentions by name as his predecessors in this type of writing:

> Joubert, Erreurs Populaires et propos Vulgaires, touchant la Medecine et le Regime de Sante. (1579)

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[1]Bacon, The Advancement of Learning, in Philosophical Works, p. 100.

Mercurius, De gli Errori Populari d'Italia. (1603)

Primrose, Jacobi Primerosii Doctoris Medici De Vulgi Erronibus in Medicina. (1639)[1]

Browne goes on to say that these works are sometimes in error, and are moreover limited in scope, yet it is evident that he thinks of himself as writing in an established tradition--one which antedates Bacon considerably, as the dates above show. Cawley has suggested that the absence of medical topics in Vulgar Errors is due to the fact that Dr. Primrose had already "covered that assignment."[2]

Now if the work were directly suggested by Bacon, we might reasonably expect to find Browne mentioning the fact. By so doing he would certainly have gained the approval of Bacon's many admirers, and assure for himself a place in the ranks of the advancers of learning. But Browne does not mention Bacon.

Critics have met this problem in various ways. Howell triumphantly claims a definite reference to the Baconians in Browne's statement:

> and surely more advantageous had it been unto truth, to have fallen into the endeavours of some co-operating advancers that might have performed

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[1]Vulgar Errors, II, 179 ff. The exact titles of the works mentioned are from Geoffrey Keynes, A Bibliography of Sir Thomas Browne (Cambridge, 1924), pp. 210 ff.

[2]Robert R. Cawley, "Sir Thomas Browne and His Reading," Publications of the Modern Language Association, XLVIII (1933), 441.

> it to the life...which the privacy of our condition ...cannot expect.[1]

Says Howell, "He is using Bacon's very title Advancement of Learning, and one of his pet ideas, that of coöperative research."[2] But surely such research was not limited to Bacon, nor does the echo of a title--which Browne may well have intended--constitute a debt.

Thaler admits that Browne does not mention Bacon, but believes this omission more than offset by the following argument:

> He [Browne] dedicated his Garden of Cyrus to his "worthy and honoured friend," Sir Nicholas Bacon, grandson of Francis Bacon's half-brother. The dedication salutes the younger Bacon not only as a "serious student in the highest arcana of nature," but as "a flourishing branch of that noble family unto whom we owe so much observance."[3]

The obvious objection to this sort of reasoning is that none of these critics tell us why we should hunt for clues, cryptic statements, and hidden tributes. If Browne were consciously following Bacon's suggestion, why should he not admit it? The most reasonable answer is that Browne recognized no such influence. There is absolutely no reason why we should accept a highly conjectural explanation, depending upon the type of

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[1]Vulgar Errors, II, 178.

[2]Almonte C. Howell, "Sir Thomas Browne and Seventeenth Century Scientific Thought," Studies in Philology, XXII (1925), 62.

[3]Alwin Thaler, "Sir Thomas Browne and the Elizabethans," Studies in Philology, XXVIII (1931), 109. Italics Thaler's.

evidence quoted above, when a forthright and intelligible explanation, in which Bacon is not involved, is given by the author himself.

The contention that Browne's analysis of error is based upon the Baconian idols has been argued at length by Thaler and Howell. I will not devote much space to Thaler, for his method is that of phrase correspondence and is based upon the proposition that a great number of improbabilities taken together resolve into probability. Here is one of his comparisons:

> Browne: "huddled together, they will be error itself"
>
> Bacon: "formed by the intercourse and association of men with each other"[1]

This kind of procedure need hardly be attacked, for it manages to furnish its own rebuttal.

Howell has suggested the following system of correspondences:[2]

Browne	Bacon
General infirmity	Tribe
Disposition of people	Tribe
Credulity	Cave
Supinity	Cave
Adherence to antiquity	Cave
Adherence to authority	Cave
Verbal misapprehension	Marketplace
Fallacy	Marketplace

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[1] Ibid., p. lll. Italics are Thaler's.

[2] Howell, op. cit., pp. 63-65.

However, these equations disappear upon examination, or at least become exceedingly faint. Merton has argued against any such identification.[1]

Bacon lists these characteristics under the Idol of the Tribe:

> 1. The imposing of more order and regularity upon the world by the understanding than in fact exists.
>
> 2. The tendency of the understanding to draw all evidence to support that which it has adopted, and another tendency toward affirmatives rather than negatives.
>
> 3. The strong movement of the understanding toward that which is familiar or immediately present to it.
>
> 4. The fatal straining of the mind toward final causes.
>
> 5. The tendency of the understanding to accept as true those things the affections wish were true.
>
> 6. The dependence of the understanding upon the dull and deceptive reports of the senses.
>
> 7. The attraction abstractions hold over the understanding.[2]

From the summary of Browne's analysis made in the body of my paper it can easily be seen that the two treatments are entirely different in scope and character. The only point of contact is in 5 above, but even here the similarity is more apparent than real. Bacon is concerned with the unconscious bias of the understanding toward that which the affections deem desirable, while Browne is thinking of the conflict between

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[1]Egon S. Merton, "Sir Thomas Browne's Scientific Quest," Journal of the History of Medicine and Allied Sciences, III (1948), 214-228. My analysis is based partially upon Merton and partially upon a direct examination of the texts.

[2]Bacon, Novum Organum, in Philosophical Works, pp. 264-267.

the affections and reason for control of the will.

Furthermore, while Browne does not treat of final cause in his analysis of error, he had previously written in Religio:

> There is but one first cause, and four second causes, of all things. Some are without efficient, as God; others without matter, as angels; some without form, as the first matter: but every essence, created or uncreated, hath its final cause, and some positive end both of its essence and operation. This is the cause I grope after in the works of nature; on this hangs the providence of God.[1]

There is no evidence that he ever changed his mind on this point. But in this he is more in sympathy with the biologists, and in direct conflict with an essential Baconian article.

The second basic cause of error in Browne, the erroneous disposition of the people, is even less closely connected with the Idol of the Tribe. Browne is here interested in the faults of the uneducated, while Bacon is concerned with the limits of reason common to all men. He makes no distinction at all between learned and illiterate. When Bacon speaks of the "deceptions of the senses" he is making the point that the senses lie between the reason of man and exterior reality. The mind necessarily receives its reports through the senses, an imperfect and dull set of instruments. Browne, on the contrary, by "fallacies of sense" means that uneducated men rely upon sensual reports rather than upon reason. The two points are completely different.

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[1] Religio, II, 20.

The Idols of the Cave:

> grow for the most part either out of the predominance of a favorite subject, or out of an excessive tendency to compare or to distinguish, or out of partiality for particular ages, or out of the largeness or minuteness of the objects contemplated.[1]

Browne's credulity and supinity have no relation whatsoever to this set of faults. His "adherence to antiquity" is vaguely similar to Bacon's "partiality for particular ages," but the reasons he gives for rejecting antiquity, as we have seen, are based upon a close examination of the ancients themselves. There is no reason to connect this idea with Bacon, since it was by no means original with him. In the Idol of the Cave Bacon does not touch upon the problem of authority to any extent.

Bacon's Idols of the Marketplace center around the imprecision of abstract terms. Browne does not consider this problem, but emphasizes errors in logic.

Browne has nothing similar to the Idol of the Theatre, nor does Bacon touch upon the endeavours of Satan. Therefore, it can be seen that the actual points of contact between the two works are few indeed. The material covered is not the same, the specific points of emphasis are different, and the organizations are not at all alike. The dependence of Browne on Bacon is most improbable. Merton concludes his comparison

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[1]Bacon, Novum Organum, in Philosophical Works, p. 269.

by saying:

> Browne's diagnosis of the causes of error can be termed Baconian only in the loosest sense. It should not be taken as a version, perhaps somewhat muddled, of Bacon's idols. Its debt is not a specific one to Bacon, but rather a general one to that new experimental philosophy which Bacon so forcibly echoed....They are ideas pervasive not only in Bacon but in the general climate of opinion to which Browne, as well as Bacon, was so responsive.[1]

I do not wish to give the impression that I am unaware of the great importance or accomplishments of Bacon. However, it is dangerous to concentrate upon him, to accept him as a kind of demi-god who alone had the truth in his possession. Chalmers says, for example:

> Bacon's Great Instauration gave the impulse to the scientific activity of the seventeenth century and dictated not only the aims of modern science but also its working principles.[2]

Howell speaks in similar terms:

> Against this formidable giant [authority] Browne used the extremely modern (in his day) weapons forged and perfected by Bacon and Descartes, experiment and reason.[3]

Experiment was no more "forged" by Bacon than the tragedies of Shakespeare were. By thinking of Bacon as a point of origin for science we miss the whole development of that discipline which I have outlined previously, and consequently cannot but fall into error.

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[1]Merton, Sir Thomas Browne's Scientific Quest, p. 219.

[2]Gordon K. Chalmers, "Sir Thomas Browne, True Scientist," Osiris, II (1936), 38.

[3]Howell, op. cit., p. 67.

Browne, by his failure to adopt such key Baconian precepts as the rejection of final cause and the practical motivation of scientific activity, is much closer to the Paduan biologists in method and theory. These in turn were inspired in no small measure by the intensive study of Aristotle himself.[1]

In conclusion, neither of the positions relating to the influence of Bacon on Browne can be defended satisfactorily. Unless new evidence can be presented we should regard such influence as unlikely.

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[1]Randall has written of the growth of scientific method at Padua from the point of view of the philosophers and logicians there who approached the problem through a critical examination of Aristotelian texts. (John H. Randall, Jr., "The Development of Scientific Method in the Schools of Padua," Journal of the History of Ideas, I (1940), 184.) It is becoming increasingly apparent that a full treatment of the development of science at Padua during the sixteenth century, from the philosophical, mathematical and empirical points of view will throw much light on the early history of modern science. Unfortunately no such work has been attempted to my knowledge.

APPENDIX II.

SIR THOMAS BROWNE AND THE ROYAL SOCIETY

My statement that Browne's position as a scientist was not doubted in his own day may be questioned by some on the grounds that he was never admitted to the Royal Society, the accepted scientific organization of his time. Consequently, it is necessary to define his relations with that body.

The view most commonly held by critics is that Browne was excluded by the Society. It is instructive to trace the growth of this opinion. It is a theory, which if not original with Gosse, was mainly promoted by him. He speaks of certain letters which Browne wrote to the secretary of the Society, Oldenburg, in connection with reports from abroad which his son Edward wished the Society to have. Gosse interprets these letters as giving:

> the impression that Browne was exceedingly anxious to be elected to the Royal Society...but that the Council were determined that he should not have their diploma, and resolutely disregarded his hints and civilities.[1]

Herford finds this theory extremely plausible and adds a

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[1]Gosse, op. cit., p. 158. It should be remembered that none of the actual replies of Oldenburg are in our possession.

variation of his own:

> And the sages of the English Academe did not hesitate to make the respected intruder understand that he was out of place....Browne's letters to the secretary make it tolerably evident that he would have liked to join a body few of whom could rival the natural history collections of his Norwich home....But it may be that the real rock of offence was just that which has become the corner stone of his fame--his style.[1]

Richard Foster Jones in his admirable discussion of science and prose style in the latter part of the century says that his researches:

> furnish strong support to Herford's contention that Browne's style was the obstacle in the way of his joining the Royal Society. Browne had early become notorious for his style.[2]

This is an interesting series of passages. The last two writers accept without question the assumption that Browne attempted to get into the society and was rebuffed. This assumption is based entirely upon the subjective judgment of Gosse.

The crux of the matter is to be found in the Oldenburg letters. These are reprinted in Keynes, VI, 386-391. I have read them over several times and can find absolutely no justification for Gosse's contention. Browne's civility is

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[1]C. H. Herford, Introduction to Browne's Religio Medici and Other Writings (Everyman Edition; London, 1952), p. xiv.

[2]Richard Foster Jones, "Science and English Prose Style in the Third Quarter of the Seventeenth Century," in The Seventeenth Century, by R.F.Jones and others (Stanford, Calif., 1950), p. 90 (note).

evident enough, but the only passage which might possibly be taken as a "hint" is:

> Worthy Sir,
>
> I humbly thanck you for your courteous letter & the R. Societie for their acceptance. I shall, god willing, continue to serve them in any way of my meane power....[1]

Without any supporting evidence this statement is not enough to uphold Gosse's theory, but it is actually the only objective basis for it.

Browne's style certainly ran counter to the program of the Society, but as Finch points out we have no evidence of anyone excluded because of his writing.[2] Gosse's own conjecture that Browne was excluded because of his "reputation as an infatuated astrologer" is indefensible because it is by no means certain that Browne had this reputation.[3] Furthermore, Elias Ashmole, a very famous astrologer, was admitted to the Society in 1661.[4]

The Society was by no means the exclusive and professional group pre-supposed by these critics. Martha Ornstein writes:

> as to the personnel of the Fellows: There were fourteen noblemen, barons, and knights; eighteen esquires; eighteen physicians; five doctors of

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[1]Keynes, op. cit., VI, 389.

[2]Finch, op. cit., p. 262.

[3]Gosse, op. cit., p. 134.

[4]Finch, op. cit., p. 261.

> divinity; two bishops...and thirty-eight other members. We have here an association not of scholars and learned men pre-eminently, but of amateurs interested in experimental science....[1]

However, the whole controversy has been settled by the researches of Finch. Browne as a Fellow of the Royal College of Physicians was automatically eligible for membership in the Society. His reason for not becoming an active member is most likely the fact that the Society's activities were confined to London. As a member he would be required to pay certain fees without receiving any advantages he could not enjoy as a correspondent. He kept in close contact with the Society and served it throughout his life. There is no evidence that he wished to become a member or that he was treated with anything but respect by the officials and members of the Society.[2]

In brief, Gosse's assumption is absolutely baseless and runs counter to the facts at our disposal. Considered as a "Vulgar Error," Gosse's argument might be classified by Browne as a real mistake resulting from petitio principii, while Herford seems to exhibit the faults of credulity and adherence to authority!

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[1]Martha Ornstein, The Role of Scientific Societies in the Seventeenth Century (Chicago, 1938), p. 110.

[2]Finch, op. cit., pp. 263 ff.

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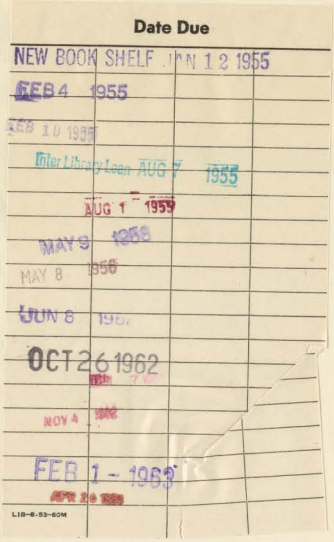

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