A DOCTOR'S LANGUAGE OF DEVOTION: THE OCCULT SCIENCES IN THE WORKS OF SIR THOMAS BROWNE

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ABSTRACT

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By

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My initial examination of Sir Thomas Browne's attitude toward occult studies revealed in his work an apparent contradiction: Browne seemed at times to embrace occult sciences and at other times to condemn them. In an attempt to resolve this contradiction, some scholars have argued that Browne was devoted to occult sciences as a young man, but that he put aside this youthful enthusiasm when he became a mature scientist. But Browne published devotional works throughout his lifetime which drew heavily upon the occult tradition. A systematic analysis of Browne's use of the occult reveals that he is neither ambivalent nor inconsistent. He speaks as a scientist about this world and as an artist about the world beyond. As a scientist, he consistently condemns both belief in occult sciences and the inference of literal truth from occult language. But as an artist, Browne turns to the vocabularies of alchemy, astrology, the Cabala, numerology, and other abstruse studies as one way of making intelligible to his readers the divine reality glimpsed by him through faith.

Browne's discrimination between scientific and metaphoric truth can be seen clearly in a number of ways. For example, even though Browne rejected much of what he read in Paracelsus, he made use of Paracelsus' considerable medical innovations and he drew upon Paracelsian writings as a source of figurative language. Browne rejects alchemical claims for universal cures as scientifically groundless, but he frequently borrows alchemical language to express his deeply held religious beliefs. The clearest example of Browne's use of the occult, however, is found in his treatment of number symbolism. In a long chapter in Pseudodoxia Epidemica, Browne traces the history of numerology and censures it as a source of literal truth. But he employs the language of number mysticism throughout the Garden of Cyrus for artistic and religious ends.

Occult language cannot, as some have claimed, form a true bridge between Browne's religion and science because he clearly does not believe in the occult sciences. But from this rich tradition Browne fashions a language of devotion which for many of his contemporaries would seem to join his science and religion.

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INTRODUCTION

I

In the Middle Ages and early Renaissance, no sharp distinctions had yet been drawn among religion, science, and the occult or pseudo-sciences. Alchemists, to choose the most widely recognized example, worked in the forerunner of the modern chemical laboratory, yet their preparations depended not on understanding the chemical operations of the metals they worked with, but on religious assumptions about the operation of the world, and they described laboratory reactions in language interchangeable with religious ritual. By the time Sir Thomas Browne published the first edition of his scientific work Pseudodoxia Epidemica, the lines between science, religion, and occult sciences were beginning to be firmly drawn, and despite occasional lapses, Browne is in complete sympathy with the major movement of the Great Instauration. He acknowledges that natural philosophy cannot progress as long as it remains wedded to religious explanations. The worlds of science and religion can no longer be essentially unified as they were for the early Renaissance scientist; the religious scientist of the seventeenth century must live in two worlds. As we shall see, this is not an opinion Browne holds only late in life. He does not progressively develop from an emotional young Christian devotee to a rational

scientist in his mature years. Both characteristics exist simultaneously in his personality throughout his lifetime.

I shall argue in this thesis that Browne consistently keeps his scientific observation and thinking free from religious and pseudo-scientific or occult concepts; at the same time, he makes frequent use of the language of pseudo-scientific or occult studies in his devotional prose. Linguistically, as well as intellectually, Browne lives in divided worlds. Other scholars have argued that Browne found in occult sciences a doctrinal justification for reconciling his science and faith,[1] but this could be true only if he believed in the occult sciences and in the assumptions about the world upon which those sciences rest. He does not. But in his devotional prose Browne is seeking a symbolic, metaphoric language, to express his deeply felt religious faith, his intuition of the transcendent world. Several seventeenth-century Christian writers had turned to the Bible and Christian tradition for such a language and Browne too draws upon these sources. In addition, he consciously adapts the vocabularies of the pseudo-sciences, which he probably became acquainted with through his continental medical studies, his wide reading, and his personal friendships, to religious ends. This language fulfills two functions in Browne's prose. First, it provides in language accommodated to human understanding

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[1]Harold Fisch, "The Scientist as Priest: A Note on Robert Boyle's Natural Philosophy," Isis, 44 (1953), 252-265.

some intimation of the incomprehensible divine reality he glimpses through his faith. The second function of occult sciences grows out of Browne's desire not to appear as two different men, one a scientist the other a Christian. Even though occult language provides no real bridge between Browne's science and faith because he does not believe in occult sciences in themselves, the use of the occult lexicon in his devotional prose supplies a device for keeping his identity as a natural philosopher before his readers. Occult language still has a "scientific" flavor for many of Browne's contemporaries.

II

The only magic which concerns most readers of the prose of Sir Thomas Browne is that which elegantly informs the mystical passages of Religio Medici and The Garden of Cyrus or the grave cadences of Hydriotaphia. But the scholar attempting to explain the function of occult learning in Browne's thought and prose style confronts a complex and perplexing problem. Although scholars have not debated the issue of the significance of occult studies in Browne with the same fervor which has characterized their discussion of whether or not Browne was a 'true scientist' or an antiquarian enthusiast, a pious Christian or a religious skeptic, the matter has been given some attention.

Two of the best early books on Browne note his apparent interest in abtruse and esoteric studies though they do not undertake a systematic analysis of that concern. William Dunn,

surveying the work of Browne, especially Religio Medici, notes evidence of occult learning. "This was a territory in which Browne was more or less at home and it will be impossible to understand him without at least straying into the borders of it."[2] Dunn read with great interest the correspondence between Browne and Elias Ashmole,[3] in which Browne confesses a life-long association with Arthur Dee, the son of the infamous alchemist John Dee and offers to send what alchemical documents he has in his possession for Ashmole to examine. Dunn admits that he would gladly pursue the suggestions of this letter, but the evidence appears to him to be too inconclusive.[4] Browne's correspondence with Ashmole will engage our attention again in Chapter II of this thesis.

Egon Merton, who is chiefly concerned with the effect of Browne's scientific studies on his artistic imagination, discovers in Browne's use of occult studies a reflection of the intellectual milieu of the seventeenth century, whose scientists had already begun to make several important discoveries, but still assigned occult causation to

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[2]William P. Dunn, Sir Thomas Browne: A Study in Religious Philosophy (Minneapoles, 1950), p. 82.

[3]The Works of Sir Thomas Browne, ed. Geoffrey Keynes (London, 1964), IV, 296. All citations from Browne in this thesis will be taken from Keynes' four-volume 1964 edition of The Works of Sir Thomas Browne, and will be referred to in the text by Volume and page number.

[4]Dunn, p. 20.

many observable phenomena.[5] Merton finds Browne, like other writers in the occult tradition, heavily indebted to assumptions based on correspondences between man and the rest of creation.[6] Browne's affection, and that of many of his literary contemporaries, for the macro-microcosm conceit is well known.

> ... but to call ourselves a Microcosme, or little world, I thought it only a pleasant trope of Rhetorick, till my nearer judgment and second thoughts told me there was a real truth therein: for first we are a rude masse, and in the ranke of creatures, which only are, and have dull kind of being, not yet privileged with life, or preferred to sense or reason; next we live the life of plants, the life of animals, the life of men, and at last the life of spirits, running on in one mysterious nature those five kinds of existences, which comprehend the creatures not of the world, onely, but of the Universe (I, 44-45).

In a later survey of Sir Thomas Browne's reading, and a collation of critical opinion on the books which are said to have influenced him, Robert Cawley recognizes Browne's familiarity with the writers of the occult pseudo-scientific

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[5]Browne employs the word occult in two senses. As a scientist, he applies the term to physical qualities not manifest to direct observation and to hidden or undiscovered causes of observable phenomena. This sense could be applied to Browne's discussion of magnetical "effluxions" (II, 90), those "invisible paths" by which magnetic attraction was described before modern physics. See also II, 85 and 121. To the writer of devotional prose, the word occult refers to those ancient and medieval reputed sciences believed to involve the knowledge or use of agencies of a secret and mysterious nature (as magic, alchemy, astrology, theosophy, etc.) Browne employs the language of these recondite pseudo-sciences throughout his meditative prose.

[6]Egon Merton, Science and Imagination in Sir Thomas Browne. (New York, 1949), p. 148.

tradition: Ficino, Paracelsus, Agrippa, and the English Paracelsian Robert Fludd.[7] Cawley also calls attention to an early book by Dewey K. Ziegler which emphasizes Browne's debt to Neoplatonism and states that Hermetic philosophy was on Browne's mind continually.[8] Cawley could have added the name of Robert Sencourt, who shares Ziegler's view of Browne's attachment to occult studies. "Magic in each of its three branches -- astrology, witchcraft, and hermetic physick, and their mutual influence, provided Browne with congenial matter for his studies."[9]

Most commentators, however, have not been eager to engage in a systematic examination of the occult in Browne. Harold Fisch, nonetheless unearths some useful information in this regard while contrasting the work of Boyle and Browne. By comparing passages from each of these writers, Fisch convincingly demonstrates their debt to the Hermetic tradition. "My concern here is with the metaphysical ground of Boyle's Philosophy and whereas Bacon's Philosophy rests upon a clear separation of the religious and utilitarian functions of knowledge, (cf. Novum Organum, Part I, Section 65), and a boundless emphasis upon the latter made possible by this dissociation, Boyle's Natural Philosophy, on the other hand, owes its dynamism precisely to the integration of the two

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[7]Robert Cawley and George Yost, Studies in Sir Thomas Browne (Eugene, 1965), pp. 104-5.

[8]Ibid., p. 107.

[9]Robert Sencourt, Outflying Philosophy (London, 1924), p. 91.

functions, so that the pursuit of scientific, experimental knowledge becomes, for him, itself an act of religious devotion."[10] Boyle's biographer M.S. Fisher has clearly demonstrated, argues Fisch, Boyle's connection with the rationalist philosophers of the later seventeenth century such as Tillotson, Chillingsworth and the Cambridge Platonists, but he has not been fully aware of Boyle's relationship to writers in the Hermetic tradition including "such richly ambiguous figures as Thomas Browne."[11]

Ross Garner, in his fine book on Henry Vaughan, contrasts what he judges to be the dissimilarities in the quality and emphasis of Hermetic philosophy in Browne and Vaughan, and points the way to a full understanding of Browne's use of the occult.

> But Sir Thomas Browne perhaps represents the most widely known seventeenth-century figure who drew largely from Hermeticism. In Religio Medici, for example, occult notions are worked into the very fabric of his thought and style -- which is not to say, of course, that Browne was committed to the occult sciences as a way of life, but only that he may have found in Hermetic notions an apt imagery. ...Occult science thus seems to afford a great many opportunities for religious awe and a great many images for the explanation of the spiritual processes.[12]

In a current biography of John Dee written and published at the urging of Frances Yates, who has herself done much

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[10]Fisch, p. 253.

[11]Ibid., p. 253.

[12]Ross Garner, Henry Vaughan: Experience and Tradition. (Chicago, 1959), pp. 62-3.

to bring the significance of Renaissance Hermeticism to the attention of modern scholars, Peter French speculates on the possible importance of Browne's friendship with Arthur Dee, and alludes to Browne's own absorption in the Hermetic arts: "his fame /Arthur Dee's/ as a Hermetic Philosopher, like his father's, reached the court of Russia, where he eventually went to serve. Little is known of this son of Dee's; one cannot help but wonder, however, how much he may have influenced Browne, who was one of seventeenth-century England's greatest literary exponents of the type of occult philosophy in which both of the Dees were immersed."[13]

The most recent and far reaching discussion of occult philosophy and its importance in the work of literary figures such as Browne is undertaken by Wayne Shumaker in a book titled The Occult Sciences in the Renaissance. We will pause here for a detailed consideration of this book, which will certainly become an influential and valuable source for Renaissance scholars since it offers a lucid and succinct explanation and synthesis of such unmanageable topics as astrology, alchemy, witchcraft, black and white magic, and Hermetic philosophy. It also argues an interpretation of Browne's work which I do not share. Shumaker avers that he has undertaken this project partially to discourage

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[13]Peter J. French, John Dee: The World of an Elizabethan Magus (London, 1972), p. 14.

recrudescent occult enthusiasm in our own time by demonstrating that, although enigmatic and imposing in appearance, occultism is, after all, only inane nonsense.[14] Few scholars would deny this thesis, but in making his case Shumaker deals severely with the analogical mode of thinking which underlies the occult sciences;[15] analogical thinking, Shumaker fails to note, also underlies traditional Aristotelian metaphysics, upon which scholastic philosophy rests, which, in turn, furnishes the philosophical structure for many Renaissance and seventeenth-century writers including Browne.[16] Shumaker's complete rejection of reasoning by analogy leads him to confer supreme value on rational empirical truth such as that embraced by our age, and to measure the past including the Renaissance against that standard. Thus early writers, such as Pico della Mirandola, who attacked astrology get high grades from Shumaker because their judgments have won acceptance.

As regards Browne, who gets more space than any other literary figure discussed in the book, Shumaker must, of course account for the magic element in his work. He manages this

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[14]Wayne Shumaker, The Occult Sciences in the Renaissance (Berkeley, 1972), p. xvii.

[15]Ibid., p. 33. "For unlettered men the reasoning process still consists largely of finding analogies." See also p. 161.

[16]Fisch, p. 257. "For Boyle, on the other hand, as for Sir Thomas Browne, the natural world and the evidence of the Scriptures were bound closely together by the law of analogy, a factor which gave both their scientific and religious outlook their distinctive character."

by stating that when he wrote Religio Medici Browne was immersed in occult notions and hermetic analogies, and that he retained his affection for at least one Hermetic image -- Hermes' definition of God[17] -- throughout his life; but that as Browne grew older he became more of a "true scientist," eschewing the intellectual stance that had produced Religio Medici, and settled down to a life of experimentation and examination of error, the results being recorded in Pseudodoxia Epidemica.[18] Near the close of his analysis of Browne's work, Shumaker pronounces him "rather strikingly anti-Hermetic."[19]

Anyone who knows Browne's work will be rightly wary of an argument constructed in such absolute terms, since most readers come away from Browne certain that he absolutely abhors only two things, atheism and representative government. I find fault with Shumaker's argument on at least two counts: first, it places exaggerated emphasis on two of Browne's works, suggesting that the first, Religio Medici, an enthusiastically mystical spiritual confession of the author's youth, was supplanted by Pseudodoxia Epidemica, which Shumaker regards as the work of a mature empirical scientist and crusader against analogy, superstition, and adherence to authority. My second quarrel grows out of the nature of Pseudodoxia itself.

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[17]See pages 16-17 of this chapter.

[18]Shumaker, p. 169.

[19]Ibid., p. 242.

Browne, it must be admitted, published Religio Medici as a young man, and as Garner and others have observed, the book does incorporate occult science into the very tissue of its thought and style. Religio Medici, which appeared in an authorized version in 1643, was Browne's first published work, while Pseudodoxia Epidemica (usually referred to by the less cumbersome title Vulgar Errors, a practice I shall follow hereafter) appeared in several editions throughout Browne's lifetime. Vulgar Errors was first published in 1646 after the public had consumed eight editions in English and Latin of Religio Medici, whose author was now well known in England and on the continent. A much revised and enlarged second edition of Vulgar Errors was represented to the public in 1650; two more editions, which contained minor additions and revisions, appeared in 1658 and 1669; the final edition with further additions published in Browne's lifetime was issued in 1672 and contained a statement by the author that readers could expect no enlargements, the book being finally "compleat and perfect" (II, vii-viii).

Shumaker's assertion that Vulgar Errors is a book of "hardheaded observation" will be dealt with soon, but first we should recall that Browne was publishing other works, at least two of which are today more highly regarded than Vulgar Errors, at about the same time the 1658 edition of his scientific work appeared. In a period between 1656 and 1659 -- scholars are divided on the exact dates --, eight years after the emergence of the first enlarged edition of Vulgar Errors,

Browne produced two new works: The Garden of Cyrus, and Hydriotaphia. A Letter to a Friend is also believed to have been written during this period, but it was not published until 1690.

Browne neglects scarcely any aspect of occult studies in The Garden of Cyrus: there are hermetic allusions to light and darkness (I, 218), a discussion of the Sephiroth (I, 224), a reference to the "Hebrew mysteries and Cabalistical accounts" linking the number five to generation (I, 222), and an allusion to the "mystical mathematics of the City of Heaven" (I, 226).[20] Hydriotaphia, in the final meditative chapter, employs Hermetic imagery in some of Browne's most memorable lines: "life is a pure flame and we live by an invisible sun within us" (I, 169, "a small fire sufficeth for life, great flames seemed too little after death" (I, 169).[21] Browne also mentions "tutellary observators" (I, 165),[22] and mingles alchemical and mystical language to describe the triumphant Christian:

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[20]The discussion of Browne's allusions to the Cabala and to the system of the Sephiroth is dealt with in Chapter III, pp. 29-32.

[21]See Chapter II, pp. 20-30.

[22]Browne refers to these provincial spirits in Religio, Hydriotaphia, and the Garden. In Religio he writes, "Therefore for Spirits, I am so far from denying their existence, that I could easily believe, that not onely whole Countries, but particular persons, have their Tutelary and Guardian Angels. It is not a new opinion of the Church of Rome, but an old one of Pythagoras and Plato" (I, 42). Browne could have added the spirits mentioned in the Corpus Hermeticum which he is almost certainly aware of (See Chapter II). See Corpus Hermeticum, ed. A.D. Nock and A.J. Festugiére, Dieuxieme Edition, 4 vols. (Paris, 1960), IV, p. 21.

"And if any have been so happy as truly to understand Christian annihilation, extasis, exolution, liquefaction, transformation, the kisse of the Spouse, gustation of God, and ingression into the divine shadow they have already an handsome anticipation of heaven..." (I, 170). Browne found this final description so apt for the ultimate Christian experience that he repeated it at the close of Christian Morals (I, 241), which Browne's daughter Elizabeth Lyttelton called "the last work of our Honoured and Learned Father," a work which bears the stamp of occult expression not only at its close, but throughout. In Browne's comparatively short work, A Letter to a Friend, he refers to the uroboros (I, 105),[23] the hermetic symbol of eternity. It can be seen then from this admittedly brief survey of Browne's other works that he did not immediately give over interest in occult science with the publication of the first, or subsequent, editions of Vulgar Errors; to align ourselves with Shumaker's judgment of Browne we must ignore his greatest literary productions, which is too great a price to pay.

My second disagreement with Shumaker concerns the nature of Vulgar Errors itself. We must agree that the work does go a long way in debunking many of the superstitious errors the Renaissance had accepted as truth. And Vulgar Errors is indeed Baconian in its identification of the greatest enemy of knowledge: "The mortallest enemy unto Knowledge, and that which hath done the greatest execution upon truth, hath been a

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[23]See Chapter II, n. 13.

peremptory adhesion unto Authority, and more especially, the establishing of our beliefs upon the dictates of Antiquity" (II, 40). But Vulgar Errors is a long book and before we have made our way through half of it, we find Browne very ambivalent toward Antiquity and its authority. In Book III of Vulgar Errors, the book most often mined for a representative sample of the whole, Browne examines the assertion that the bite of a tarantula can be cured with the appropriate music. "Some doubt many have of the Tarantula, or Poisonous Spider of Calabria, and that magical cure of the bite therof by Musick. But since we observe that many attest it from experience: Since the learned Kircherus hath positively averred it; and set down the songs and the tunes solumnely used for it; Since some also affirm the Tarantula itself will dance upon certain stroaks, whereby they set their instruments against its poison; we shall not at all question it" (II, 267). This passage calls to mind Robert Burton, who made no secret of his adhesion to authority. He admits having been skeptical about his mother's use of a spider in an amulet as a cure for ague, until he found, "rambling amongst authors," that Dioscorides, Matthiolus, and Aldrovandus approved of it.[24]

On the question of the mutation of the sexes, Browne adjoins the authority of Empedocles and Tiresias to those who suggest that though there have been "few, or rather none which

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[24]Robert Burton, The Anatomy of Melancholy, ed. Holbrook Jackson, 3 vols. (London, 1949), II, p. 250.

have emasculated or turned women, yet there have been very many who from an esteem or reality of being Women have infallibly proved Men. Some at the first point of their menstruous eruptions, some in the day of their marriage, others many years after: which occasioned disputes at Law, and contestations concerning a restore of the dowry" (II, 213-4). His discussion makes it absolutely clear that Browne believes in the occasional occurrence of "transexism," which is "observable in Man," and that he does so on the basis of learned authority. Browne continues by citing the "Paracelsians" who have discovered the transmutation of one animal into another, and he himself notes the transformations of caterpillars and silkworms, which, he has said in Religio Medici, turned his "Philosophy to Divinity."

Browne's own stated method in Vulgar Errors, which disavows authority while including it as one of the "three Determinators of Truth," should lead us to question the clarity of his thinking on this point. His discussion of the badger provides another case familiar to many readers who know Vulgar Errors only through excerpts in anthologies. He finds it much easier to dismiss the error that this animal "hath legs of one side shorter then of the other," because neither Albertus Magnus nor Aldrovandus could believe it (II, 170-1). If Browne ever measured the animal's legs, he does not bother to include that information in his refutation. He likewise argues primarily from authority when, in another

place, he alleges that elephants have written whole sentences, and have also spoken, and that dogs and cats speak to witches (II, 161).

These few examples are cited not to deny that Browne was a "true scientist" (many scholars have discussed at length experiments which Browne performed that are irrefutably scientific even in the present sense of that term) but to demonstrate that Vulgar Errors provides very insubstantial evidence that a young religious mystic had completely evolved into an exclusively rational, empirical scientist.

It is also misleading to imply, as Shumaker does, that in Vulgar Errors Browne entirely abandons references to his occult studies. In his discussion of glowworms, Browne muses on whether the light of animals is "Kin unto the light of Heaven: whether the invisible flame of life received in a convenient matter, may not become visible" (II, 263). In this book of what Shumaker calls "hardheaded observation" he refuses to "reject or condemn a sober and regulated astrology" (II, 336). In his celebrated chapter on "Hieroglyphical Pictures," Browne demonstrates that he still examines the signatures and the alphabet of the Divine in nature, and still, in his phrase from Religio Medici, sucks "Divinity from the flowers of nature." Other examples of occult learning exhibited in Vulgar Errors will be examined in later chapters, but these few should be sufficient to cast some doubt on Shumaker's allegation that the "later Browne" is fundamentally different from the author of Religio Medici. We must look

elsewhere for an adequate explanation of Browne's use of occult studies.

Not all modern writers on Browne wish that he be viewed either as an empirical scientist, or as a devout physician whose religion and science are consciously integrated. James King, following the view of Dewey Ziegler, desires that the doctor of Norwich be considered an unsuccessful oriental mystic. "Browne employed his speculative or discursive intellect not to create philosophical systems or to make philosophical analyses, and not even (primarily) to solve scientific or theological problems, but to induce in himself a state of ecstasy through which an ultimately liberating, unifying, and noetic experience might come."[25] King concludes his chapter by suggesting that although Browne had the proper temperament to become a mystic, he lacked a proper master, and failed to reach a transcendent state of mystical consciousness because he succumbed to the temptation to dissipate the power of his experiences by writing them down.[26] For Browne to have become a genuine mystic, according to King, he should not have written at all. This is an opinion certain to be "studiously declined" by admirers of English prose, but as vague and forced as King's argument is it does contain an important truth about Browne: there are degrees of his

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[25]James Roy King, Studies in Six Seventeenth Century Writers (Athens, Ohio, 1966), pp. 96-7.

[26]Ibid., p. 120.

being, aspects of his experience, that empirical science will not satisfy. If by mysticism we mean belief in the possibility of union with the Divine by means of ecstatic contemplation or dependence upon spiritual intuition, or if we mean "direct intuitive access to God... conceived as absconditus from human reason,"[27] Browne's prose evidences numerous passages with a mystical flavor, and in these passages, as we shall see, he repeatedly draws his language from occult studies.

A complete study of Browne's occult learning awaits a number of scholarly investigators since no single study could adequately handle every aspect of it.[28] Browne's works include discussion of or allusions to the Corpus Hermeticum and pseudo-Hermetic documents, alchemy, numerology, the Cabala, astrology, palmistry (Browne admits being skeptical about it, but recalls that he has observed the life line in apes and moles II, 393), witchcraft, and other subjects. This thesis will focus on the most significant occult influences on Browne's work: astrology, Corpus Hermeticum, alchemy, and the particular variety of number mysticism present in The Garden of Cyrus.

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[27]Henry M. Pachter, Magic Into Science: The Story of Paracelsus (New York, 1951), p. 328. Pachter states that mysticism is originally a theological doctrine opposed to the method of dialectic. The mystic claimed direct intuitive access to God. "In the fifteenth century, however, some of the greatest dialecticians nourished mystic ideas, notably Nicholas de Cusa, whose theory of 'learned ignorance' and 'coincidence of the opposites' became fruitful in the Renaissance age. From then on, 'reason' and 'intuition' no longer were considered as alternatives."

[28]I have avoided dealing with Browne's statements about witchcraft, for example, because they are discussed sufficiently in numerous works.

The tradition in which Browne works as a physician and scientist includes much occult learning which corroborates his faith by providing intellectual systems and language compatible, and in some cases interchangeable -- alchemical jargon -- with the thought and language of orthodox Christian religion. That Browne chose to make use of this tradition should surprise no one, since it was current in the medical schools he attended, and it offered a propitious means of articulating a satisfying adult faith. The author of Religio Medici professes and describes that faith early in the work (I, 11).

For the man of faith the seventeenth century posed two sharply defined theories of science from which to choose. In the old science, religion and natural philosophy are inseparable, and natural events are often explained through spiritual intervention. Later, Bacon and Descartes relegated God to a discrete, remote region from which He directed an increasingly mechanical creation; the other region, God's creation, the domain of nature, became the subject of empirical science. For Boyle and others, including Browne, who retain their Christian faith but acknowledge that religious beliefs cannot be mingled with truly scientific investigation, occult sciences furnished a metaphoric language congenial to the religious scientist.

Chapter I of this thesis will focus on Browne's particular debt to Paracelsus, not because he is the major figure in the occult tradition -- although this may very well be true -- but because in his work we can observe a number

of ideas important in Renaissance occultism which are also crucial to understanding the work of Sir Thomas Browne. My second chapter will examine the way in which Browne's work incorporates some of the themes and language of the Corpus Hermeticum and the primary Hermetic art of alchemy. First, Browne employs one of that tradition's chief themes: the visible world is a manifestation of the invisible, which is central to the Hermetic Pimander, and underlies Paracelsus' and Browne's treatment of "signatures" and the Book of Nature. Second, Browne is so fond of the Hermetic definition of God -- God is a circle whose center is everywhere and whose circumference is nowhere -- that he includes it in each of his works. This definition, which first appears in the pseudo-Hermetic Liber Philosophorum of the 12th century, was first employed as Browne uses it by Nicholas of Cusa. Third, Browne shares with John Dee and other Hermetists a characteristic religious tolerance born of the belief that the Hermetic corpus was a part of the prisca theologica, and, like Hellenistic wisdom, foreshadowed the truth of Christianity.

My third chapter will analyze Browne's particular variety of numerology in his most thoroughly mystical work. The entire Garden of Cyrus can be summarized as a hieroglyph of the Creator as he manifests himself through order, order which is revealed by the ubiquity of the quincunx in the creation. A comparison of Browne's apparently contradictory statements on number mysticism in Vulgar Errors and in the Garden of Cyrus provides the clearest example of the scientist's

censure of an occult science and of the devotional writer's eagerness to embrace its language as a device in his art.

In my final chapter, I will focus on the persona we encounter in Browne's meditative works. I have discovered that Joan Webber's suggestions about Browne's timeless and representative persona, or "cosmic personality," which she arrives at by a rhetorical analysis of Religio Medici, can be seen with equal clarity through an examination of Browne's affinities with the occult tradition. Webber states, "Where Burton sought to make himself cosmic by omnivorous reading, Browne does it on the one hand by reference to physiology, which was, after all, his business, and on the other by means of introspection characteristic of his nature."[29] Webber's concept of the "cosmic personality" helps us to account for the numerous apparently contradictory statements Browne makes about occult studies, and to comprehend the artistic nature of Browne's use of occult language.

We now turn to Browne's early medical education and to the probable source of his initiation into the occult world.

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[29]Joan Webber, The Eloquent "I" (Madison, 1968), p. 161.

CHAPTER I

BROWNE AND PARACELSUS

The fact that Renaissance England owes a great debt to the thought of Paracelsus is a commonplace of the history of ideas, and Browne's specific debt to him has also been commented upon in passing by most scholars interested in Sir Thomas Browne's ideas. This chapter examines the impact of the thought of Paracelsus, one of the central figures of the occult tradition, on Browne's own use of occult studies. Browne finds in Paracelsus useful medical concepts and a language which he adapts to his own supra-mundane expression. For Paracelsus, analogy is the fundamental principle of all thought, scientific or religious, a fact which is clear from his two principal theories: the macrocosm-microcosm analogy and the doctrine of signatures. For Browne analogical thinking is absolutely essential to religion and to the metaphysical approach that he takes to his art, but he insists upon the necessity of logical causal thinking in scientific investigation. Browne's attitude toward Paracelsus then is ambivalent; he condemns the analogical foundations of Paracelsus' medicine and at the same time employs in his art a number of the very devices he condemns.

Fortunately, Browne was a self-aware and articulate physician, and we therefore have a great deal of valuable commentary from him on his medical studies and practice. In addition, researchers have provided us with much helpful information on medical training at Oxford during Browne's stay there, and also at the three continental medical schools he attended. Using both sources of evidence, I shall first briefly trace Browne's medical education with particular emphasis on his acquaintance with Paracelsus. Second, I shall examine Browne's own commentary on Paracelsian ideas as those comments appear in his published work and correspondence, and third, I shall attempt to account for Browne's attitude toward Paracelsus' variety of occult science.

Browne began what today would probably be called pre-medical training at Oxford. Phyllis Allen describes the typical Oxford medical student of Browne's day as possessing a very dull intellectual, but stimulating social life.[1] Most students who completed a medical degree at Oxford merely retired to the country without ever attempting to establish a medical practice. Candidates serious about practicing medicine for their livelihood often completed degrees at Oxford for the purpose of licensing, but secured their practical education elsewhere. Anatomy occupied only a minor position in the medical curriculum: only three human anatomy lessons were scheduled by the university each

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[1]Phyllis Allen, "Medical Education in the 17th Century," Journal of the History of Medicine, 1(1946), 121-6.

year, and most students did not attend these lessons. At the anatomy lessons, the professor did not dissect or examine the body himself, but rather read from Galen as a barber-surgeon exposed or held up the various organs.

As one can quickly discern from Allen's description, medical education at Oxford was scarcely compatible with the serious intention or scholarly temperament of Sir Thomas Browne. The young doctor who in Religio Medici confesses, at age twenty-nine, that his manner is "austere, his behaviour full of rigour, sometimes not without morosity" (I, 12), could hardly have been satisfied with medical training which elevated the social over the intellectual life. Equally distressing to him, must have been the lack of emphasis on the study of anatomy which later, as a practicing physician, he recommends to Henry Power as one of the pillars of medical knowledge (IV, 255). Browne's Oxford training, nonetheless, was not entirely without redeeming qualities, since he undoubtedly received from the University a thorough knowledge of Galen's work, which along with Harvey's treatise on the circulation of the blood and the study of pharmacology, Browne recommends to Henry Power as absolute necessities for the practicing physician (IV, 255). Also, Browne met Thomas Clayton at Oxford, who probably advised him to continue his medical studies on the continent after completing his M.A.[2]

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[2]Frank L. Huntley, Sir Thomas Browne (Ann Arbor, 1962), p. 41.

In the following passage Robert Burton paraphrases Dr. Clayton's characterization of the ideal priest-physician. We will soon have occasion to consider this concept in the discussion of Paracelsus and Browne.

> A good Divine either is or ought to be a good physician at least, as our Saviour calls Himself, and was indeed... They differ but in object, the one of the body, the other of the soul, and use divers medicines to cure: one amends animam per corpus, the other corpus per animam, as our Regius Professor of Physick well informed us in a learned lecture of his not long since.[3]

If he had not already encountered Paracelsus' ideas in England (which is unlikely),[4] Browne certainly would have studied them at Montpelier in France, probably the first continental medical school he attended. At Montpelier, Lazare Riviere, whose Praxis Medica Browne owned and recommended to Henry Power (IV, 256), was an outspoken advocate of Paracelsus in his university's continuing debate with the University of Paris' more conservative faculty, which still reverenced the work of Galen.[5] In accord with belief in Paracelsian chemical preparations, Montpelier also possessed

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[3]Burton, Anatomy, I, 37.

[4]Paul Kocher, "Paracelsan Medicine in England (ca. 1570-1600)," Journal of the History of Medicine, 2(Autumn, 1947), p. 475. Kocher states that by 1590 every well informed person in England came to know something about Paracelsian medicine. Also, Meyrick Carre, Phases of Thought in England (Oxford, 1949), p. 210. Carre argues that the "writings of Paracelsus were avidly studied in England by scholars interested in the secrets of nature."

[5]Jeremiah S. Finch, Sir Thomas Browne (New York, 1958), pp. 63-80.

a splendid herbal garden for the preparation of drugs. Judging from Browne's account of his own herbal garden, he obviously considered such herbs an absolute medical necessity. The list of herbs which Browne prepared in 1667 covers four pages of the Miscellany Tracts (III, 397-400). Even though Browne obviously follows the Paracelsian practice of preparation of specific drugs for specific illnesses, he deprecates Paracelsus' suggestion that plants should be renamed for the diseases they cure, stating that this is a "way more likely to multiply Empericks then Herbalists" (II, 153) and is unlikely to make any lasting contribution to the practice of medicine.

Browne probably did not encounter Paracelsian thought at the University of Padua, the second medical school he attended. But Browne's lifelong opinion that medical knowledge and practice should rest on the foundation of anatomy (IV, 255) can be traced to that university, where Harvey had studied Vesalian medicine before him.

At Leyden, where Browne most likely received his medical degree, Paracelsian medicine occupied a position of eminence in the university's curriculum. Professors at Leyden were reportedly drawn to the Paracelsian theory that many organic processes were chemical, and disease or illness caused by organic malfunctions were susceptible to cure by drugs prepared specifically for those organs. At Leyden, Browne is believed by some to have prepared his thesis on syphilis. Paracelsus was an authority on syphilis, and he was famous for his preparations

of allegedly miraculous mercurial cures.[6] Huntley argues, almost convincingly, that the assertion that Browne prepared his thesis, now lost, on syphilis rests upon slender evidence,[7] but it is not difficult to demonstrate from Browne's extant work that the subject of syphilis, and venereal disease generally, continued to interest him throughout his life. In Vulgar Errors, Browne isolates the supposed geographical origins of venereal disease, and puzzles over why it should have originated exclusively in the islands around America (II, 464). Browne's correspondence is also dotted with references to this disease. In a letter to his son Edward dated 1676, Browne recommends a new book by de Blegny on the "French disease" (IV, 63), and in 1679 he refers one of his own patients to Edward because his own various attempts at a cure, which included "mercuriall pills," had failed (IV, 107 and 116).

Specific references to Paracelsus appear in most of Browne's works, and in others numerous ideas occur which can be traced directly to him. These references, reflecting Browne's general ambivalence toward Paracelsus, at times hold him up to near ridicule, while at other times they appear to express genuine admiration, as, for example, in the passage below.

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[6]Walter Pagel, Paracelsus (New York, 1958), p. 24.

[7]Huntley, p. 68.

> I could never passe that sentence of Paracelsus without an asterisk or an annotation; Ascendens constellatum multa revelat, quaerentibus magnalia naturae, i.e. opera Dei (I, 41).[8]

Thomas Browne was drawn, as it appears many seventeenth-century physicians and scientists were, to the mystical, religious quality of Paracelsus' natural philosophy. Walter Pagel, who has examined the religious tone of Paracelsian medicine and science in great detail states, "The new science of Paracelsus knows only a single infinite universe. Therefore it is dedicated to the perception of the divine in the individual of the One in the multiplicity of his manifestations. It leads to a new reality, to life. According to the doctrine of Paracelsus, this science begins here below with experiments, but it must be blessed by grace from above."[9] Paracelsus' science is intuitive and non-rational, it is grounded in his faith in the Creator whose presence he discovers everywhere in the cosmos, and he believes that the secrets of nature are revealed by God to the pious investigator of nature. Pagel continues:

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[8]Sir Thomas Browne, Religio Medici and Other Works, ed. L. C. Martin (Oxford, 1964), p. 301. Martin argues that this passage is often wrongly attributed to the De Imaginibus of Paracelsus. A statement which closer to the sense of Browne's appears in Philosophia Sagax, Paracelsus, Opera Omnia, 3 vols. (Geneva, 1658), II, 528. All citations to the work of Paracelsus in this thesis are taken from this edition. "Astrum ducit hominem ad sublimem sapientiam, prudentiam, scientiam, ut in lumine admirabilis fiat, atque mysteria miraculorum Dei splendida et luculenta manifestentur."

[9]Walter Pagel, "Religious Motives in the Medical Biology of the XVIIth Century," Bulletin of the Institute of the History of Medicine, 3(Feb., 1935), 109-110.

> The combination of religious irrationalism and vitalistic empiricism characteristic of the XVIIth century originated in Paracelsus, in his refutation of formal logic and reason as methods of natural research, his mysticism and his realism. In all the fundamental points of his doctrine religious motives can be recognized: in his employment of analogy like that of the macrocosm-microcosm, in his theory of sympathy and antipathy, and in his rejection of ancient humoralism in favor of his doctrine of seeds and created entities ... These religious fundamentals are obvious in the predominance of spirit and imagination as emanations of the universal logos in things based upon the assumption that they, like Christ, represent the mediator between the One and the Many.[10]

In some of the ideas listed above, Browne clearly follows Paracelsus, but even though his science often leads Browne to rhapsodic meditations on the First Cause of Nature, his actual scientific investigation, as we shall see, is neither irrational nor fundamentally religious, but based upon formal logic and rational observation.[11] Browne, like Bacon before him, labels as one of the chief causes of error the proclivity of the unlearned to mingle religious, analogical truth with scientific investigation. Browne clearly demonstrates this view in a condemnation of one of the Christian superstitions, which he compares with the doctrine of sympathies and antipathies of

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[10]Pagel, "Religious Motives," pp. 119-20.

[11]As I have myself pointed out in the Introduction of this thesis, Browne's science does not possess the consistency of modern science and Browne often violates his own methodological guidelines. He, for example, condemns authority as a test of truth, but he turns to it again and again in Vulgar Errors. One fact, however, which does distinguish Browne's "scientific" writing from his sacred prose is that the former is virtually free of analogical, inferential thinking, while the latter pursues every conceivable analogy to an o altitudo.

Paracelsus, an idea which Browne disavows throughout his work.

> Thus the Ass having a peculiar mark of a cross made by a black list down his back, and another athwart, or at right angles down his shoulders; common opinion ascribes this figure unto a peculiar signation; since that beast had the honour to bear our Saviour on his back. Certainly this is a course more desperate then Antipathies, Sympathies, or occult qualities; wherein by a final and satisfactive discernment of faith, we lay the last and particular effects upon the first and general cause of all things (II, 475).

In Pagel's treatment of the religious motives of the medical biology of the seventeenth century, he, in another connection, refers to Sir Thomas Browne as an example of the "via media" as regards occult study. In Pagel's view, Browne's reconciliation of religion and science grows consistently out of Paracelsus' world view, and, although I reject that opinion because it is based upon a metaphorical passage in Religio Medici which Pagel takes literally,[12] his term, "via media," seems to me useful. Browne is aware that in his own time religion, magic, and science are not as yet absolutely distinguished, the perplexities of science often being "explained" by reference to hidden or occult qualities, or religious causation. Even though the example quoted above and many like it in Vulgar Errors demonstrate that Browne carefully separates these three realms of experience, he avails himself of their proximity in the minds of his readers when he writes his sacred prose. His "via media" is thus an

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[12]Pagel, "Religious Motives," p. 217.

attitude toward occult studies which allows him to employ the metaphoric language in his imaginative prose without committing himself to belief in the ideas themselves. Basil Willey states that Browne is a man pleading for religion in an age of science,[13] and occult sciences provide Browne with a mechanism for keeping one foot in the door of the church, another in the door of the laboratory.

I shall now turn to an examination of what I judge to be Browne's "via media" in dealing with the ideas of Paracelsus. Browne unquestionably employs Paracelsian ideas in his science and his art, but he is discriminating in what he accepts or transforms and in what he rejects. In terms of science, that discrimination proceeds largely upon Baconian scientific principles. In Christian Morals, Browne closes one of his most justly famous and eloquent passages in praise of the scientific revolution then in progress with an equally well known allusion to Paracelsian medicine.

> And therefore, rather than to swell the leaves of learning by fruitless Repetitions, to sing the same Song in all Ages, nor adventure at Essays beyond the attempt of others, many would be content that some would write like Helmont or Paracelsus; and be willing to endure the monstrosity of some opinions, for divers singular notions requiting such aberrations (I, 262).

Browne devotes space to the examination of both what is useful in Paracelsus and to the monstrosities and aberrations. He condemns several of the logical absurdities to which Paracelsus'

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[13]Basil Willey, The Seventeenth Century Background (Garden City, 1953; originally 1935), p. 49.

uncritical method leads him. One such absurdity is Paracelsus' belief in "non-Adamical men," those "middle natures betwixt men and spirits" which Paracelsus named fairies, nymphs, and pigmies. Browne's condemnation of this notion is unqualified, but the idea nonetheless stimulates his imagination -- as bizarre ideas often do -- and he muses that the immaterial soul could as easily "exercise her faculties" in a pigmy "as in a Giant" (II, 305-6). In Religio Medici, Browne alludes to another Paracelsian aberration. He writes: "I am not of Paracelsus' minde that boldly delivers a receipt to make a man without conjunction ..." (I, 46-7). Here Browne condemns this extravagant extension of the power of putrefaction, a theory which anticipates the idea of test-tube babies by several centuries. Paracelsus' formula follows:

> The secret of how to make the "homunculus" was known to the "Wunderleut" /Miracle Men/ of old who were themselves begotten by the process. It shall remain secret to the end of days, when everything will be manifest. A recipe is given, however it prescribes: let a man's semen putrefy in a sealed vessel for 40 days at the highest possible temperature -- until some movement can be seen. It will then resemble a human shape, but be transparent and without a body. It now needs feeding daily with the "arcanum" of human blood, for 40 weeks, after which it will develop into a real human child with all its limbs, only smaller.[14]

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[14]This paraphrase appears in Pagel, Paracelsus, p. 117. Two references in the Opera Omnia to the homunculus follow: "Origo quid spermatis est: per maximam enim digentem, quae in ventre equino sit, generatur homunculus, similis ei per omnia, corpore et sanguine, principibus membris, a quo produit" (II, 63). Also, "Ut autem id fiat, hoc modo procendum est: Sperma viri per se in cucurbita siggillata putrefiat summa putrifactione ventris equini per quadraginta dies, aut tandiu donec incipiat vivere et moueti ac agitari, quod facile videre tamen pellucidum it sine corpore" (II, 86).

Browne humorously rejects Paracelsus' alchemical boast that he had discovered the Elixir of Life.

> It is folly to find out remedies that are not recoverable under a thousand years; or propose the prolonging of life by that which the twentieth generation may never behold. More veniable is a dependance upon the Philosopher's stone, potable gold, or any of those Arcana's whereby Paracelsus that died himself at fourty-seven, gloried that he could make other men immortal (II, 197).

Browne treats more seriously the probably mistaken belief that Paracelsus died from taking one of his own mineral preparations. "And in the same sense shall we only allow a Diamond to be poison; and whereby as some relate Paracelsus himself was poisoned" (II, 125). In this passage Browne condemns the administration of even beneficial minerals in "gross and angular Powders."

In reading Browne's treatment of these "monstrosities" of Paracelsian thought we can understand why historians of medicine have referred to Paracelsian medical innovations as a mixed blessing. On the one hand Paracelsus insisted that physicians be consummate natural philosophers, that they experiment and prepare specific medical drugs for specific organic malfunctions, and that medical practice be based on a first hand knowledge of anatomy; whereas, on the other hand, his intuitive and non-rational methods make the belief that he died by his own hand from ingesting ground diamonds not totally unthinkable. Paul Kocher states that medical practice grounded in animistic, Cabalistic, and Neoplatonic

thought and encouraged by Paracelsus' example, produced countless quacks and charlatans who must have killed a considerable number of people with their uncontrolled medicines.[15] Browne delivers a vituperative condemnation of "Saltimbancoes, Quackslavers, and Charlatans" (II, 30) in Vulgar Errors, while he bestows high praise, in a letter to Dr. Samuel Bave, on Dr. Rant, who appears to have incorporated the beneficent qualities of the Paracelsian tradition while avoiding its very real dangers. Browne says of Rant "no one has such competence in disease and has explored the nature and cause of disease more deeply, and has moreover prescribed safe and specific remedies against disease" (IV, 243).

Browne's attitude toward the "singular notions" of Paracelsus, the beneficial qualities of his thought, can be best understood in the light of Allen Debus' explanation of the compromise position taken by most English physicians in regard to Paracelsian medicine. "They readily accepted those of the new remedies which proved their worth, but very few of them concerned themselves with the deeper and more occult aspects of Paracelsian thought."[16] Browne's compromise, his "via media," is of a different sort since he does find a place for the "deeper and more occult" aspects of Paracelsianism in his art though not in his medical practice. Before turning to his artistic use of Paracelsian thought,

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[15]Kocher, "Paracelsan Medicine," pp. 479-80.

[16]Allen Debus, The English Paracelsians (London, 1965), p. 80.

however, we will investigate Browne's use of ideas borrowed from Paracelsus in his own scientific investigation, which he scrupulously separates from occult and religious influence.

One of the principal contributions of Paracelsian medicine, which can be partially accounted for by the macrocosm-microcosm analogy, was Paracelsus' belief that the "greater" and "lesser" worlds operated on identical chemical principles. Debus explains:

> First, chemistry formed the basis of an understanding of the macrocosm as a whole. They /alchemists/ felt that the universe was chemically created and that it continues to operate in a chemical fashion ... Second, the Paracelsians turned their chemical key towards an understanding of the human body -- an approach they believed valid since they maintained that our bodies, which are in close correspondence with the macrocosm, must also operate chemically. Bodily functions and diseases were pictured as chemical malfunctions which chemically prepared medicines would counteract and cure.[17]

But Paracelsus' discovery of medical preparations was not based entirely on his a priori assumption of the macrocosm-microcosm analogy; many of his attempts at specific cures grew out of his first hand observation of disease. We have mentioned earlier Paracelsus' work with venereal disease. He also directly observed several bronchial and pulmonary illnesses which afflict men who work in mines.[18] It was the near epidemic proportions

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[17] Ibid., p. 4.

[18] Pagel, Paracelsus, p. 102, n. 268. Browne demonstrates an interest in mines and miners in his correspondence. See, IV, 41 and IV, 15, 16.

of diseases such as syphilis and the entire family of fatal illnesses to which mine workers were subject that accounted for much of the Renaissance dissatisfaction with Greek medicine, since many of the diseases current in the Renaissance and seventeenth century were unknown to Hippocrates and Galen. Though he is skeptical of Paracelsus' metaphysical flights, Browne accepts his empirical recommendations concerning such diseases. In a letter to Henry Power he advises a concise summary of the virtues of Paracelsian medicine without its aberrations. Browne stresses the importance of chemical preparations, and the thorough knowledge of disease both through familiarity with the authorities on disease and through direct observation. He closes his letter to Power with a succinct Latin maxim: secretum medicorum est judicium (IV, 256), advice which Power apparently kept with him since he went on to distinguish himself as a physician and a scientific investigator.[19]

Another of Paracelsus' medical innovations which grew out of his cosmic thought was his correct assumption that the causes of disease can often be traced to the infirmity of specific organs.

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[19] T. Cowles, "Dr. Henry Power Disciple of Sir Thomas Browne," Isis, XX (1933-4), 344-366.

> Disease and its cause, then, must be referred to a seat, and the cause found in a chemical substance -- a mineral 'element' -- well defined by its counterpart in the greater world. In other words pathology, must be based on the 'anatomia elementata' which is concerned with the distribution of minerals in the outside world ... Paracelsus' attention given to organs grows out of the principal article of his faith -- his conviction of the parallelism between man and the cosmos.[20]

It is clear from a number of Browne's letters that he, as a physician, looks upon disease as confined to specific organs, and that his administration of medical drugs is based upon that assumption.[21] But in his medical practice Browne rejects the notion that man's organs answer to their various counterparts in the macrocosm, or that any cure can be based upon such a correspondence. In a passage from Vulgar Errors, Browne denounces the error that man's body is magnetic, which, like Paracelsus' theory of organic pathology, is based upon the analogical microcosmic conceit. Browne removes the sting from his deprecation with a scatological joke, which closes the passage.

> It is improbable and something singular what some conceive, ... that the body of man is magnetical, and being placed in a Boat, the Vessel will never rest untill the head respecteth the North... This Opinion confirmed would much advance the Microcosmical conceit, and commend the Geography of Paracelsus, who according to the cardinal points of the World, divideth the body of man; and there-

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[20]Pagel, Paracelsus, p. 136-7.

[21]See IV, 27-232. In Browne's correspondence with his son, Edward, also a physician, he discusses a number of diseases for which he mentions the specific cures.

> fore working upon human ordure, and by long preparation rendering it odiferous, he terms it Zibeta Occidentalis, Western Civet; making the face the East but the posteriours the America or Western part of his Microcosm (II, 106).

While reading this denunciation of Paracelsian geographical analogy, the reader familiar with Browne's work will perhaps recall just how pervasively that geography -- the macrocosm-microcosm conceit -- occurs in his artistic prose.

Still another example of Browne's scientific application of Paracelsian thought is provided by his study of color indicators in Vulgar Errors. He praises and censures the chemists who had, on the basis of the three-principled theory with which Paracelsus had replaced the four Galenic humors, admirably explained odor and taste, but had inadequately accounted for color.

> The Chymists have laudably reduced their causes unto Sal, Sulphur, and Mercury; and had they made it out so well in this, as in the objects of smell and tast, their endeavors had been more acceptable: For whereas they refer Sapor unto Salt, and Odor unto Sulphur, they vary much concerning colour; some reducing it unto Mercury, some Sulphur; others unto Salt (II, 460).

Allen Debus, who has studied closely Browne's analysis of color indicaters in Vulgar Errors states that it, along with other evidence,[22] indicates that Browne was well acquainted with Paracelsian scientific theory. Browne's own attempt

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[22]Allen Debus, "Sir Thomas Browne and the Study of Color Indicators," Ambix, 10 (1962), 29-36. My discussion follows this article closely.

to discover which of the three elements, or which of the elements in combination, causes color begins with a hypothesis: though "Sulphur seem to carry the master-stroak, yet Salt may have a strong co-operation (II, 460).

Since Browne's discussion of this problem occurs in his digression concerning blackness, his two part explanation focuses on reactions which produce that color. In the first part of the explanation he observes that all combustible bodies contain an inflammable substance, which is Sulphur. This chemical, when exposed to a flame, when "torrified and sindged," turns black, as, for example, in the residue which remains in chimneys. From this and numerous other examples (II, 475-6), Browne concludes that Sulphur is one essential cause for the blackness of bodies. But he adds complexities to this simple explanation involving the effects of Vitriol on an oak-gall fluid. "The second way whereby bodies become black, is an Atramentous condition or mixture, that is a vitriolate or copperose quality conjoyning with a terrestrious and astringent humidity; for so is Atramentum Scriptorium, or writing Ink commonly made by copperose cast upon a decoction or infusion of galls" (II, 477). Browne has now satisfied himself that Salts also play a part in causing blackness, but he presses for a more complete explanation. He finds that "not only is Vitriol -- and therefore specifically the iron part of it -- the cause of blackness, but that salts generally play a part in the colours of substances. To support this contention he lists a variety of observations, among them that spirits of salt (hydrochloric acid) turn blue paper to an orient red,

and Tartar or vitriol turns an infusion of violets to a delightful crimson."

Debus concludes his article with high praise for Browne's experiment. "While Sir Thomas Browne was not primarily interested in the search for chemical indicators, this study represents a significant addition to the seventeenth-century body of chemical information -- not only in regard to this specific test as an indicator, but also as a clearly written study of chemical reaction. Finally, one might point to this description as a most interesting use of the three principle theory as a stimulus to chemical investigation." It should be added that this experiment proceeds from beginning to end with no discussion of occult qualities, sympathies or antipathies, no suggestion that celestial emanations play any part in darkening of oak gall; the experiment relies wholly on careful and controlled observation. Even though the experiment is grounded in Paracelsian theory, it seems closer in spirit to Boyle.

In his meditative prose, Sir Thomas Browne confronts a different array of problems from those posed by his scientific investigation and medical practice. Browne's spiritual confessions articulate his deeply held and emotionally experienced Christian faith, which his age apparently felt was at odds with the profession of medicine. The opening of Religio Medici contains a well known allusion to the idea that all physicians were atheists:

> For my religion, though there be severall circumstances that might persuade the world I have none at all, as the generall scandall of my profession, the indifferency of my behaviour, and discourse in matters of Religion, neither violently defending one, nor with the common ardour of contention opposing another; yet in despight herof I dare, without usurpation, assume the honourable stile of a Christian (I, 11).

Paul Kocher aptly traces this accusation leveled at physicians and he attributes it to a number of causes. One was, of course, the dependence of medicine on the pagan Greeks, especially Galen, who was singled out for his notable lack of spirituality.[23] Furthermore, Elizabethans often linked medicine with sorcery, or black magic.[24] Browne does little to allay this suspicion when in Religio Medici he cites the devil as a legitimate source of knowledge for men: "For this I do honour my own profession and embrace the

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[23]Kocher, "Paracelsan Medicine," p. 452.

[24]Kocher, Science and Religion, p. 243-5.

counsell even of the Devill himself: had he read such a Lecture in Paradise as hee did at Delphos, we had better known our selves, nor had we stood in feare to know him" (I, 21).[25] The popular belief that physicians depended upon judicial astrology in the treatment of diseases was added to the allegations against doctors.[26] Later I shall briefly analyze Browne's astrology.

Physicians who, like Browne, showed respect for Paracelsus might be suspected of atheism. Paracelsus was attacked by Erastus and others for his "heresies" and "cloudy theosophies"; still others associated Paracelsian doctrines with witchcraft and irreligious magic. Although Paracelsus' arcane terms could easily have led the uninitiated to this latter conclusion, nothing could be further from the truth. It was Galen, not Paracelsus, who had removed religious devotion from medical

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[25]A good deal has been written on Browne's belief in witchcraft, but I have read nothing which convinces me that we are to take such passages as the one quoted here literally. It is true that Browne testified at a trial that he believed in witches possessed by devils, but from a devout seventeenth-century Christian we could hardly expect different testimony. There can be little doubt that there are Christians who today believe in possession by Satan, and Roman Catholic priests still receive the power to exorcise at ordination. In the passage quoted here the point is self-knowledge, not possession. Similarly when Browne writes about the oracle of Apollo, whom he identifies with the devil, he does so to point out that man should depend on his own intelligence and industry rather than on delphic pronouncements. "Smarter curiosities would have been at the great Elixir, the Flux and Reflux of the Sea, with other noble obscurities in Nature; but probably all in vain: in matters cognoscible and framed for our disquisition, our Industry must be our Oracle, Reason our Apollo" (III, 102).

[26]Kocher, Science and Religion, p. 245.

considerations; Paracelsus, on the other hand, imported "supernaturalism and mystical allegory more intimately into the science of medicine than had ever been the case before."[27]

But Paracelsus had many defenders, who, though like Browne they were embarrassed by his excesses, realized that Paracelsus' religious faith, like his compassion for the sick, was sincere. Thomas Tymme, the translator of Duchesne's The Practice of Chymicall and Hermeticall Physicke, 1605, provides a typical opinion. Tymme, a cleric, was drawn to Paracelsian medicine because of its connection with religion. In the foreward to his translation of Duchesne, Tymme states that medical knowledge should be as widely diffused as possible. even among laymen, as a source of religious edification.[28] Tymme here correctly understands Paracelsian thought, since Paracelsus, following Ficino, believed that the physician performed a priest-like function. According to Pagel, Ficino considered it the "foremost act of charity to maintain a man in sound mind and healthy body."[29] The work of the religious physician is thus an exemplum of Christian love, and many passages in Browne's religious prose can be traced to this idea.

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[27]Kocher, "Paracelsan Medicine," p. 479.

[28]Debus, English Paracelsians, p. 88.

[29]Pagel, Paracelsus, p. 222-3.

The notion of the priest-physician affords Browne a number of opportunities both to artistically illustrate the devotion of physicians, and also to introduce Paracelsian material which he is compelled to reject from his science, but which allows him to express his faith more forcefully.

In Religio Medici, Browne is very much in the tradition of the priest-physican when he states that he cannot go to cure someone's body without thinking of the person's soul (I, 79). He links the physician directly to Christ in another passage which ends with a quotation from Matthew: "He went about Galilee healing all manner of Diseases" (I, 103). The following passage indicates that it is charity and sympathy with the suffering of his patient to the point of identification with him, rather than greed, which motivates the Doctor of Norwich.[30]

> I feele not in me those sordid, and unChristian desires of my profession, I doe not secretly implore and wish for Plagues, rejoyce at Famines, revolve Ephemerides, and Almanacs, in expectation of malignant Aspects, fatall conjunctions, and Eclipses: I rejoyce not at unwholsome Springs, nor unseasonable Winters; my Prayers go with the Husbandmans; I desire everything in its proper season, that neither men nor the times bee out of temper. Let mee be sicke my selfe, if often times the malady of my patient be not a disease unto me. I desire rather to cure his infirmities than my owne necessities (I, 84-5).

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[30]For a similar sentiment in the work of Paracelsus see Opera Omnia, II, 203.

The fact that Browne is not gladdened by the misfortunes of his patients is borne out time and again in his correspondence,[31] where he exhibits the compassion for humanity which many commentators argue was also characteristic of Paracelsus.[32]

In still another passage from Religio Medici, Browne cites anatomy as a possible object of divine meditation. "In our study of Anatomy there is a masse of mysterious Philosophy, such as reduced the very Heathens to Divinitie ..." (I, 47). In a letter to his son Edward dated 1676, Browne recommends a poem by Thomas Tenison, then Archbishop of Canterbury, which is dedicated to Browne, and which illustrates "God's wisdome and providence from Anatome" (IV, 57).

Before leaving this discussion of the priest-physician we can profitably ask how closely Browne's writing reflects the ideal set forth in the writing of Paracelsus. It appears clear, after examining a representative sample of what Browne has to say in this regard, that he does in fact employ and artistically transform this idea in defense of his profession. But the positions of Paracelsus and Browne are not identical. Paracelsus assumes that the pious physician can depend upon the beneficent assistance of the Creator whose power is everywhere, poised to be harnessed and employed for the good of man. Browne, on the other hand, confines himself to the metaphorical

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[31]See especially IV, 116-7, 168, 200, 202.

[32]Pagel, Paracelsus, p. 22. Also, Pachter, pp. 200 and 301.

connection between a healer of bodies and a healer of souls. When he mentions the "Amulets, Spells, Sigils and Incantations" -- all devices for commanding celestial influences -- which appear in the Archidoxis of Paracelsus (I, 103-III, 270), he clearly gives no credence to them. In fact, Browne's position differs little from that which Kocher advances as the norm for physicians in the English Renaissance. Most physicians, avers Kocher, were genuinely religious men who, while they probably believed in the possibility of divine intervention, conducted their practices as if such intervention did not exist.[33] For Paracelsus, whose entire epistemology is fundamentally religious, the ideal of the priest-physician comes close to defining the man, while Browne makes use of the ideal artistically, but proceeds upon scientific principles as a physician.

Another fundamental principle in Paracelsian thought which Browne modifies for his artistic ends is the macrocosm-microcosm analogy. George Conger, who has studied the history of this idea, upon which a number of occult sciences (including astrology and alchemy) rest, points out an apparent contradiction in Browne's attitude toward this analogy. He states that Browne apparently embraces the idea without reservation in Religio Medici (I, 44), condemns it in Vulgar Errors (II, 106), and employs it extensively in the Garden of Cyrus.[34]

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[33]Kocher, Science and Religion, p. 261.

[34]George Conger, Theories of the Macrocosmos and Microcosmos in the History of Philosophy, 2nd ed. (New York, 1967), pp. 65-6.

My position, as it will be developed here, is that while excluding the analogy from his science, Browne makes use of it, and of the occult sciences closely related to it, as metaphor in his sacred prose.

Conger traces the notion of the macrocosm-microcosm to antiquity. It becomes important for our consideration, however, because it makes its appearance in the Hermetic corpus. Conger asserts that the idea appears in the Hermetic Pimander. The conceit also appears in the pseudo-Hermetic Emerald Table, which succinctly summarizes some of the principal ideas and themes of the Corpus Hermeticum. The Emerald Table was used by the alchemists as their theoretical bible. One of the earliest statements in that work -- "that which is beneath is like that which is above"[35] -- is an allusion to the macrocosm-microcosm analogy. Although it is probable that Browne was familiar with Corpus Hermeticum, most of his references to Hermetic literature can be adequately accounted for on the basis of his familiarity with the work of Paracelsus. Debus asserts that many seventeenth century Englishmen attributed to Hermes esoteric and occult ideas which appear in Paracelsus.[36]

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[35]Kurt Seligmann, The History of Magic (New York, 1948), pp. 128-9. Browne quotes the Smaragdina Tabula in Christian Morals (I, 260) and in the Miscellany Tracts (III, 290). Shumaker, p. 243, argues that even though Browne alludes to the Emerald Table directly, it is with a skepticism characteristic of his later work. It seems to me that Browne quotes the passage -- Verum, certe verum, atque verissimum est -- as a striking contrast to the circumspect spirit he believes the scientific investigator should assume.

[36]Debus, English Paracelsians, p. 96.

In Chapter II of this thesis, I shall attempt to determine Browne's debt to the Hermetic writings; at this point, I shall discuss only his use of the macrocosm-microcosm analogy.

In the writing of Paracelsus, the importance of this analogy reached its highest point in the history of ideas. Conger says of the frequency of the idea in Paracelsus' work: "The term 'microcosmos' or its equivalent is used by Paracelsus more often than by any other writer -- perhaps as much as by all the writers up to his time taken together."[37] Paracelsus was perhaps the originator of the word "macrocosmos." The mere frequency of the appearance of this idea is hardly the important point, but rather the broad application, medical and moral, which Paracelsus found for this notion. Paracelsus positioned the belief that man is a microcosm at the center of his medical theory in an attempt to ground his medicine in great cosmic principles.[38]

Specific references to the macrocosm-microcosm analogy appear far more frequently in Browne's work than Conger's brief discussion of Browne would seem to indicate. It explicitly appears or is implied in each of his works. But for the Doctor of Norwich, the microcosm-macrocosm analogy is not a suitable tool for scientific investigation, which proceeds from the observance of causes in nature, and not from analogies. When Browne suggests the absolute necessities of medical practice

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[37]Conger, p. 57.

[38]Ibid., p. 59.

to Henry Power, he chooses not to include the application of this idea among those necessities. In that same letter, Browne extravagantly praises Harvey's discovery of the circulation of the blood, a discovery Browne "prefers to Columbus," but he includes no references to the fact that Harvey's discovery might be related to the microcosm-macrocosm conceit.[39] Browne's attitude toward this analogy seems to me very close to Bacon's, who condemned not the notion, but the practice of taking it literally.[40] As Huntley correctly points out, Browne acknowledges that the truth of the analogy cannot be grasped by the senses. Its truth is emblematic rather than literal; it affords a recognition, explanation, or confirmation of something already believed; and it can be comprehended only by the understanding. A few examples from Browne's work will make this point clear.

One of Paracelsus' most striking uses of this analogy can be found in his comparison of the macrocosm to the womb of our mothers.[41] Browne, following Paracelsus, who saw in the womb a symbol of the unification of the greater and lesser worlds because the womb contains properties of both worlds, states in Religio Medici:

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[39]Debus, English Paracelsians, p. 32.

[40]De Sapienta Veterum, XIII, pp. 147-8. The Works of Francis Bacon, ed. James Spedding, Robert Ellis, and Douglas Heath, 15 vols. (Boston, 1890).

[41]Opera Omnia, I, 99. "Sic se ergo Microcosmos seu minor mundus habet, in suo corpore continēs omnia mineralia mundi. Ad quod consequi scitote, quod corpus medicinam suam ex mundo conquirat is enim ipsumet est."

> Some Divines count Adam 30 years old at his creation, because they suppose him created in the perfect age and stature of man; and surely wee are all out of the computation of our age, and every man is some moneths elder than hee bethinkes him; for we live, move, have a being, and are subject to the actions of the elements, and the malice of diseases in that other world, the truest Microcosme, the wombe of our mother; for besides that generall and common existence wee are conceived to hold in our Chaos, and whilst wee sleepe within the bosome of our causes, wee enjoy a being and life in three distinct worlds, wherein we receive most manifest graduations (I, 50).

Paracelsus makes a number of specific connections between the objects of nature and their mother earth and the fetus in its prenatal environment. The seed is nourished by the earth as the fetus is cared for by the uterus. The plants sprout roots which attract nutriment from the earth; in the fetus, vessels attach themselves to the nourishing uterine wall, and so on. Browne closes the section in which the passage above appears with an illustration of the way in which man passes birth-like, through the various states of his being, from vegetable grossness like the earth's to a state of pure spirit.

Browne returns to this analogy in Hydriotaphia, but again his use of the conceit is literary rather than medical or scientific. Browne's artistic imagination is excited by the visual similarity of the burial urn and the womb, and by the intellectual paradox it forces upon him. "But the common form with necks was a proper figure, making our last bed like our first; nor much unlike the Urnes of our Nativity,

while we lay in the nether part of the Earth, and inward vault of our Microcosme" (I, 148).

Browne, in another passage, finds the analogy a fit vehicle for the metaphoric suggestion that our ignorance of the totally spiritual life in heaven parallels the fetal ignorance of physical life. "A Dialogue between two Infants in the womb concerning the state of this world, might handsomely illustrate our ignorance of the next, whereof methinkes we yet discourse in Platoes denne, and are but Embryon Philosophers" (I, 162). It is likewise metaphorical truth Browne concerns himself with when he uses the conceit as an analogy for self discovery:

> Wee carry with us the wonders, we seeke without us: There is all Africa, and her prodigies in us; we are that bold and adventurous piece of nature, which he that studies wisely learnes in a compendium, what others labour at in a divided piece and endlesse volume (I, 24).

And:

> Whilst I study to finde how I am a Microcosme or little world, I finde my selfe something more than the great. There is something of Divinity in us, something that was before the Elements, and owes no homage unto the Sun (I, 87).

Browne also employs the analogy for an artistic end when he insists in a witty paradox in Religio Medici that God cannot destroy the world entirely because man, who is the little world, will endure (I, 86).

The idea of the macrocosm-microcosm is directly related to occult sciences in Browne by a passage in Christian Morals

which links it with astrology. I quote the opening lines of a passage which will be quoted at length later in the chapter.

> Burden not the back of Aries, Leo, or Taurus, with thy faults, nor make Saturn, Mars, or Venus guilty of thy Follies. Think not to fasten thy imperfections on the Stars, and so despairingly conceive thy self under a fatality of being evil. Calculate thine own Orb or Microcosmical Circumference (I, 274).

The proximity of the microcosm-macrocosm analogy and astrology in Paracelsus and Browne is not accidental since, as Cassirer points out, the two realities are inextricably fused. "The astrological vision of the world had always been bound to the idea of the microcosm. Indeed, astrology seemed to be nothing other than the simple consequence and carrying out of that idea."[42]

In discussing Browne's astrology, Huntley argues that Browne "was concerned, more or less seriously, with the stars that presided over his birth"[43] throughout his lifetime. Huntley's discussion suggests that Browne took astrology rather seriously for he believes many of Browne's comments on astrology refer to Thomas Browne the man as well as the persona who speaks in the devotional prose. Huntley ends his treatment of Browne's astrology with the judgment that he was "Born so unlucky a horoscope /that he/ looked upon each day of his

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[42]Ernst Cassirer, The Individual and the Cosmos in the Philosophy of the Renaissance (New York, 1963), p. 10.

[43]Huntley, p. 2.

life as a special gift of Providence that stayed his destiny."[44] Don Cameron Allen expresses the same view in his study of Renaissance astrology when he asserts that "Sir Thomas Browne was half converted to the essential tenets of astrology..."[45]

Browne corresponds with two known astrologers, William Lilly and Elias Ashmole, which suggests some interest in the subject (IV, 292-8). In a letter to his son Edward he laments the imprisonment of astrologer John Gadbury, recalling that it is a capital crime to cast the king's horoscope (IV, 137). The attitude toward astrology which emerges from Browne's published works is hard to define. In Vulgar Errors, he unequivocally denounces astrologers, placing them in the infamous company of "Fortune-tellers, Juglers, and the like incantory Imposters" who daily and professedly "delude" scores of men (II, 30). Browne, like Paracelsus, objects not to the idea that stars can influence men's lives, but to the notion that celestial influence is so deterministic that a man's destiny can be predicted. Browne goes on:

> Astrologers ... who having won /m̄en's/ belief unto principles wherof they make great doubt themselves, have made them believe that arbitrary events below, have necessary causes above; whereupon their credulities assent unto any Prognosticks, considering the independency of their causes, and contingency in their Events, are only in the prescience of God (II, 30).

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[44] Ibid., p. 3.

[45] Don Cameron Allen, The Star Crossed Renaissance (New York, 1966), p. 145.

If the writer of these words did foretell events, as Whitefoot, Browne's earliest biographer, suggests,[46] it would be a strange contradiction indeed. Browne's works, as far as I can discover, contain only one prediction, and that one, the future location of the Panama Canal (II, 457), is more the result of Browne's geographical acumen than his intimate knowledge of the zodiak. In Vulgar Errors, he objects to the otherwise worthy inquiry of Cabalism on the ground that some of its adherents claim to be able to predict future events (II, 483).

Despite Browne's condemnations of astrologers, he manages to incorporate the language of the occult art into several passages in his works. Some of these examples are, in my view, only illustrative; others serve as a vehicle for the expression of Browne's faith. Among the examples of mere illustration, I would place Browne's references to his astrological relationship with Saturn. "At my Nativity, my ascendant was the watery signe of Scorpius; I was borne in the Planetary houre of Saturne, and I think I have peece of the Leaden Planet in me" (I, 88). This sentence appears in a discussion on sleep and waking, and it illustrates through the specific astrological association with Saturn, Browne's morosity which, as he says early in Religio Medici, is his

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[46] Works of Sir Thomas Browne, ed. Simon Wilkin (London, 1890), pp. xxx-xxxi. Whitefoot's remarks are quoted in Samuel Johnson's Life of Browne, which Wilkin chooses to reprint supplemented with the material Johnson omitted from his brief quotation.

normal state while awake. Browne goes on to say that despite this lack of "mirth" and his inability "to galliardize of company," in his sleep he can "compose a whole comedy, behold the action, apprehend the jests, and laugh /himself/ awake at the conceits thereof" (I, 88). The allusion to astrology underlines the point of this passage: that men are often radically different in states of sleeping and waking. Similar examples of the illustrative employment of astrology occur when, for example, in a discussion of his age he states, "If there be any truth in Astrology, I may outlive a Jubilee /A Jewish equivalent for fifty years/" (I, 52), and when in the Garden of Cyrus it provides still another example for the mystical consideration of the number five (I, 224).

Browne's ethical and religious use of astrology develops logically out of the Paracelsian attitude toward it. Cassirer states that the new cosmos outlined by Cusa, whom Paracelsus follows, makes the Ficinian explanation of celestial emanation untenable. "The idea of the world organism is here expanded in such a way that every element in the world may with equal right be considered the central point of the universe. The hitherto one-sided relationship of dependence between the lower and higher world now takes on more and more the form of a relationship of pure correlation."[47] Cassirer notes that the Paracelsian school still leans heavily on astrology, but in this newly modified sense, "we recognize that the tight

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[47]Cassirer, p. 110-11.

circle of naturalistic astrological thought is being penetrated by a new and fundamentally foreign idea. The purely causal mode of observation becomes teleological. And through this transformation, all definitions of relationship between the macrocosm and the microcosm receive, in a sense, a new accent, even though their content may remain the same. The ethical self-consciousness of a man opposes the astrological motif of destiny."

All of the following examples of Browne's astrology take into account this substitution of ethical self-consciousness for the notion of destiny. The lengthy passage which follows makes the point that man should make virtuous choices to overcome any malevolent influence. Browne stresses here the non-deterministic nature of celestial influences whether they be for good or for evil. Finally, Browne presents a witty astrological argument to refute the central allegation against it.

> Let celestial aspects admonish and advertise, not conclude and determine thy ways. For since good and bad Stars moralize not our Actions, and neither excuse or commend, acquit or condemn our Good or Bad Deeds at the present or last Bar, since some are Astrologically well disposed who are morally highly vicious; not celestial Figures, but Virtuous Schemes, must denominate and state our Actions... Whatever Influences, Impulsions, or Inclinations there be from the Lights above, it were a piece of wisdom to make one of those Wise men who overrule their Stars, and with their own Militia contend with the Host of Heaven (I, 275).

If, as Kocher states, the most forceful argument against astrology derives from a denial of freewill,[48] Browne

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[48]Kocher, Science and Religion, p. 201.

is certainly in no doctrinal difficulty here.

The passage from Vulgar Errors which follows is similar in tone to the one above. Again Browne acknowledges the influence of the stars, but asserts the ascendency of the human will over their influence.

> Nor do we hereby reject or condemn a sober and regulated Astrology; we hold there is more truth therein than in Astrologers; in some more than many allow, yet in none so much as some pretend. We deny not the influence of the stars, but often suspect the due application thereof; ... There is in wise men a power beyond the Stars (II, 336).

Browne's passage is remarkably similar to one Pachter attributes to Paracelsus.

> Man is superior to the stars if he lives in the power of superior wisdom. Such a person, being master over heaven and earth, by means of his will, is a magus, and magic is not sorcery but supreme wisdom.

Browne shares with Paracelsus the belief in the ability of men of militant virtue to overcome malign influence through the strength of their reason and will. These final examples demonstrate Browne's use of astrology in the expression of his religious devotion.

> We need not labor so many arguments to confute judiciall Astrology; for if there be a truth therein, it doth not injure Divinity; if to be born under Mercury disposeth us to be witty, under Jupiter to be wealthy, I doe not owe a knee unto these, but unto that mercifull hand that hath disposed and ordered my indifferent and uncertaine nativity unto such benevolous aspects (I, 29).

And:

> I say, every man hath a double Horoscope, one of his humanity, his birth; another of his Christianity his baptisme, and from this doe I compute or calculate my Nativitie; not reckoning those Horae combustae, and odde dayes, or esteeming my selfe any thing, before I was my Saviours, and inrolled in the Register of Christ (I, 55).

In addition to his reliance upon Paracelsus for the macrocosm-microcosm conceit and a concomitant ethical interpretation of astrology, Browne also borrows the doctrine of signatures from Paracelsus. Like Paracelsus, Browne believed that the Creator revealed his real presence in nature through visible signs. He finds in every natural phenomenon a revelation of the power and glory of God and a sign which exposes the inner nature of the phenomenon. Browne prefers the term "hieroglyph" for these external signs, but he incorporates what Paracelsus has to say about signatures and he also draws into his consideration the traditional associations initiated Renaissance readers attached to these Egyptian characters.[49]

For Paracelsus, the primarily medical notion of signatures has the characteristic theological underpinnings. "The search for the visible 'seals' and forces in Nature will thus, however indirectly, lead to truth -- in contrast

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[49]The Renaissance view of hieroglyphs is summarized by both Gordon K. Chalmers, "Hieroglyphs and Sir Thomas Browne," Virginia Quarterly Review, XI (1935), 547-560, and Liselotte Dieckmann, "Renaissance Hieroglyphics," Comparative Literature, IX, No. 1 (Winter, 1957), 308-321.

to mere human speculation. For there is more 'Knowledge' ('wissen und erkentniss') in that which God has created than there is in human reasoning. Thus we recognize God in his creation which is the greater world and in whom all its parts are represented."[50] Careful scrutiny of vegetable creation, however, reveals not only the signature of the Creator but also His -- as the Divine Physician -- direction for finding specific medical cures. "A herb reveals by a certain configuration or colour of its leaves, flowers or roots an affinity with a certain star, organ, or disease."[51] Affinities with certain stars is an important part of this scheme since each of the planets has a corresponding metalic counterpart used in chemical cures, and some diseases are believed to respond to the astrological influence of one or another of the planets.

Browne, of course, broadly employs the doctrine of signatures -- he uses the term "hieroglyphs" -- in his works. Many readers of Religio Medici may recall the notion of the visible signs of the invisible God in Nature as one of the most enduring impressions left by that work. One example of this

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[50]Pagel, Paracelsus, p. 56. See Opera Omnia, I, 283. "Vos ergo Medici si probi et frugi esse vultis, strenue id annitimini: nec, quemadmodum sues in agro rapa versant, sic vos hominem tracteris, ad Dei similitudinem effectum: sed eo modo integritate ambulate, sicut Deus Medicum in suo libro instituit."

[51]Ibid., p. 148. See Opera Omnia, I 284. "Exemplum: Euphragia formam ac imaginem--signatura--oculorum in se habet. Unde sit, ut assumpes in membrum suum se sistat, et in ipsam formam eius membri, ita ut Eufragia integer ac totus oculus fiat... Membra universa hominis suam omnino similem formam habent in rebus crescentibus, in lapidibus, in metallis, in minerabilius etc.

Renaissance commonplace that God reveals himself in the Book of Nature appears below in an abbreviated allusion to Browne's "devout and learned admiration."

> These are Contemplations Metaphysicall; my humble speculations have another Method, and are content to trace and discover those impressions hee hath left on his creatures, and the obvious effects of nature (I, 22).

Unlike Paracelsus, however, and consistent with his own general attitude toward occult studies, Browne scrupulously excludes the doctrine of signatures from his scientific investigations. Browne never argues that anything can be newly discovered or explained by means of hieroglyphs. As Chalmers so aptly puts it in his study of Browne's treatment of hieroglyphs: "To interpret symbols with any accuracy, one must first understand the limitations of the metaphor, Browne thought, distinguish between cause and analogy, and be content never to seek anything wholly new by means of a hieroglyph, for a metaphor does not compel the mind to accept a necessary conclusion; its truth is merely recognized."[52]

As symbols, hieroglyphs afforded Browne numberless opportunities for recognition of the Creator through apparently "scientific" observation. In the Garden of Cyrus, where Browne unearths the mystical inscription of the quincunx from virtually every part of the creation, other mystical messages in nature command his attention as well.

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[52]Chalmers, p. 557.

> Studious Observators may discover more analogies in the orderly book of nature, and cannot escape the Elegancy of her hand in other correspondencies. The Figures of nails and crucifying appurtenances, are but precariously made out in the Granadilla or flower of Christ's passion: And we despair to behold in these parts that handsome draught of the crucifixion in the fruit of the Barbado Pine ... Some finde Hebrew, Arabick, Greek, and Latine Characters in Plants; In a common one among us we seem to reade Aiaia, Viviu, Lilil (I, 206-7).

Browne's preference for the term "hieroglyph," rather than "signature," draws into his theme of visible manifestations of the Creator the mystical associations Renaissance men assigned to things Egyptian. As symbols, hieroglyphs were believed to have the advantage of being immediately apprehensible to the initiate. As Liselotte Dieckmann puts it: "These symbols were thought to represent ideas rather than letters or sounds, and the ideas were considered to be the secret wisdom preserved by the priests which only the initiated could decipher."[53] This is precisely the way in which Browne understands and presents his conception of hieroglyphs in his essay on that subject in Vulgar Errors.

> Certainly of all men that suffered from the confusion of Babel, the Aegyptians found the best evasion; for, though words were confounded, they invented a language of things, and spake unto each other by common notions in Nature. Whereby they discoursed in silence, and were intuitively understood from the theory of their Expresses. For they assumed the shapes of animals common unto all eyes; and by their conjunctions and compositions were able to communicate their conceptions, unto any that coapprehended the Syntaxis of their Natures (II, 379).

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[53]Dieckmann, p. 308.

But Browne closes this discussion with his characteristic warning that hieroglyphs, although laudable symbols containing metaphoric truth, are also the source of numerous "vulgar" errors because they are often taken literally.

> Thus began the descriptions of Griphins, Basilisks, Phoenix, and many more; which Emblematists and Heralds have entertained with significations answering their institutions; Hieroglyphically adding Martegres, Wiverenes, Lion fishes, with divers others. Pieces of good and allowable invention unto the prudent Spectator, but are lookt on by vulgar eyes as literal truths, or absurd impossibilities; whereas indeed, they are commendable inventions, and of laudable significations (II, 380).

Thus the "prudent spectator," equipped with the understanding of the type of truth hieroglyphs yield, can learn much from them, and their general extended association as signatures. In the example which follows, Browne fuses the study of manifestations of the Creator in Nature with related, but more esoteric signature-reading, finally associating the entire discussion with the Egyptians.

> I hold moreover that there is a Phytognomy, or Physiognomy, not onely of men, but of Plants, and Vegetables; and in every one of them, some outward figures, which hang as signes or bushes of their inward formes. The finger of God hath set an inscription upon all his workes, not graphicall or composed of Letters but of their several formes, constitutions, parts, and operations, which aptly joyned together make one word that doth expresse their natures. By these letters God cals the Starres by their names, and by this Alphabet Adam assigned to every creature a name peculiar to its Nature. Now there are besides those Characters in our faces, certaine mysticall lines and figures in our hands,

> which I dare not call meere dashes, strokes, a la volee, or at randome, because deliniated by a pencill, that never workes in vaine; ... I beleeve the Egyptians, who were neerer addicted to those abstruse and mysticall sciences, had a knowledge therein, ... (I, 72-3).

Browne's particular attitude toward hieroglyphs can be more clearly focused through a comparison with the founder of Egyptology, Athanasius Kircher, a prolific writer on hieroglyphs whom Browne praises repeatedly.[54] Kircher's mistaken notions about hieroglyphs grew out of his acceptance of the mystical Neoplatonic world. Erik Iversen, who respects Kircher in spite of his obvious errors, says of him: "From the Renaissance Kircher had inherited the conceptions of a God-centered universe, dominated by a timeless emanation of divine truth, pervading it as an elementary dynamic force. The supreme and final manifestation of this truth was in Kircher's opinion the revelations of Christianity, but it was immanent in all existing religions and philosophic systems as well, and the philosophy of the Egyptians, such as it had inspired a Plato and a Pythagoras, was its highest pre-Christian manifestation."[55] Iversen's allusion here is to the notion of prisca theologia which argues that all religions which antedate Christianity prophetically foreshadow it.

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[54]See II, 62, 191, 267; III, 249, 308. Browne alludes only to Kircher's learning and says nothing of his often remarked upon credulity.

[55]Erik Iversen, The Myth of Egypt and its Hieroglyphs (Copenhagen, 1961), p. 94.

The idea assumes the mistaken Ficinian chronology which placed Hermetic Philosophy -- believed to contain the truths of mystical Egyptian philosophy and religion -- before all other religions, including the Hebrew. In addition, Kircher believed that Hermes Trismegistus was the inventor of hieroglyphs,[56] which contained within themselves secrets of the operation of the Neoplatonic world.

Browne often avails himself of Kircher's examples, in his devotional prose, but he does so with restraint. Thus, in the Garden of Cyrus, when he repeats Kircher's assertions that invisible spirits move from the celestial spheres, through the earth, under the earth and back to the celestial spheres again following an X-shaped path, he does so without absolutely endorsing the idea -- "And if Aegyptian Philosophy may obtain" -- and without the direct connection that Kircher makes with the Spiritus Mundi (I, 220).[57] Recalling Chalmers' suggestion quoted earlier, we can see that Browne believes that the limitation of metaphor ends with recognition, not explanation, which involves the knowledge of direct causation. Browne appears satisfied that his reference to celestial emanation adumbrates a Reality outside the bounds of human knowledge; such a Reality can be glimpsed, but not, as Kircher is striving to do, explained.

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[56]Frances Yates, Giordano Bruno and the Hermetic Tradition (New York, 1969), p. 402.

[57]Athanasius Kircher, Obiliscus Pamphilius (Rome, 1650), p. 385.

A second reference which Browne borrows from Kircher is that of the handled-crosses (cruces ansatae).[58] Browne's use of this figure, which is identical to the astrological sign of Venus, artistically fuses the Christian cross with the Hermetic circle which is "the nature of God" (I, 204). As Chapter III of this thesis argues in detail, Browne makes extended use of the symbolic associations of this and other geometrical images, but Browne's purpose remains essentially artistic. He disavows Kircher's extended discussion of the handled cross as a talisman for making celestial influence the servant of mankind,[59] just as he rejects similar Paracelsian suggestions. For Kircher, like Paracelsus, the lines which divide religion, magic, and science, as this illustration demonstrates, are extremely vague if they exist at all. With his insistence on two types of truth, however, Browne manages to make distinctions between rational, scientific truth, and shadowed symbolic truth at the expense of neither his science, nor his religion and art.

I have discovered only one instance in all of Browne's writing in which he apparently abandons the distinction between literal and metaphoric truth. In Religio Medici, Browne writes:

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[58]L. C. Martin, p. 352. Crosses with handles. For hand-handles see OED.

[59]Kircher, Oedipus Aegypticus (Rome, 1652), p. 439. "Crux ansata... amuletum contra adversas potestates omnium efficasissimum... indicat praeterea processum animae mundi per omnia mundi membra."

> A plant or vegetable consumed to ashes, to a contemplative and schoole Philosopher seemes utterly destroyed, and the forme to have taken his leave for ever: But to a sensible Artist the formes are not perished, but withdrawne into their incombustible part, where they lie secure from the action of that devouring element. This is made good by experience, which can from the ashes of a plant revive the plant, and from its cinders recall it into its stalk and leaves againe (I, 59).

Browne makes it clear that this "occular and visible" type of the "resurrection" is effected through God's invisible power. He has stated as a literal truth an idea which he would ordinarily regard as metaphoric -- an idea which the senses could not accept, but which would be true to the eyes of the understanding. Dr. Henry Power, Browne's indefatigable young correspondent, apparently finds this the most striking passage in Religio Medici, since he writes Browne at least two letters asking for the source of the information about this experiment (IV, 258). Power states that he finds the notion "obscurely and imperfectly" in Quercitan -- Joseph Duchesne, the French Paracelsist. L.C. Martin suggests that Helmont is the source of the idea, but I have found it in Paracelsus and Cardan,[60] both likely sources.

We can be certain from Power's first letter that Browne has once allowed Power's inquiries -- in a third, earlier letter -- about the revivification of the plant to go unanswered (IV, 258), and no reply by Browne to Power's

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[60]Jerome Cardan, The First Book of Jerome Cardan's De Subtilitate, trans. with the Latin by Myrtle Cass (Williamsport, 1934), p. 83.

second letter has been discovered. William Dunn suggests that Browne, who usually handles the mystical material he employs in his writing with considerable artistic restraint, has allowed himself in the passage just quoted to rashly follow Paracelsus.[61] Dunn's explanation appears to me to be correct since this one apparently literal example appears at the close of a series of other illustrations which are obviously metaphoric in intent. Browne perhaps feels that he has significantly qualified the statement with the words "to a sensible Artist," but his phrase "made good by experience" justifies Power's confusion. If Browne's answer to Power is ever discovered, it will probably contain some restatement of his position on the distinction between metaphoric and literal, scientific truth, and perhaps a mildly embarrassed apology for succumbing to a confusion which he says elsewhere is unique to "vulgar heads": the failure to discriminate between literal and metaphoric truth. In Vulgar Errors Browne condemns the "vulgar" more than once for their literal understanding of the Phoenix legend, but in his passage on the revivification of plants Browne is himself guilty of an identical confusion. He merely substitutes, in his error, a resurrected plant for the mythical bird of Arabia.

Browne's scientific debt to Paracelsus is great, but it is a debt he shares with most other physicians in the seventeenth century. Far more interesting is his debt for those occult notions which Browne transforms into effective metaphors

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[61]Dunn, p. 23.

in his art. Still another rich source of metaphor from which he draws is the Hermetic literature and the Hermetic art -- alchemy --, to which we now turn.

CHAPTER II

BROWNE AND HERMES TRISMEGISTUS

As a man of genuine scientific interests, Browne realized no less than Francis Bacon that science had to rid itself of religious interference in order to proceed with the "noble Elucatation of Truth" (I, 262), with the establishment of the enterprise soon to become modern science. We have observed that Browne the physician and investigator of nature maintained his science largely free from religious influence. At the same time he insisted that rightly understanding the demonstrable relationships among phenomena in nature could evoke in the rational investigator of creation a sense of wonder about and admiration for the Creator. Browne's remarks on the loadstone provide one of many possible examples:

> Other Discourses there might be made of the Loadstone: as Moral, Mystical, Theological; and some have handsomely done them; as Ambrose, Austine, Gulielmus Parisienses, and many more, but these fall under no Rule, and are as boundless as men's inventions. And though honest minds do glorifie God hereby; yet do they most powerfully magnifie him, and are to be looked on with another eye, who not from postulated or precarious inferences, entreat a courteous assent; but from experiments and undeniable effects, enforce the wonder of its Maker (II, 116-7).

Browne here as elsewhere is reluctant to condemn men of genuine devotion who think they are serving religion by assigning mystical properties to natural objects, but he maintains that God receives the highest praise from those who truly comprehend natural phenomena.

On the other hand, Browne, the writer of devotional prose who best commands the attention of modern readers, must unite the two worlds that the scientist must insist upon separating. He sought to ally his religion and science in a way which would neither render his science false by grounding it, as Paracelsus had, in a priori religious principles, nor remove the study of nature so entirely from the realm of faith that science would appear alien to belief in God. I shall argue in this chapter that through the incorporation in his devotional prose of borrowings from alchemy and perhaps the Corpus Hermeticum, Browne managed to construct a metaphoric bridge between his religion and science. I shall begin the discussion with Browne's debt to alchemy because it is an unambiguous one, and will conclude with Browne's possible reliance upon the Corpus Hermeticum. Before turning to alchemy, however, it will be necessary to clarify some of the cloudy terminology which surrounds this subject, and to establish the terms upon which the present discussion will proceed.

Anyone acquainted with the critical commentary on hermeticism, a general category of esoteric studies which includes alchemy, knows that it is hopelessly confusing. The

confusion is directly bound up with the shifting definitions of the terms "hermeticism," "hermetism," and "hermetical philosopher" and "philosophy." For example, when Margaret Heideman argues that the opening images of the Garden of Cyrus (I, 179) and a later allusion to the color green (I, 217) are hermetic, she is referring to images drawn from alchemical sources.[1] When Dewey Ziegler states that "Hermetic philosophy could form a doctrinal basis for Browne's method of relating his observation of nature and God,"[2] he is presumably establishing Browne's debt to the Corpus Hermeticum,[3] a body of speculative philosophic treatises ascribed to Hermes Trismegistus. In E. C. Pettet's treatment of hermetic philosophy in Henry Vaughan -- most of Pettet's remarks on alchemy can be applied with equal force to Browne -- he mines his examples solely from alchemical texts.[4] Wayne Shumaker acknowledges Browne's interest in alchemy, but limits his examination of Browne's work to the influence of the Corpus Hermeticum alone, when it is by no means clear that the terms "hermetic"

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[1]Margaret A. Heideman, "Hydriotaphia and the Garden of Cyrus: A Paradox and a Cosmic Vision," University of Toronto Quarterly, XIX (April, 1950), 241.

[2]Ziegler, p. 30.

[3]The discussion of the Corpus Hermeticum, including the edition of these works referred to in this chapter, begins on page 19.

[4]E. C. Pettet, Of Paradise and Light (Cambridge, 1960), pp. 71-85.

or "hermetical" as Browne employs them, refer specifically to that body of writing; on the contrary, Browne's borrowings from genuinely alchemical sources appear to far outstrip those from the Corpus Hermeticum itself.[5]

If rigidly maintained, the terms "hermetism," if applied solely to the Corpus Hermeticum, and "hermeticism," if reserved for esoteric systems generally, would seem to remove the present confusion, but what then is a hermetic philosopher, or hermetic -- or hermetical, Browne's usual preference -- philosophy? In most scholarship these two terms are synonymous with alchemy and the alchemist. How then does one treat those who like Agrippa, Paracelsus, and Kircher are deeply influenced by the Corpus Hermeticum? They should obviously not be called hermetic philosophers because this would confuse them with alchemical adepts.

For the purpose of this chapter the ill-defined term hermeticism will be avoided completely since the only esoteric system which is really pertinent here is alchemy. I shall first attempt to elucidate Browne's use of alchemy as a metaphoric bridge between his science and faith, and second I shall examine the relationship of Browne's possible borrowings from the Corpus Hermeticum to his thinking.

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[5]Browne never quotes, as far as I have been able to discover, the body of documents called the Corpus Hermeticum by modern scholars (Cf. note 35).

I

Many studies of alchemy and its impact on modern science and literature, especially Renaissance literature, are available today. E. J. Holmyard's book is especially useful because in it he summarizes the conclusions of early scholars of Chinese, Egyptian, and Islamic alchemy along with his own study of this religio-pseudo-science in the West. After calling attention to the deep interest of Sir Thomas Browne in alchemy,[6] Holmyard provides a lengthy description of its twofold nature.

> Alchemy is of a twofold nature, an outward or exoteric and a hidden or esoteric. Exoteric alchemy is concerned with attempts to prepare a substance, the philosopher's stone, or simply the Stone, endowed with the power of transmuting the base metals lead, tin, copper, iron, and mercury into the precious metals gold and silver. The Stone was also sometimes known as the Elixir or Tincture, and was credited not only with the power of transmutation but with that of prolonging human life indefinitely. The belief that it could be obtained only by divine grace and favour led to the development of esoteric or mystical alchemy, and this gradually developed into a devotional system where the mundane transmutation of metals became merely symbolic of the transformation of sinful man into a perfect being through prayer and submission to the will of God.[7]

Shumaker objects to the concept of esoteric or mystical alchemy on the grounds that it is not a separate reality, but merely "a more highly metaphorical and imaginative style which was encouraged among especially literate and reflective writers, both by the tradition of veiled utterance and by a tendency

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[6]E. J. Holmyard, Alchemy (Baltimore, 1968), p. 15.

[7]Ibid., p. 16.

to draw parallels between changes imposed upon the laboratory materials and such Christian ceremonies or mysteries as baptism, marriage, resurrection, and transfiguration,"[8] However, Holmyard's distinction has the advantage of accounting for writers like Browne who, as far as we can discover, never attempted to produce gold, but who employ the mystical-scientific language of alchemy in their work. And in spite of Shumaker's objection, some students of alchemy, including Mircea Eliade, argue that this division between exoteric and esoteric alchemy inevitably develops when the assumptions about matter upon which alchemy is based begin to break down. "Alchemy posed as a sacred science, whereas chemistry came into its own when substances had shed their sacred attributes."[9] Browne is writing at precisely the point in the history of European alchemy when matter is shedding its sacred attributes. One finds in the seventeenth century on the one hand the fledgling science of chemistry, and, on the other, a richly suggestive language which describes chemical reactions and the deepest religious emotions in interchangeable phraseology.

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[8]Shumaker, p. 170.

[9]Mircea Eliade, The Forge and the Crucible, trans. Stephen Corrin (New York, 1971), p. 9.

Browne's familiarity with exoteric and his use of esoteric alchemy is not difficult to document.[10] In two letters to Elias Ashmole, Browne reveals his acquaintance with the alchemical opus through his friendship with Arthur Dee. Browne's first letter to Ashmole dated 25 January 1658 says of Arthur Dee: "he was a persevering student of Hermetical philosophy and had noe small encouragement, having seen projection made; and with the highest asseverations he confirmed unto his death, that hee had ocularly, undeceavably, and frequently beheld it in Bohemia" (IV, 293). The impact the testimony of this "familiar friend" must have had on Browne's imagination is not difficult to envision. It does not seem extravagant to conjecture that Browne discussed this subject often with Arthur Dee, who lived in Norwich and who studied alchemical documents all of his life. "Dr. Arthur Dee was a young man when he saw this projection made in Bohemia, butt he was so inflamed therwith that he fell early upon the studie and read not much all his life but bookes of that subject" (IV, 297). A number of the documents which occupied Dee throughout his life, Browne possessed (IV, 294) and later entrusted to Ashmole, probably during the preparation of his

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[10]Browne speaks knowledgeably about the steps of the alchemical opus in his discussion of Roger Bacon's famous projection (II, 538-9), which was dramatized by Robert Greene in his play The Honorable Historie of Frier Bacon and Frier Bongay. In addition, in the list of documents Browne sent to Ashmole (IV, 294), one which provides a formula for "shortning of the great work" is included. This it seems would indicate Browne's knowledge of the large amount of time normally required for the performance of the traditional steps in preparation of the Philosopher's Stone. For an annotated description of those steps see Shumaker, pp. 171-1, or Holmyard pp. 17-19.

Theatrum Chemicum Britannicum, a verse anthology containing the work of several English writers on alchemy.

Although Browne never professes belief in Arthur Dee's story, the manner in which he reports it leaves no doubt about Dee's sincerity: "I have often heard him affirme, and sometimes with oaths, that hee had seen projection made and transmutation of pewter dishes and flagons into sylver, which the goldsmiths at Prague bought of them, and that count Rosenberg played at Quaits with sylver Quaits made by projection" (IV, 297).

There were certainly men in England who had far less reliable evidence for their belief in alchemy than the testimony of a close friend, but Browne never wholly commits himself to belief in projection. He seems unable to hold the unquestioning belief in universal correspondence which allowed alchemists to understand the purification of metals and the regeneration of the physical and spiritual health of men to be literally identical processes.[11] It should not be forgotten that even though Browne was an artist whom the idea of universal analogy would appeal to, he was also a physician faced daily with illnesses for which medicines prepared on the basis of such analogies proved useless. It is the physician-scientist who, although he will not wholly exclude the possibility of the Philosopher's Stone and an Elixir of Life, attacks those who spend their lives in an apparently futile

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[11]Walter Pagel, "Paracelsus and the Neoplatonic and Gnostic Tradition," Ambix, 8 (1960), 129-30.

search for such universal cures. "It is folly," he has said, "to find out remedies that are not recoverable under a thousand years; or propose the prolonging of life by that which the twentieth generation may never behold" (II, 197).[12]

In an earlier book of Vulgar Errors, Browne includes a more forceful condemnation of the alchemists for holding out a false hope of the eventual discovery of a panacea.

> I wish herein the Chymists had been more sparing: who overmagnifying their preparations, inveigle the curiosity of many, and delude the security of most. For if experiments would answer their encomiums, the stone and Quartane Agues were not opprobrious unto Physitians: we might contemn that first and most uncomfortable Aphorism of Hippocrates, for surely that Art were soon attained, that hath so general remedies; and life could not be short, were there such to prolong it (II, 52).

Many commentators on Browne have described his soaring lyrical imagination, but another side of the man which emerges unambiguously from his works is the practical, hard-headed physician who faces a daily medical practice in which

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[12]In a discussion of the Oracle of Apollo which appears in the Miscellany Tracts (III, 102), Browne suggests that Philostratus could have demanded the secret of the great Elixir from the ghost of Achilles. But the passage indicates no real interest in the Elixir itself; it is rather employed by Browne as an illustration that men should use their reason and industry instead of depending upon oracles.

not only the "Stone and Quartane Agues," but also infant mortality[13] and a host of other recalcitrant medical problems -- such as smallpox (IV, 200, 202) -- fail to respond to the general remedies alluded to above. Alchemy may indeed provide a propitious language for the expression of religious sentiment, but Browne never regards alchemy as a source of miraculous cures without derision.

Despite these condemnations of exoteric alchemy, Browne makes extensive use of alchemical language in his meditative prose, and there is perhaps no other British writer in the seventeenth century, except Jonson and Donne, who blends alchemical material into his work so effectively. Browne's utilization of alchemical diction as a source of figurative language follows his general use of occult sciences as a metaphoric means of expressing, and allowing his readers to experience, the emotional immediacy of the Divine Reality confirmed intuitively by his faith. In their discussion of

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[13]Browne writes in A Letter to a Friend, "Nothing is more common with Infants than to dye on the day of their Nativity, to behold the worldly Hours and but the Fractions thereof; and even to perish before their Nativity in the hidden World of the Womb, and before their good Angel is conceived to undertake them" (I, 105). This reflection on infant mortality leads Browne to consider those who die on their birthdays, as he himself was destined to do: "That the first day should make the last, that the Tail of the Snake should return into its Mouth precisely at that time, and they should wind up upon the day of their Nativity, is indeed a remarkable Coincidence ..." (I, 105). The image Browne refers to here is the alchemical uroboros, which appears as Browne describes it in countless alchemical texts as a symbol of the completion of the great work, and, figuratively, as a symbol of perfection. Carl Jung, Psychology and Alchemy, trans. R. F. C. Hull (London, 1953), presents a number of varied representations of the uroboros; see also the frontispiece of The Works of Thomas Vaughan, ed. Arthur E. Waite (London, 1919).

figurative language, Warren and Wellek explain the mystical image in a way which is particularly appropriate for the alchemical imagery of Sir Thomas Browne. "The /mystical/ image is a symbol effected by a spiritual state; it is an expressive image not a causative image, and it is not necessary to the state: the spiritual state can express itself in other symbols."[14] To be sure, Browne's faith expresses itself in other symbols, but his partial reliance on alchemical language possesses distinct advantages. Not only are the languages of alchemy and Christian ritual and mysteries interchangeable, but seventeenth-century readers were aware that the true adept -- not scoundrels like those portrayed in the Canon's Yeoman's Tale and The Alchemist -- was traditionally a man of sincere religious faith.

> Thus the Opus /gold making/ of the alchemist is dedicated to such redemption as the perfection of metals will afford. To be successful the process in the furnace must be accompanied by a corresponding purification of the worker.[15]

This archetypal religious scientist expresses himself in words which at once convey the laboratory procedures of his art, and his own religious beliefs. Browne could scarcely have chosen a better vehicle for uniting his religion and science.

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[14]Austen Warren and René Wellek, Theory of Literature, 3rd. ed. (New York, 1965), p. 205.

[15]Pagel, "Paracelsus and the NeoPlatonic and Gnostic," pp. 129-30.

In her study of mysticism Evelyn Underhill cites the work of Sir Thomas Browne as representative of mystical alchemy. "The Norwich Physician himself, deeply read in the Hermetic Science /ālchemy7, has declared to us his own certainty concerning the true inward business of the work in few but lovely words. In them is contained the true mystery of man's eternal and interior quest of the 'Hidden treasure that desires to be found.'"[16] Underhill then quotes Religio Medici: "Do but extract from the corpulency of bodies, or resolve things beyond their first Matter, and you discover the habitation of Angels: which, if I call it the ubiquitary and omnipresent Essence of God, I hope I shall not offend divinity" (I, 45). Just as the alchemist hoped to bring base metals through a series of separations and purifications to their potential perfection as gold, the spiritual alchemist hoped to discover the potential perfection within himself. Underhill continues, for man "yet bears within himself, if we can find it, the spark or seed of absolute perfection: the 'tincture' which makes gold."[17]

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[16]Evelyn Underhill, Mysticism (New York, 1948), pp. 142-3. See also, Edgar Wind, Pagan Mysteries in the Renaissance (Middlesex, 1967), pp. 214-5.

[17]Underhill, p. 142. Browne calls attention to this symbolic quality of gold in a brief epigram which appears in his commonplace book. In a two line dedication which precedes the epigram, he alludes to "the occult and inside of his Gold." The poem itself reads:

> Persian gold I wish for you, and the finest Alexandrian
> And Imperial gold I wish you too;
> But look Beyond the image to the inside of the metal,
> Nor let your treasure-chest be richer than your mind
> (III, 279).

Or as it is expressed in another place in Religio Medici: "The smattering I have /in the knowledge/ of the Philosopher's stone, (which is something more then the perfect exaltation of gold) hath taught me a great deale of Divinity, and instructed my beliefe, how that imortall spirit and incorruptible substance of my soule lye obscure, and sleepe a while within this house of flesh" (I, 50). As a physician Browne was compelled to be skeptical about the power of the Philosopher's stone to produce an Elixir of immortality, but as an instructive metaphor for his spiritual, immortal soul he embraces the idea.

By drawing freely on the esoteric alchemical tradition, Browne has no difficulty linking his religious thought with his concurrent scientific speculation. In the passage from Religio which follows, Browne echoes the Paracelsians, who looked on the Creation as a process of alchemical separation; alchemy is sometimes called the spagyric art, or the art of separation of the base from the perfect.

> As at the creation, of the world all the distinct species that we behold, lay involved in one masse, till the fruitfull voyce of God separated this united multitude into its several species: so at the last day, when these corrupted reliques shall be scattered in the wildernesse of formes, and seems to have forgot their proper habits, God by a powerfull voyce shall command them backe into their proper shapes, and call them out by their single individuals (I, 58-9).

Allen Debus remarks in one of his studies of the history of modern chemistry that when one reads the chemical works

written before 1650, one is struck with how modern the laboratory practices appear to be, but the substructure upon which these practices rest is Hermetic (alchemical), Pythagorean, and Neoplatonic thought.[18] Alchemical thought incorporates the biblical because even scientists like Van Helmont, who rejected much of the mystical in chemistry and who denounced the macrocosm-microcosm analogy as a basis for knowing and healing man, insist that Genesis may be safely relied on as a source of physical truth.[19] As we have seen, Browne is somewhat ambivalent about the microcosm-macrocosm conceit, but nowhere does he offer Genesis as a scientific document. He does, however, avail himself of the alchemists' interpretation of the creation as a divine separation to account for the division of Prime Matter into distinct species and the return to individual essences at the Last Judgment.

In an earlier passage from Religio Medici, which deals with the presence of the Holy Spirit in man, Browne turns to Genesis, in language reminiscent of alchemical allegories:

> However, I am sure there is a common Spirit that playes 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 radicall heat of spirits, and those

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[18]Allen Debus, Alchemy and Chemistry in the Seventeenth Century (Los Angeles, 1966), p. 10.

[19]Debus, The Chemical Dream of the Renaissance (Cambridge, 1968), p. 24.

> essences that know not the vertue of the Sunne; a fire quite contrary to the fire of Hell: This is that gentle heate that brooded on the waters, and in six dayes hatched the world; this is that irradiation that dispells the mists of Hell, the clouds of horrour, feare, sorrow, and despaire; and preserves the region of the mind in serenity: whoever feels not the warme gale and gentle ventilation of this Spirit, (though I feele his pulse) I dare not say he lives (I, 42).

Even though the life sustaining flame and the brooding dove are Renaissance commonplaces, they also have some specific significations for alchemists. First, as regards the vital flame, Walter Pagel isolates three types of fire to be found in alchemical documents and the Corpus Hermeticum, one of which appears in Browne's passage. Alchemists describe three types of fire: the "sophic" or the fire of the stars, the invisible fire in the soul that nourishes and confers life, and finally, ordinary destructive fire.[20] The image of an invisible life-sustaining flame which is antithetical to the punitive fire of hell had a permanent hold on Browne's imagination, and that image will be examined at length later in the analysis of the influence of the Corpus Hermeticum on Browne's work. Browne's reference to the flame as a "gentle heate" also has an alchemical analogue in the heat applied in the first stages of alchemical projection.[21]

Second, Browne's image of the Holy Spirit in the shape of a brooding dove, which he partially accounts for by his

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[20]Pagel, "Paracelsus, NeoPlatonic and Gnostic," p. 150.

[21]Holmyard, p. 17.

marginal quotation of the Vulgate rendering of Genesis I, which includes the Latin word incubat, is also a commonplace of alchemical literature, although these notions are not confined to alchemical writings. Thomas Vaughan utilizes the image in his Magia Adamica when he writes: "...the Holy Spirit, moving upon the chaos with action some divines compare to the incubation of a hen upon her eggs, did together with his heat consummate other manifold influences to the matter."[22] And, in a more familiar example, Henry Vaughan draws on the same image in the "Waterfall":

> Unless that Spirit lead his mind,
> Which first upon thy face did move
> And hatch'd all with his quickening love.[23]

Scholarly commentary indicates the close connection of this image with the alchemical operation. Pettet notes that the alchemists often alluded to the process which produced their stone as hatching.[24] Holmyard calls attention to the analogy made by alchemists between the image of the brooding dove and the alchemical 'pelican,' or still, the device in which the various laboratory procedures were accomplished. "Thus an oval or sphaericall glass vessel which could be hermetically sealed was commonly referred to as the 'philosophers egg,'

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[22]Thomas Vaughan, Works, p. 130.

[23]The Works of Henry Vaughan, ed. L. C. Martin, 2nd. ed. (London, 1963), p. 538.

[24]Pettet, p. 74.

and that not merely because of its shape but with a vague reference to the egg out of which the universe was hatched."[25] Carl Jung, in his studies of alchemy, compounds this image with that of the Phoenix. "Out of the egg -- symbolized by the round cooking-vessel -- will rise the eagle or phoenix, the liberated soul..."[26] Browne is well aware of the significance of the Phoenix legend when he examines it in Vulgar Errors:

> Some have written mystically, as Paracelsus in his Book De Azoth, or De lingo and linea vitae; and as several Hermeticall Philosophers, involving therein the secret of their Elixir and enigmatically expressing the nature of their great work (II, 193-4).

The traditional use of the Phoenix as an emblem of the resurrection of Christ links it with the "exhaltation," or resurrection step, in the alchemical process. "Christ said, 'Yf I exalted be,/ Then shall I draw all thyngs unto

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[25]Holmyard, p. 155.

[26]Jung, p. 193. See also H. J. Sheppard, "Egg Symbolism in Alchemy," Ambix, VI (1958), 141: "The Philosopher's Egg of alchemy becomes a symbol of the primordial chaos out of which the living world emerged."

me.' The Wife /Mercury/ and Man /Sulphur/ must be 'contumulate' (interred, buried) and afterwards 'revyvyd by the Spyryts of Lyfe.'"[27] This example demonstrates how inextricably religious language and laboratory procedure are intertwined in alchemy, and the rich associations which underlie Browne's passage.

In the continuation of a passage quoted earlier in which Browne attempts to comprehend exactly how the body and soul will be reunited at the Last Judgment, he returns to the language of alchemy and perhaps to the specific step in the alchemical work referred to above. "I have often beheld as a miracle that artificiall resurrection and revivification of Mercury, how being mortified into a thousand shapes, it assumes again its owne, and returns to its numericall selfe" (I, 59). The words "mortified," and "resurrection," while being, of course, associated with Christian experience and mysteries, also have their analogues in the alchemical project. "Mortify" had been a part of the alchemical lexicon from at least the Medieval period. The alchemist in Chaucer's Canon's Yoeman's Tale says "this quick-silver wol I mortifye." Under the alchemical defini-

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[27] George Ripley, The Compound of Alchymie, 1471, Quoted in Shumaker, p. 172. Browne possessed a number of works by Ripley (IV, 294), but apparently not this one. Lynn Thorndike includes a similar quotation from the conclusion of an alchemical work written by John Thornborough, 1621: "...of the exaltation of the stone which transforms the imperfect bodies of metals into perfection and has reference to the blessed day of resurrection and the glorius state of the saints of heaven." Lynn Thorndike. A History of Magic and Experimental Science, VIII vols. (New York, 1923), VII, p. 182.

tion for mortify, the Oxford English Dictionary provides the following example: "The Chymists say a thing is Mortify'd when its outward form is altered or destroyed, as particularly when Mercury, or any other Metal is dissolved in an acid Menstruum."[28] H. J. Sheppard describes the specific operations Browne alludes to with a sketch of their development out of Hellenistic alchemy.

> In Hellenistic alchemy it must have been recognized that there was a symbolic likeness to the experiences of a participant in the rituals of the ancient mystery religions; the neophyte witnessed a ritual suffering, death and resurrection of the god, which in later Christian symbolism, was transferred to the passion, death and resurrection of Christ. In the alchemical opus the initial application of heat represented the passion and resulted in mortification...resurrection...followed a baptism which on the alchemical plane corresponded to washing.[29]

Browne uses the word "artificial" in his description because his primary image depends not upon a true alchemical "mortification," but upon an image familiar to anyone with even limited chemical experience. Any reader who has observed a portion of mercury fragment and recombine will readily understand the passage. For the reader, however, who knows the alchemical operation and its religious analogues, the meaning of the passage is greatly enriched. Mortification suggests movement through a symbolic death -- suffering, puri-

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[28]The Compact Edition of the Oxford English Dictionary (Oxford, 1973), pp. 1854-5. J. Harris. Lexicon Techn. I. S. V. Mortifie, 1704.

[29]Sheppard, p. 147.

fication -- as preparation for the glory of the Last Judgment which in context is Browne's subject.

This notion of the progress from death to glory stimulates Browne to return again to an alchemical metaphor in Religio Medici. After advancing an example from his natural philosophy, the metamorphosis of the silkworm, an instance of another way in which Browne bridges the two worlds of science and faith, he suggests that he has adopted his own alchemical description of death.

> I have therefore forsaken those strict definitions of death, by privation of life, extinction of natural heate, separation etc., and have framed one in a hermeticall way unto mine own fancie: est mutatio qua perficitur nobile illud extractum Microcosmi; for to mee that consider things in a naturall and experimental way, man seemes to be but a digestion, or a preparative way unto that last Elixar which lies imprisoned in the chaines of flesh" (I, 50-1).

This passage restates the idea that death is part of a ritual process which purifies the soul (nobile illud extractum Microcosmi), the religious parallel of the alchemist's quest to bring metal through a series of purifications to its destined perfection as gold. Browne asserts that he is considering this question in "a natural and experimental way," illustrating that he, like others who had adopted the spiritual allegories of alchemy, was drawn to the "scientific" quality of the work.[30]

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[30]Sencourt, p. 147. Alchemy "fascinated Donne by appearing to be both scientific and religious."

Browne echoes the alchemical definition of death in a mystical meditation near the close of Hydriotaphia and in an identical passage in Christian Morals in which he mingles several phrases drawn from the mystics[31] with language from alchemy in an attempt to express the ultimate joys of Christian experience:

> And if any have been so happy as truly to understand Christian annihilation, extasis, exolution, liquefaction, transformation, gustation of God, and ingression into the divine shadow, they have already had an handsome anticipation of heaven; the glory of the world is surely over, and the earth in ashes unto them (I, 170, 290).

Several words in this sentence have alchemical meanings, and the sense of the passage incorporates and extends Browne's alchemical definition of death.[32] The words "extasis," an extreme dilation, and "exolution," the process of loosening or freeing the spirit, are descriptions of the symbolic death which precedes the coming to be of the stone. A definition of "liquefaction" occurs in Norton's Ordinal of Alchemy, which Browne owned (IV, 294). In the above meditation it is employed figuratively to suggest the melting through religious ardor which frees the spirit. Donne uses the term in the

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[31]Sir Thomas Browne, Religio Medici and Other Works, ed. L. C. Martin (Oxford, 1964), p. 338.

[32]The persistence of this idea, and Browne's inclination to express it in language similar to that in Religio Medici provides one of many counter arguments against Shumaker's assertation (p. 242) that the mysterious is either "muted or absent" in the later works.

same way in his Sermon XXVI: "Till thou feele in the selfe ... a liquefaction, a colliquation, a melting."[33] "Gustation of God"[34] can be directly related to Browne's earlier suggestion that "man seems but a digestion, or a preparative way unto that last Elixar." As Browne struggles to express the ineffable Christian experience -- union with Christ -- he discovers in the mystical-scientific language of alchemy an apt vehicle for the presentation of that thought.

Browne's Garden of Cyrus is his most mystical work, and the one in which he draws most consistently on the occult sciences. It is not surprising then that we discover allusions to esoteric alchemy in the work. Margaret Heideman calls attention to the Hermetic androgyne which appears in the first paragraph of the Garden and to the importance of alchemy as one aspect of a three-part analogy which blends

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[33]John Donne, The Sermons of John Donne, ed. George R. Potter and Evelyn M. Simpson. 10 vols. (Berkeley, 1953), Vol. 4, p. 70.

[34]If the word "gustation" (the act or faculty of tasting) has an alchemical meaning, I have not uncovered it. The sense of the entire passage seems to suggest a loss of personal identity (Christian annihilation, extasis, exolution, liquifaction, transformation) and absorption by God (gustation of God, ingression into the divine shadow). This idea is, of course, everywhere in St. Paul who counsels the faithful to give up their identities to become other Christs. Underhill defends the appropriateness of taste as a symbol for union with God in her Practical Mysticism (New York, 1943), pp. 4-5. "Because he has surrendered himself to it, 'united' with it, the patriot knows his country, the artist knows the subject of his art, the lover his beloved, the saint his God, in a manner which is inconceivable as well as unattainable by the looker-on. Real knowledge, since it always implies an intuitive sympathy more or less intense, is far more accurately suggested by the symbols of touch and taste than by those of hearing and sight."

classical, biblical, and alchemical allusions. "The image of the Roman Fire-God giving arrows to the God of the Sun and the Goddess of the Moon dissolves into the Genesis account of the creation of sun and moon while providing in the sequence another aspect of the theme, for Apollo and Diana are as well the Hermetic Androgyne. Sub-currents of this triple analogy parallel the discursive part of the work..."[35]

Alchemists associated the androgyne with their conception of the creation as a process of separation.

> As originally created the primal Adam -- who represented in himself the cosmic whole -- had a non-physical body and was androgyne; but his fall plunged him into the gross material world of separated and conflicting physical and sexual elements, in which each individual part attempts to be self-sufficient. The cosmic movement of descent into division is matched, however, by the complementary movement of return to the source. This transformation of the physical back to the spiritual, and the simultaneous return of separates into unity, was made possible for man by Christ, the God-man; correspondingly, in the realm of metallic nature, the inherent tendency to return to the one origin is expedited by the Philosopher's Stone, the principle of transformation and unification which it is the task of the alchemist to disengage and purify.[36]

The circular pattern described here is, as we shall see in Chapter III of this thesis, the basic structure of the Garden of Cyrus, which views the multiplicity of nature through the unifying symbols of the quincunx and the circle.

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[35]Heideman, p. 241.

[36]M. H. Abrahms, Natural Supernaturalism (New York, 1971), pp. 158-9.

Another subtle allusion from alchemy in the Garden of Cyrus stems from the alchemist's reverence for the color green. "Of all colors, it was the colour Green which, in the vegetable world at least, was of utmost importance to the alchemists; if the creative spirit had descended into the mineral world in the form of Mercury it had descended into the vegetable world in the form of greeness."[37] As evidence for this assertion Harold Fisch quotes Browne's friend Arthur Dee in his Preface to Chymical Collections, 1650. "For when he inspired in things created, the Generation of the world...he gave also a certain Springing and Budding that is greenness of strength... and that Greenness they called Nature."[38]

In the Garden of Cyrus, Browne's treatment of "greenness" characteristically links his science and religion by appearing in what can perhaps best be called a discussion of mystical botany, which eventually gives way to a second symbol important to the alchemists and Browne: light as the visible manifestation of the hidden God. As in all of Browne's borrowings from occult science, the point of greatest interest for the student of literature is the manner in which he transforms prosaic material--the work of writers like Arthur Dee, for example-- into his own poetic prose.

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[37]Harold Fisch, "Alchemy and English Literature," Proceedings of the Leeds Philosophical and Literary Society, p. 134.

[38]Ibid., p. 134.

> And therefore providence hath arched and paved the great house of the world, with colours of mediocrity, that is, blew and green, above and below the sight, moderately terminating in the acies of the eye... And this is also agreeable unto water it self, the alimental vehicle of plants, which first altereth into this colour; And containing many vegetable seminalities revealeth their seeds by greennesse...Nor are only dark and green colors, but shades and shadows contrived through the great volume of nature... (I, 217).

As Browne turns from the color green to fix his attention on shadows, his imagination flies to another powerfully evocative symbol in "the volume of nature."

> Darknesse and light hold interchangeable dominions, and alternately rule the seminal state of things. Light unto Pluto is darknesse unto Jupiter. Legions of seminall Idea's lye in their second Chaos and Orcus of Hipocrates; till putting on the habits of their forms, they shew themselves upon the stage of the world, and open dominion of Jove... Light that makes things seen, makes some things invisible:...The Sunne it self is but the dark simulachrum, and light but the shadow of God (I, 218).

In this passage, Browne returns to the "threefold analogy" he introduces at the opening of the work. The Christian God, the classical pantheon, and the imagery of alchemy all come together in this consummate meditation.

Browne does not overburden his prose with what is really a technical, unpoetic, and highly specialized language. Judged by the sheer number of references, alchemical symbolism would not appear to be of great significance in Browne's work, but the paucity of material does not diminish its importance as a vehicle for expressing deeply felt religious emotion in

language which joins religious sentiment with Browne's science. In addition to this reconciliation of science and religion, alchemical allusions lend a more intense mystical quality to Browne's otherwise rational, somewhat tepid religious expression. As an example, the following passage which appears in the first chapter of Hydriotaphia not only implies the suffering involved in the soul's purification, but also anticipates that same soul's glory, a glory of union with Christ which, as we have observed, Browne also describes in alchemical language in his final chapter.

> Some apprehended a purifying virtue in fire, refining the grosser commixture, and firing out the Aethereall particles so deeply immersed in it (I, 137).

II

Browne's debt to mystical alchemy is clear, but in my investigation of Browne's work, I have found that it is far more difficult to establish any direct debt to the Corpus Hermeticum.

The documents themselves, which bear no direct relationship to occult studies such as alchemy despite its traditional designation as the hermetic art, are titled the Corpus Hermeticum. This collection of treatises contains three separate works: a group of dialogues often referred to collectively by the title of the first dialogue, Pimander; the Ascelepius; and the Stobean extracts, named for the man who collected them. All of the works, which are contained in four volumes in the Festugière-Nock edition, are written

in Greek with the exception of the Ascelepius, which is in Latin.[39] The question of who wrote the documents collected under the title the Corpus Hermeticum continues to be debated, but Shumaker summarizes the current opinion.

> The Corpus, the Ascelepius, and the Stobean extracts -- surviving fragments, no doubt, of a larger body of such writings by a variety of authors -- are thus products of a late Egyptian gnosticism which, by a pious fraud fathered its documents upon Hermes to give them prestige...The reigning philosophical doctrine in Egypt, as elsewhere, was a late Platonism. Plato, who was believed to have studied in Egypt for thirteen years, had derived his doctrines from Pythagoras -- perhaps at one remove through Philolaus; and Pythagoras, in turn was known to have studied in schools attached to Egyptian temples.[40]

From Ficino, who translated the Greek Corpus into Latin, through much of the Renaissance, this body of writing was attributed to Hermes Trismegistus, who now appears to be a mythical composite of the Egyptian secretary of Osiris, who alledgedly invented writing (hieroglyphics), and the Greek Hermes, who among other honors was the god of eloquence and oratory. The writings of Hermes were believed to antedate Moses and to prophetically foretell both Judaism and Christianity.[41]

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[39] Corpus Hermeticum, ed. A. D. Nock and A. J. Festugière, Dieuxieme Edition, 4 vols. (Paris, 1960). This authoritative edition of the Corpus provides a page by page French translation of the Greek and Latin text. All quotations in this thesis are taken from the Nock-Festugière edition.

[40] Shumaker, p. 207.

[41] French, p. 68. French notes that Tertullian, whose influence on Browne is apparent in Religio Medici, viewed the Hermes of the Corpus as a prophet of Christianity.

This notion was very appealing to Renaissance thinkers fond of finding parallels between ancient paganism and Christianity. Browne appears to accept this idea in the following passage from Religio Medici:

> ...and truely for those first chapters of Genesis, I must confesse a great deale of obscurity, though Divines have to the power of humane reason endeavoured to make all goe in a literall meaning; yet those allegoricall interpretations are also probable, and perhaps the mysticall method of Moses bred up in the Hieroglyphicall Schooles of the Egyptians (I, 45).

The idea that the Corpus Hermeticum is a repository of ancient Egyptian theology (which the Renaissance mind would inevitably connect with mysticism) was refuted by the great sixteenth-century classical scholar Issac Casaubon, who first placed the works in the second century A.D.[42] Casaubon argued that the Corpus could not be attributed to an ancient Egyptian because it contained a composite of late Greek and early Christian thought which was greatly influenced by the work of Plato and his students, and by St. John's Gospel.[43] Casaubon published his findings in the final year of his life, 1614, well before Browne's first published work.

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[42]It is now believed that Casaubon dated the works about one hundred years too early and that they were actually composed between the latter half of the second and the end of the third century A.D. This fact, however, does not diminish the importance of his discovery.

[43]Shumaker, p. 207.

Could a scholar of Browne's quality and breadth have overlooked such a discovery? Although he discusses Casaubon's findings nowhere in his published works, he does possess books by Issac Casaubon,[44] who gained a reputation at two of the continental schools Browne attended: Montpelier and Leyden. In addition, Browne quotes Casaubon's less distinguished son Meric in Hydriotaphia (I, 151), and in his correspondence with Ashmole, Browne refers directly to Meric's A Veritable and Faithful Relation of what Passed Between John Dee and Certain Spirits, 1653 (IV, 296).

In my view, Browne, like Kircher, whose influence pervades Browne's work, knew Casaubon's commentary on the Corpus Hermeticum, but ignored it.[45] As a repository of deep religious feeling, and as a source of metaphoric language compatible with Browne's other occult borrowings, the Corpus Hermeticum is undiminished by Casaubon's discovery. Also, for the Renaissance, Hermes Trismegistus had become far more than the author of this body of speculative philosophy; he was the reputed author of a number of other mystical and alchemical documents, and Browne does not appear to discriminate between the author of the Corpus and these apocryphal writings.

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[44] Catalogue of the Libraries of the Learned Sir Thomas Browne and Dr. Edward Browne, his Son, 1710-11, p. 9. I have used a photographic reproduction from the University of Michigan Library.

[45] Yates, p. 402.

Shumaker's inquiry into the possible influence of the Corpus Hermeticum upon English Literature offers a number of sound reasons for separating the Corpus from the study of occult sciences, including alchemy, the so-called hermetic art, but I find no convincing evidence in Browne's writings that he maintained such a distinction himself. Shumaker is at one point surprised that Browne speaks of the author of the Ascelepius as an astrologer and alchemist,[46] but when Browne's references to Hermes are viewed as a whole the attribution is not puzzling. Like many other Renaissance writers, Browne appears to accept as genuine numerous esoteric works ascribed to Hermes by authors hoping to attach more prestige to their work. For example, Browne attributes the geometrical definition of God to Hermes Trismegistus, but that description, "God is a circle whose center is everywhere and whose circumference is nowhere," does not appear in the Corpus Hermeticum.[47] Browne also accepts Hermes as the author of the Emerald Table, which the alchemists viewed as a sacred document surpassed in authority by the Scriptures alone.[48] Although the succinct phrases of the Emerald Table echo some of the ideas expressed in the Corpus Hermeticum, no direct relationship between the

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[46]Shumaker, p. 244.

[47]Browne's fondness for this figure is well known. The exact source of the metaphor is unknown, but it first appeared ascribed to Hermes in the pseudo-Hermetic Liber XXIV Philosophorum of the twelfth century. See Huntley, p. 109.

[48]Shumaker, pp. 179-80; Holmyard, pp. 97-100.

works can be demonstrated. Browne refers directly to the first statement of the Emerald Table in suggesting that scientific investigators seek out the truth skeptically, and without unquestioned assumptions. "To begin or continue our works like Trismegistus of old, Verum, certe verum, atque verissimum est, would sound arrogantly unto present Ears in this strict enquiring Age, wherein, for the most part, Probably, and Perhaps, will hardly serve to mollify the Spirit of Captious Contradictors" (I, 260, also III, 290). There are several passages in Browne's works which might be indebted to the Corpus Hermeticum, but in general these use language which Browne could have found in alchemical writings such as the Emerald Table. In Religio Medici Browne asserts: "The severe Schooles shall never laugh me out of the Philosophy of Hermes, that this visible world is but a picture of the invisible" (I, 21). He is perhaps relying here upon a statement from the Ascelepius concerning the visible and invisible God,[49] but he is more likely referring to the second statement of the Emerald Table: "What is below is like that which is above, and what is above is like that which is below..."[50]

The notion that nature is a visible manifestation of God is at least as old as Plato, but in the sixteenth and seventeenth centuries it became the justification of pious

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[49]Corpus Hermeticum, II, 304-5.

[50]Shumaker, p. 179.

scientists for their investigations of nature. Browne advances this role of the scientist, as an interpreter of the signs of the Creator in his creation, as a primary responsibility. His words from Religio Medici are well known.

> The wisedome of God receives small honour from those vulgar heads, that rudely stare about, and with a grosse rusticity admire his workes; those highly magnifie him whose judicious enquiry into his acts, and deliberate research of his creatures, returne the duty of a devout and learned admiration (I, 22).

A number of works inspired by alchemical documents such as the Emerald Table contain such statements. I quote from Thomas Tymme as an example because his expression of this notion is remarkably like one in Browne's own prose.

> The Almighty Creatour of the Heavens and Earth, (Christian Reader), hath set before our eyes two most principal Bookes: The one of Nature, the other of his written Word... The wisdome of Natures booke men commonly call Naturall Philosophie, which serveth to allure to the contemplation of that great and incomprehensible God, that wee might glorifie him in the greatnesse of his work.[51]

And from one of Browne's most frequently quoted passages:

> Thus there are two bookes from whence I collect my Divinity; besides that written one of God, another of his servant Nature, that universall and publik Manuscript, that lies expans'd unto the eyes of all (I, 24-25).

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[51]Quoted by Debus, Alchemy and Chemistry, pp. 8-9. French (p. 67) notes that the inscription of the famous image of Hermes in Sienna refers to the created world as a second God.

Browne would not have had to know the Corpus Hermeticum to have written this passage. It is a commonplace of Paracelsian and alchemical literature,[52] and Browne may have found it expressed in any number of chemical documents.

Integrated with the theme of the visible world, the Book of Nature, as a picture of the invisible is the belief that the Sun is the visible God. Even a writer of the true scientific stature of Copernicus quotes Hermes as saying that the sun is the visible deity.

> In the center of all rests the sun. For who would place this lamp of a very beautiful temple in another or better place than this wherefrom it can illuminate everything at the same time? As a matter of fact, not unhappily do some call it the lantern; others the mind and still others the pilot of the world. Trismegistus calls it a visible god.[53]

In Vulgar Errors Browne alludes to this idea in his argument against the superstition that the sun dances each Easter. The passage is reminiscent of others in Browne where the quality of his imagination, akin to that of the metaphysical poets, is stimulated by the contrasting worlds of light and darkness. He begins his discussion by declaring that he would willingly believe in this event as a miraculous demonstration of the resurrection of Christ, but he, as a scientist, must confess that this idea contains no scientifically verifiable, rather

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[52]Debus, p. 9 et passim.

[53]Nicholas Copernicus, On the Revolutions of the Heavenly Spheres, trans. Charles Wallis (Chicago, 1952), pp. 526-7.

only "Tropical," truth:

> And if metaphorical expressions go so far, we may be bold to affirm, not only that one Sun danced, but two arose that day: That light appeared at his nativity, and darkness at his death, and yet a light at both; for even darkness was a light unto the Gentiles, illuminated by that obscurity. That 'twas the first time the Sun set above the Horizon; that although there were darkness above the earth, there was light beneath it, nor dare we say that hell was dark if he were in it (II, 390).

Browne owes, it seems to me, one probable specific debt to the Corpus Hermeticum either at first or second hand. Both his mystical metaphor for the presence of God as a vital flame within man, and his association of God with light -- lux est umbra Dei -- appear again and again in the Corpus Hermeticum, although the association of God and light is centuries old and appears in countless works outside the Hermetic tradition. In a passage from Vulgar Errors praising the superiority of Egyptian metaphors because they are less likely to be taken literally, Browne turns to this example of figurative language which is perfectly compatible with his borrowings from alchemy: "And so perhaps because it is predicated of God, that he is a consuming fire, he may be harmlessly described by a flaming representation" (II, 389). This symbol appears so often in the Corpus Hermeticum that it is reasonable to assume Browne is either familiar with the Corpus itself or with writers like Agrippa, Paracelsus, and Kircher who are deeply indebted to those writings.

The identification of God and Light occurs at the outset and throughout the Corpus Hermeticum. In the opening

pages of the Pimander this identification is made for the first time.

> Alors Poimandrès: 'As-tu compris ce que cette vision signifie?' -- Et moi: 'Je le saurai, dis-je. -- 'Cette lumiere', dit-il, 'c'est moi, Noûs ton Dieu, celui qui existe avant la nature humide qui est apparue hors de l'obscurite. Quant au Verbe lumineux issu du Nous, c'est le fils de Dieu.[54]

In a later passage it is suggested that the essence of God can be grasped best by men through an analogy with the sun.

> Car il est celui de qui les bonnes énergies pénètrent non seulement dans le ciel et l'air, mais aussi sur la terre jusqu'au gouffre le plus profond et à l'abîme. D'autre part, s'il existe aussi quelque substance intelligible, elle est le volume du Soleil, et la lumière du Soleil pourrait être dite le receptacle de cette substance... Quant à la vue du Soleil, elle n'est pas affaire de conjecture, mais le rayon visuel lui-même enveloppe de son éclat le plus brillant le monde entier, et la partie qui est au-dessus et celle qui est au-dessous: car le Soleil est établi au milieu du monde, portant le monde comme une couronne, et, tel un bon conducteur, il a assuré l'equilibre du char du monde et se l'est attaché a lui-même de peur qu'il ne soit emporté en une course désordonnée.[55]

In the Ascelepius, it is suggested that just as the sun enlightens the earth, God enters the minds of pious men.

> ...neque enim omnes, sed pauci, quorum ita mens est, ut tanti beneficii capax esse possit; ut enim sole mundus, ita mens humana iste clarescit lumine et eo amplius; nam sol quidquid inluminat.[56]

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[54]Corpus Hermeticum, I, p. 8.

[55]Ibid., II p. 234.

[56]Ibid., II, p. 317.

Some of Browne's most intensely moving passages are inspired by the figure of God as an invisible fire: "The Breath of God that is the truest consuming flame" (I, 56). We are tempted at times to believe that Browne understands this as a literal rather than symbolic truth. Even in his scientific work Vulgar Errors, Browne is strongly inclined to assert that the visible presence of God can be literally observed in animal light. The following quotation appears in Browne's discussion of the glowworm.

> Now whether the light of animals, which do not occasionally shine from contingent causes, be of Kin unto the light of Heaven; whether the invisible flame of life received in a convenient matter, may not become visible, and the diffused aetherial light make little Stars by conglobation in idoneous parts of the compositum: whether also it may not have some original in the seed and spirit analogous unto the Element of Stars, whereof some glympse is observable in the little refulgent humor, at the first attempts of formation: Philosophy may yet enquire (II, 263).

Yet later in the same work, when Browne is discussing various attempts to represent the invisible God, he clearly labels the "flaming representation" a metaphor:

> ...and so perhaps because it is metaphorically predicated of God that he is a consuming fire, he may be harmlessly described by a flaming representation. Yet if, as some will have it, all mediocrity of folly is foolish, and because an unrequitable evil may be ensue, an indifferent convenience must be omitted, we shall not urge such representments; we could spare the holy Lamb for the picture of our Saviour, and the Dove or fiery Tongues to represent the holy Ghost (II, 389).

This passage clarifies Browne's attitude toward this, for him, compelling metaphor. It is compatible with the consistent distinction Browne makes between scientific and metaphoric truth. Browne can, in Hydriotaphia, call attention to the Greek's fear of drowning because it would extinguish the invisible flame which allowed them to exist in the after life (I, 138), but he indicates no belief in the literal possibility of this notion.

Browne may not be relying directly on the Corpus Hermeticum when he writes in Hydriotaphia that "Life is a pure flame and we live by an invisible Sun within us" (I, 169), but the idea that this flame represents God's, perhaps here Christ's (Sun-Son) life-sustaining presence in us, "the fire and scintillation" (I, 42), certainly appears in the Corpus.[57] Whether Browne borrows this metaphor from the Corpus Hermeticum itself or from the language of the mystical alchemists is of small moment, since in either case God's presence in man is brought home to the reader with emotional immediacy in a symbol which links Browne's science and religion.

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[57] Ibid., I, p. 8.

CHAPTER III

BROWNE AND NUMBER MYSTICISM

In 1658, Browne published, in a single volume, two literary works: Hydriotaphia and The Garden of Cyrus, and an emended and enlarged third edition of Vulgar Errors. In an unusually lengthy chapter on the belief in The Great Climacterical Year in Vulgar Errors (II, 306-323), first published in 1646, and in The Garden of Cyrus Browne includes virtually all that he has to say on the subject of numerology.[1] The Garden of Cyrus, as we shall see, comes close to arguing a Pythagorean numerological position through Browne's rhetorical manipulation of the number five and the quincuncial figure. With this in mind, it is with some surprise that we read Browne's essay on the climacterical year, which in logical and stylistically straightforward prose unambiguously denounces numerology and the superstitious premises on which it rests. In this chapter, I shall examine this apparent contradiction and argue that, although Browne clearly does not believe in numerology, he artistically employs the

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[1]Browne's statements on harmony, which will be examined later in this chapter, are confined to Religio Medici. There are also a few scattered references to numerology in other discussions in Vulgar Errors.

numerological tradition in the Garden of Cyrus to synthesize Hermetic-Egyptian, Hebrew, Christian, scientific, and abstruse learning in an effort to symbolically limn out the order of creation and the orderly Creator of the world.

I

The word climacterical, in Browne's as in our own time, denotes a specific and dramatic physical change in the life of a human being, puberty or menopause for example. It is clear in Browne's chapter on the climacterical year, however, that he employs the word in a much narrower sense to describe the fatal year, the year of one's death. "For the daies of men are usually cast up by Septenaries, and every seventh year conceived to carry some altering character with it either in the temper of body, mind, or both. But among all other three are most remarkable, that is, 7 times 7 or fourty-nine, 9 times 9 or eighty one, and 7 times 9 or the year of Sixty three; which is conceived to carry with it the most considerable fatality..." (II, 307).

In a temperate study of numerology and its impact on English literature, Christopher Butler traces some of the traditional numerological associations attached to the numbers seven and nine. Seven, as a number of examples in Browne's chapter on the climacterical year illustrate, was associated with the body and the mutable world. "Nine is the number of the mind, the spheres, the angelic hierarchies, and of

heaven itself."[2] As Browne's statement quoted above indicates, both seven squared and nine squared were regarded as climacterics, but, Butler asserts, of the three pairs of numbers nine times seven was the most important because seven and nine were corporal and spiritual respectively and as such were thought to have the power to determine crucial stages of human life.[3]

In Vulgar Errors, after a brief enumeration of the most illustrious figures in the numerological tradition, Pythagoras "who seemed to have played the leading part" (II, 307), Plato and Philo the Jew, Browne attacks numerological superstition in a variety of ways. First, not only have the numbers seven and nine been invested by antiquity with occult powers, but "most of the other digits have been as mystically applauded" (II, 308). Browne, indicating his familiarity with this abstruse study, discusses the Pythagoreans' affection for the number four. Six, he states, has much credited to it, and also ten because it contains within itself "even, odd, long, plain, quadrate, and cubical numbers" (II, 308). Browne adds that both Barbarians and the Greeks, including Aristotle, believed the number ten to be a governing principle in nature.[4]

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[2]Christopher Butler, Number Symbolism (London, 1970), p. 145.

[3]Ibid., p. 145.

[4]Browne omits here the traditional designation of ten as the perfect number, although it may perhaps be implied in his discussion of that number.

Simon Wilkin, Browne's most distinguished early editor,[5] finds it "not a little singular"[6] that the author of the Garden of Cyrus should omit the number five from this passage. As we shall observe later, this is not the only passage in this chapter from Vulgar Errors where the reader familiar with the Garden of Cyrus and its companion piece Hydriotaphia becomes conscious of a discrepancy in the attitudes expressed in these works.

Browne next turns his attention to those numbers not believed to be grounded in nature, but commended from "artificial, casual, or fabulous foundations" (II, 308).[7] A catalogue of examples including the Nine Muses, the Seven Wonders of the World, the Seven Gates of Thebes, the Seven Stars in Ursa Minor, and many more follows.

Next, Browne considers numbers which are extolled "from foundations and principles, false or dubious" (II, 309). Under this heading, Browne includes the belief that women are menstruant and men pubescent at twice seven though physicians know that the occurrence of either physical event cannot be rigidly fixed, that the Nile has seven heads

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[5]Geoffrey Keynes judges Wilkin's edition of Browne "one of the best edited books in the English language" (I, viii).

[6]The Works of Sir Thomas Browne, ed. Simon Wilkin, 3 vols. (London, 1890), I, p. 247, n. 4.

[7]Browne states that, because the numbers one through ten were understood not only by the learned Greeks but also by the barbarians, they seemed to be "grounded in nature" rather than learned (II, 308).

though there have been sometimes more and at other times less than seven,[8] that there are seven planets, or "errant Stars," when observation proves there are more,[9] that there were seven wise men in Greece when some authorities cite more, others fewer (II, 309-11).

Finally, Browne traces numerous errors to the metaphoric language of Holy Scripture. Here Browne argues, as he does consistently in Vulgar Errors, that many essentially allegorical expressions have been taken literally by the "vulgar," and that they are as such the source of numberless popular errors. Browne singles out two examples to refute: first, the belief that the Jubilee (Jewish term for a fifty year period) can be understood as the first climacterical -- seven squared or forty-nine years: and, second, that the New Testament genealogy of Christ can be summed up in fourteen

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[8]In his example of the heads of the Nile, Browne's parenthetical statement, as "we have made manifest elsewhere," alludes to a more complete discussion of the same subject elsewhere in Vulgar Errors (II, 448-9). The discussion summarizes the debate by geographers about whether there were "7 heads of the Nyle" or more. In a passage about the Sperma Ceti whale in the Garden of Cyrus (I, 206), Browne refers the reader to his more thorough treatment of the whale in Vulgar Errors. I find these examples of cross referencing interesting because they demonstrate that Browne has his remarks on a specific subject in other works, or in a different place in the same work, in mind as he writes. This fact is important to my analysis of certain lines in the Garden of Cyrus and Hydriotaphia which apparently contradict Browne's more "scientific" opinion in his essay on the Great Climacterical Year.

[9]"In that there are just 7 Planets or errant Stars in the lower orbs of Heaven, but it is now demonstrable unto sense, that there are many more; as Galileo hath declared, that is, two more in the orb Saturn, and no less then four more in the sphere of Jupiter" (II, 309).

generations or twice seven. Browne denies the former instance by appealing to authorities who fix the fiftieth year as the actual year of the Jubilee; he refutes the latter by calling attention to some remarkable omissions in the fourteen generations of the genealogy of Christ.

Browne closes this chapter by tracing the commentary on the climacterical from antiquity to the Renaissance, finding each authority's testimony interesting but fundamentally groundless. Browne remarks that few people are sixty-three when they think themselves sixty-three anyway because they neglect to take into account the nine months that they have spent in the womb, and, in the case of the ancients, they have computed their ages on the basis of variable systems of time measurement. The notion then that men die more often in their sixty-third year when exposed to "strict account and critical examen of reason" is found to be without foundation (II, 323).

Browne's polemic against belief in the Great Climacterical Year, and his critical evaluation of the actual function of numbers is discriminating and precise. "True it is, that God made all things in number, weight, and measure, yet nothing by them or through the efficacy of either" (II, 314). Following a distinction between numerology and mathematics made by E. T. Bell, a mathematician who has written a readable popular account of numerology,[10] we shall, it seems to me,

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[10]E. T. Bell, Numerology (Baltimore, 1933). My discussion relies heavily on Bell's explanation, pp. 71-144.

agree that in the above quotation Browne's understanding of the function of number is consistent with modern scientific usage. Browne accepts the assumption that all physical reality can be described mathematically. Bell avers that numbers operate in mathematical theories which serve as "convenient maps" for attempting to provide an explanation for as much as possible of the scientific terrain. They are "convenient" because they can be discarded whenever they are found to inadequately describe the phenomena under consideration. The numerologist, on the other hand, extrapolates on the evidence of one map -- one mathematical theory -- and proposes his description as an explanation of all reality. Pythagoras did precisely this when, inspired by his mathematical discovery -- musical intervals --, "he soared to the blue heaven of metaphysical mysticism." This latter description of numerology is as applicable to the author of the Garden of Cyrus as Bell's explanation of the true foundation of mathematical theory is to Browne's position in his chapter on the Great Climacterical Year. In the Garden of Cyrus, however, Browne moves from the discovery of the quincunx to the realm of metaphysical speculation: "But the five-leaved flowers are commonly disposed circularly about the Stylus; according to the higher Geometry of nature" (I, 201); "And some resemblance there is of this order in the Egges of some Butterflies and moths, as they stick upon leaves, and other substances; which ... do neatly declare how nature Geometrizeth, and observeth order in all things" (I, 203);

the Hebrew number five "is also one of the Numbers that makes up the mysticall Name of God, which consisting of Letters denoting all of the sphaericall Numbers, ten, five, and six; Emphatically sets forth the notion of Trismegistus, and that intelligible Sphere which is the Nature of God" (I, 223); "All things began in order, so shall they end, and so shall they begin again; according to the ordainer of order and the mysticall Mathematics of the City of Heaven" (I, 226). In the Garden of Cyrus, Browne ascends from his catalogue of fives and the figure of the quincunx to a symbolic representation of all reality based upon number. Thus, after reading Browne's treatment of number mysticism in Vulgar Errors, we cannot avoid being struck by the apparently contradictory nature of these statements from Hydriotaphia and the Garden.

As I have suggested earlier, other lines from Hydriotaphia and the Garden of Cyrus are echoed as Browne inveighs against the climacterical superstition. In the second paragraph of his discussion in Vulgar Errors, Browne writes that number "though wonderful in itself, and sufficiently magnifiable from its demonstrable affections, hath yet received adjections from the multiplying conceits of men, and stands laden with additions which its equity will not admit" (I, 307). Surely Browne must realize that he has himself added considerably to these "adjections" through his own use of "multiplying conceits" in the Garden of Cyrus. Later in his discussion of the climacterical year, Browne condemns Philo, the learned Jew, for his "divers pages

in summing up everything which might advantage this number" (II, 307). This by the author who, as Coleridge accurately reported, overlooked few examples of fives or quincunxes in his scrutiny of the universe.[11]

We should again recall that, at the same time Browne is publishing The Garden of Cyrus and Hydriotaphia, he is also seeing the third edition of Vulgar Errors through the press. The central section of Browne's discussion of the Great Climacterical Year examines the relationship between time and number. Browne argues that time, which is merely the numerical description of motion, like number, in itself causes nothing. "So do we unjustly assign the power of Action even unto Time itself; nor do they speak properly who say that Time consumeth all things" (II, 314). Although the exact phrase, "Time consumeth all things," does not appear in Hydriotaphia, numerous synonyms of that phrase do appear. A few examples follow: "Time which antiquates Antiquities" (I, 164), "Time hath spared the Epitaph of Adrians horse, confounded that of himself" (I, 167), "There is no antidote against the Opium of time, which temporally considereth all things" (I, 166). Could Browne have expected readers of his essay on the climacterical year to overlook such apparently contradictory statements in his meditative

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[11]Samuel Taylor Coleridge, Coleridge: Selected Poetry and Prose, ed. Elisabeth Schneider (New York, 1966), 439.

works? This and similar contradictions in Browne,[12] not all

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[12]Although it is outside the subject matter of this chapter, a similar paradox occurs in Browne's attitude toward senescense, or the gradual decay of the world. Along with Donne's "First Anniversary," Browne's Hydriotaphia is the most lengthy and well known literary discussion of this belief. Kocher discusses the theory of the gradual decay of the world at length in his study Science and Religion in Elizabethan England (San Mariano, 1953). Kocher notes that this doctrine, as far as he can discover, is confined almost exclusively to literary works. The conception of decay was that "The universe was running down and man with it. Therefore man of the present might inherit the scientific and other achievements of their forefathers but could not hope to equal them" -- p. 82. From several expressions of this idea in the final chapter of Hydriotaphia I choose the following representative example: "Tis too late to be ambitious. The great mutations of the world are acted, our time may be too short for our designes. To extend our memories by Monuments whose death we dayly pray for, and whose duration we cannot hope, without injury to our expectations in the advent of the last day, were a contradiction to our beliefs. We whose generations are ordained in this setting part of time, are providentially taken off from such imaginations. And being necessitated to eye the remaining particle of futurity, are naturally constituted unto thoughts of the next world ..." (I, 166). In Religio Medici Browne speaks of the world "whose solid and well composed substance must not expect the duration and period of its constitution; when all things are compleated in it, its age is accomplished, and the last and general fever may as naturally destroy it before six thousand" (I, 53). And also, in A Letter to a Friend: "And surely, he that hath taken the true attitude of Things and rightly calculated the degenerate state of this Age..." (I, 112). In Vulgar Errors, Browne flatly contradicts all of the above statements: "Now according unto these Chronologists, the prophecy of Elias the Rabbin, so much in request with the Jews, and in some credit also with Christians, that the world should last but six thousand years; unto these I say, it hath been long and out of memory disproved..." (II, 404). Even in Religio Medici, Browne can denounce the theory of world decay when it does not suit his artistic purpose. "I do believe the world drawes near its end, yet it is neither old nor decayed, nor will it perish upon the ruines of its own principles" (I, 56). I have traced Browne's attitude toward senescense because it appears to closely parallel his stance toward the macrocosm-microcosm conceit, his use of the doctrine of signatures, his attitude toward astrology and the Cabala, alchemy, and numerology. As a scientist, Browne assumes a very rational, analytical attitude toward esoteric and occult learning, but at the same time he avails himself of its rich resources of metaphor in his sacred prose. See also I, 57, 132, 279-80, 289, where in each case Browne embraces the idea of world decay.

of which pertain to occult sciences, partially explain why some critics have been able to argue that Browne is a rational scientist, others that he is a meditative mystic who only casually includes science in his religious prose.

It is true that Browne is both a scientist and a meditative Christian. But he understands the dangers both of total reliance on scientific method and of uninhibited mystical speculation -- of too great a reliance either on the senses or on the understanding. The chapter in Vulgar Errors concerning numerology opens with a caveat:

> Certainly the eyes of the understanding, and those of the sense are differently deceived in their greatest objects; the sense apprehending them in lesser magnitudes then their dimensions require; so it beholdeth the Sun the Stars, and the Earth it self. But the understanding quite otherwise: for that ascribeth unto many things far larger horizons then their due circumscriptions require: and receiveth them with amplifications which their reality will not admit (II, 306).

Browne's entire chapter on the Great Climacterical Year attacks one specific numerological superstition, and numerology generally as a debility of the understanding. To contend with this variety of error, Browne counsels demetaphorization, and strict observance of effective causation. If no causal connection can be demonstrated between the combination of numbers seven and nine and the death of men, the belief should be abandoned.

In Vulgar Errors, Browne rarely speaks of the weakness of the faculty of the sense apart from the general statement

which is part of the quotation above. Since the senses comprehend objects "in lesser magnitude than their dimensions require" it becomes the burden of Browne's meditative prose to restore the wonder and mystery to reality which science must methodically ignore. It is as an artist then that Browne turns to the numerological tradition in his attempt to sketch the cosmos as a splendidly varied, but ordered adumbration of the ultimate Reality.

II

The passage quoted from Christian Morals which follows might be considered justification of the often noticed extravagence of the Garden of Cyrus.

> Created natures allow of swelling Hyperboles; nothing can be said Hyperbolically of God, nor will his Attributes admit expressions above their own Exuperances, Trismegistus his Circle, whose center is everywhere, and circumference no where, was no Hyperbole. Words cannot exceed, where they cannot express enough (I, 272).

In his chapter on the Great Climacterical Year, Browne has necessarily assailed "adjections" and hyperbole, but in The Garden of Cyrus he is working with a subject which calls for the full excercise of his hyperbolical powers; he can properly engross himself in the mystery. Near the close of his dedicatory letter to Nicholas Bacon which prefaces The Garden of Cyrus, Browne asserts: "Nullum sine venia placuisse eloquium, no eloquence pleases without indulgence" (I, 177). In that same letter Browne likewise warns that "in this Garden Discourse we range into extraneous things, and many parts of

Art and Nature, we follow herein the example of old and new Plantations" (I, 176). Browne's statements here remind Bacon, and the reader, that the role of the artist is markedly different from that of the scientist, who distinguishes literal truth from its metaphorical significations. The artist employs every tool of his rhetorical art in an attempt to "reach the portal of Divinity" (I, 272). As Browne demonstrates in Vulgar Errors, scientific investigation requires methodological attention to causal relationships in nature, while sacred prose invites an unfettered imagination. Browne's art adumbrates an ineffable reality that his faith intuitively assures him exists. The Garden of Cyrus and Browne's other meditative prose can be viewed as an adjustment for the shortcomings of scientific knowledge, which apprehends objects "in lesser magnitudes than their dimensions require" (II, 306). Light is more than a physical phenomenon; it is the "Shadow of God" (I, 218). The great mysteries of religion do not yield themselves to scientific methods; they are understood rather in adumbrations (I, 218).

In his dedicatory letter, Browne describes a garden as "the Epitome of the earth" (I, 176), and as such it should reflect the diversity of the earth, containing "Trees, Aviaries, Fish Ponds, and all variety of animals" (I, 176). The word "Epitome," which Browne uses to denote "an abstract," links this work to his discussion in Religio Medici of the Book of Nature, and nature for Browne is not only varied, but ordered as well. Browne supplies that order, in the Garden of Cyrus,

through number, but is Browne's use of number the same thing as numerology? If we turn to scholarship for an answer to this question we are largely disappointed. The Garden of Cyrus receives less critical attention than any of Browne's major artistic prose pieces, and the subject of its numerology has been virtually ignored. Douglas Bush states that most modern readers of the work "skip to the last page and surrender /without/ comprehension to the hypnotic climax of 'inexcusable Pythagorisme.'"[13] Frank Huntley comments briefly on the numerological aspect of the Garden in his book on Browne, but his two references are confusing. The first suggests that Browne's Garden reflects a Platonic progression from the lowest or artificially contrived objects which have a quincuncial form to the highest archetypal quincunx in the mind of God.[14] He later argues that "The two essays, The Garden of Cyrus and Hydriotaphia, form a Platonic dichotomy: two parts opposed yet conjoined, with a rising from the lower or elemental Urn Burial (death) to the higher or celestial Garden of Cyrus, the 'numerical character' of reality (life)."[15] In this second statement, Huntley, I think unwittingly, pronounces Browne a numerologist.

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[13] Douglas Bush, English Literature in the Earlier Seventeenth Century, 2nd ed. (Oxford, 1962), p. 354.

[14] Huntley, p. 208.

[15] Ibid., p. 209.

Recent scholarship has produced a number of books and articles on numerology and its relationship to the literature of the Renaissance,[16] but Browne is scarcely mentioned in these discussions. The most influential scholar of numerology writing today is Maren Sofie Røstvig who does discuss Browne briefly. She approaches the Garden of Cyrus with a diffidence uncharacteristic of her studies of poetry. She asserts that "both the contents and the form of the Garden of Cyrus reveal a familiarity with the science of numbers and its literary application."[17] She also suggests, as does Huntley,[18] that Browne structurally emphasizes his discovery of numberless examples of the quincunx, by constructing his essay in five chapters. Both critics would certainly agree that these observations in themselves do little to help us understand the Garden of Cyrus better.

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[16]Books and articles by those doing numerological, or as it is also called, arithmological criticism, include: Maren Sofie Røstvig, The Hidden Sense and Other Essays, New York: Humanities Pre-s, 1963; also, "Renaissance Numerology: Acrostics or Criticism." Essays in Criticism, XVI No 1 (Jan., 1966), 6-22; Alastair Fowler, Spenser and the Numbers of Time (London, 1964); A. Kent Hieatt, Short Time's Endless Monument (New York, 1960). Those who attack this method of scholarship: C.C. Brown, "The Mere Numbers of Henry More's Cabala," Studies in English Literature, 10 (Winter, 1967), 143-153; Douglas Bush, "Calculus Racked Him," SEL, VII (Winter, 1967), 194; Richard J. Shoeck, "Recent Studies in English Renaissance," SEL, X (Winter, 1970), 215-50.

[17]Røstvig, Hidden Sense, p. 16.

[18]Huntley, pp. 206-7.

Christopher Butler's recent study of number symbolism, cited earlier, provides a much more helpful discussion of the numerological tradition generally, and a very brief examination of Browne's relationship to that tradition.[19] Butler really takes no definite point of view on the function of number symbolism in Browne, but he is instead satisfied to explain one or two of Browne's numerological allusions. But Butler's examination of the variety of uses to which number symbolism was put before and during the Renaissance, prepares the ground for a close study of the number symbolism which informs the Garden of Cyrus.

In the remainder of this chapter I will attempt to place this work in the numerological tradition, and will argue that in numerology, as in his employment of occult sciences generally, Browne witholds his belief and puts these studies to his own artistic ends. I shall examine Browne's scientific digression in Chapter III of the Garden, relating it to the dominant mode of number symbolism, and, finally, I shall argue that Browne employs number symbolism in combination with the rhetorical techniques of amplification and repetition to unify not only the disparate subject matter, but also the imagery of the work.

To begin, it will be necessary to sketch some of the fundamental concepts of numerology as they developed in the

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[19]Butler, pp. 122-128.

schools of Pythagoras. The material which follows relies heavily on Butler's and Bell's summaries of the Pythagorean philosophy. I shall not repeat their discussions, but summarize, noting, when possible, illustrations of these ideas in Browne's works.

Much of what we know of Pythagorean ideas comes to us from other writers, such as Aristotle, who were not always sympathetic to Pythagorean numerological notions. Still Aristotle lays before us clearly and succinctly some of the principal tenets of Pythagorean theory. "The Pythagoreans were the first to take up mathematics and thought its principles were the principles of all things ... since, then, all other things in their whole nature seemed modeled on numbers, and numbers seemed to be the first things in the whole of nature, they supposed the elements of number to be the elements of all things."[20] Pythagoras, as he is presented here, reveals a genuinely philosophical, specifically metaphysical, speculative concern: the attempt to reduce all existence to a single common denominator, number. Thus number is for Pythagoras, as Butler suggests, the "arch-synthesizer of cosmological knowledge."[21]

Pythagoreans visualized numbers in geometrical forms, either in triangles or squares. The discussion of squares

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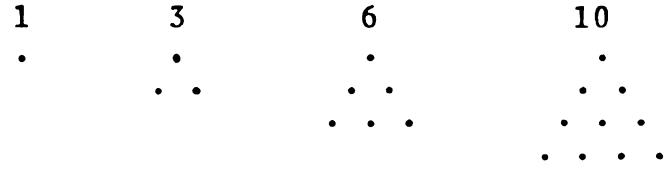
[20]Aristotle, Metaphysica, A.5985b (Ross, vol. VIII), Quoted in Butler, p. 1.

[21]Butler, p. 2. The following discussion adheres closely to Butler's exposition on pages 1-5.

can be foregone for our purposes since, in dealing with the quincunx, Browne is almost exclusively concerned with triangular numbers. Butler refers to this visualization of numbers in geometrical forms as the structural properties of numbers.

> For instance, we may find that there are certain number-series which can be fitted into geometrical shapes. We can easily construct a progression of numbers, which when laid out as dots, are seen to be "triangular" in nature. Thus:
>
> 
>
>
> and so on.

Butler goes on to say that "for these thinkers 1 was a point, 2 (points) gave extension (the line), and 3 (points) could enclose a triangle, the first plane figure visible to the sense, and thus the first real number. Extending this reasoning to solid figures was a later development. "By treating numbers geometrically, and by taking their geometrical properties as the properties of solids, that is as having extension, having a surface, and being of three dimensions, it was then possible to forget about this intermediate step which is merely reasoning by analogy, and to say physical objects were numbers."

Browne demonstrates this geometric view of physical objects again and again in the Garden of Cyrus. In the following example, he begins with the physical object and

[illegible]

works back to its essential geometrical form: "Now if for this order we affect coniferous and tapering trees, particularly the Cypresse, which grows in a conicall figure; we have found a Tree not only of great Ornament, but in its essentials of affinity to this order. A solid Rhombus being made by the conversion of two Equicrurall Cones, as Archimedes hath defined" (I, 215). Browne's purpose here is, of course, not identical with the Pythagorean, since the point of the passage is not that the solid figure can be described geometrically -- although Browne's statement assumes that fact -- but that the conversion of the two cones resembles the fundamental figure of Browne's work. He offers a more abstract illustration of that same figure at the close of his discussion of ivy. "Whilest every inclosure makes a Rhombus, the figures obliquely taken Rhomboides, the Intervals bounded with parallel lines, and each intersection built upon a square, affording two Triangles or pyramids vertically conjoyned; which in the strict Quincunciall order doe oppositely make accute and blunt angles" (I, 214).[22] There is clearly no attempt to move

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[22]Browne's details are sketchy and his description somewhat obscure. I think that the visual representation below, which is a duplication (in part) of Browne's drawing of the quincuncial order, illustrates the figure Browne has in mind.

from these two examples of the quincunx to the assertion that geometric form orders the world, but the accumulation of examples does, as we shall see, invite the reader to draw that conclusion.

Pythagoras' principal discovery, however, was not that solid figures could be understood geometrically, but that there are "mathematical ratios involved in harmonical relationships."

> He /Pythagoras/ was not concerned with harmony in our sense of simultaneously sounded notes in chords, or polyphony, but with those intervals which were most important in tuning of the Greek musical scales or modes. The Pythagoreans were so impressed by their harmonic discoveries, that they believed they had come across the basic laws of the universe. The very simplicity of the ratios 1:2 the diapason, 3:2 the fifth or diapente, 4:3 the fourth or diatesseron, and 8:9 the tone, their containment within the all important and powerful decad, which brought all things back to the unity they reverenced (1+2+3+4= 10), ... must have helped to convince them of this. They generalized their knowledge of the relationship between music and numbers, and made it the basis of any true knowledge of the soul, and of the 'cosmos.'

From the discovery of harmonical relationships grew the famous belief in the music of the spheres which Browne, as many Renaissance writers had done, comments upon. Butler, citing only Religio Medici, avers that Browne, in a qualified way, embraced the idea of music of the spheres; in that work he eloquently does so, connecting his comments on celestial harmony with those on harmony generally.

> I can looke a whole day with delight upon a handsome picture, though it be but of a Horse. It is my temper, and I like it the better, to affect all harmony; and sure there is musicke even in beauty ... For there is musicke where-ever there is harmony, order or proportion; and thus far we may maintain the musicke of the spheares; for those well ordered motions, and regular paces, though they give no sound unto the eare, yet to the understanding they strike a note most full of harmony (I, 184).

If we recall for a moment Browne's distinction between the powers of the sense and the understanding in his chapter on the Great Climacterical Year, the phrase "yet to the understanding" quoted above is interesting since it indicates that the music of the spheres can only be apprehended by that faculty of the mind which grasps metaphoric, symbolic reality. Even though we cannot hope to actually hear supernal harmony, something of the divine can even be detected in tavern music which inspires Browne to deep devotion and "profound contemplation of the first Composer" (I, 84). Browne's description of the power of musical harmony on his being ends in a semi-mystical experience: "it unties the ligaments of my frame, takes me out of myself, and by degrees mee thinkes resolves me into Heaven" (I, 84).

Having concluded that the cosmos is numerically ordered, the Pythagoreans state, and Plato follows them in this, that the soul which contemplates the cosmos must also be harmonical. "This soul itself is harmony ... But the main point is that here again the musical analogy, the undeniable effect of music upon the mind of the hearer, was,

not surprisingly, generalized to describe the effects on the mind of contemplation of order in physical phenomena, which later were themselves believed to proceed according to musical laws."[23] Browne significantly qualifies his acceptance of this Pythagorean belief. "I will not say with Plato, the Soule is an Harmony, but harmonicall, and hath its nearest sympathy unto musicke" (I, 84). Thus as an analogy, through the faculty of the understanding, Browne can embrace Pythagoras' and Plato's belief in a musically ordered soul in man.

Because of the reverence with which the Pythagoreans held number, they began to endow particular numbers with symbolic qualities. We should again recall Browne's chapter on the Great Climacterical Year because that superstition can be traced ultimately to this Pythagorean practice. In the Garden of Cyrus Browne apparently includes at least three such symbolic extensions of number: five as the number of justice, five as the number of generation, and five as a circular number. This last example is symbolic because for Browne this quality of the number five makes it a spherical number; thus Browne associates it with the Hermetic definition of God and the Platonic description of the soul.

The Pythagoreans regarded the number four as the traditional number of justice because "justice essentially involved

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[23]Butler, p. 7.

a reciprocal relationship between persons, and the reciprocity was embodied in a square number."[24] Browne, since his treatise is on the number five, wittily calls it the number of justice, "as justly dividing between the digits, and hanging in the centre of Nine, described by the square numeration, which angularly divided will make the decussated number" (I, 221). In a marginal note, Browne presents the figure which he has in mind: three rows of three dots one on top of another. The central dot of the figure, or the fifth, not only justly divides the nine, but it, in addition, serves as the point of decussation. Butler suggests that Browne may have two numerological traditions confused, the Pythagorean and the Hebrew, in his unique suggestion (it is not, however, unique since five is proposed as the number of justice by Agrippa, whom Browne knows well)[25] of five as the number connected with justice. For the Hebrews five was the number of justice because the Jewish law was contained in the Pentateuch.[26] In my view, however, this example serves as an illustration of the way in which Browne employs numerology throughout the work, that is, as a device to synthesize and unify the disparate religious traditions in the work. Here Browne, through this ingenious adjustment, fuses the Greek

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[24]Ibid., p. 7.

[25]Henry Cornelius Agrippa, Three Books of Occult Philosophy, trans. by John French (London, 1651), II, p. 188.

[26]Butler, p. 126.

and Hebrew numerological traditions and at the same time connects both with the fundamental geometric figure of the Garden of Cyrus. And this discussion is immediately preceded by two paragraphs which underline the importance of this figure to the Egyptians and to Plato, who revolved X in a circle as symbolic representation of the movement of the soul (I, 223).

In the final chapter of the Garden of Cyrus Browne identifies five as a circular number which when "multiplied in itself, will return into its own denomination, and bring up the reare of the account" (I, 223); in other words, all numbers whose final digit is 5, when multiplied by five will produce a number whose final digit is five. Browne cites additional spherical numbers, including ten which, from a different geometrical point of view is also the decussated figure. Finally, Browne calls attention to the visual similarity between circular numbers and the Hermetic "Sphere which is the Nature of God" (I, 223).

To continue, in his "mystical" consideration of the quincunx and the number five, Browne draws on the association of that number with human generation. "The same Number in the Hebrew mysteries and Cabalistical accounts was the character of Generation; declared by the letter He, the fifth in their alphabet" (I, 222). He goes on to comment upon the Cabalistical account of Abraham in relation to this number, but we will examine that discussion, and Cabalism generally, later in this chapter. In another place Browne labels five

as the Conjugall number, which ancient Numerists made out by two and three the first parity and imparity, the active and passive digits, the materiall and formall principles in generative societies" (I, 222). In Book II of Occult Philosophy, Agrippa provides a full numerological explanation for this notion.[27] In the combination of the numbers three and two, three is the perfect, masculine number and two is evil and feminine. Agrippa, apparently alluding to St. Jerome's exegesis of Genesis designates two as an evil number because God failed to say "and it was good" on the second day of creation.[28] Browne presents a witty rejoinder to this argument for a Scriptural basis for numerology. "For in the third or masculine day, the same is twice repeated; and a double benediction inclosed both Creations, whereof the one in some part was but an accomplishment of the other" (I, 223). The Pythagoreans considered five the number of Wedlock,[29] since it combined two, the number of discord, confusion, misfortune, and uncleaness, with three, the number of masculine power, goodness and rectitude.[30] Here again we see Browne artistically manipulating two numerological traditions, both of which view number in an essentially symbolic way,

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[27]Agrippa, pp. 177-8.

[28]Ibid., p. 177.

[29]Ibid., p. 177.

[30]Ibid., p. 188.

in order "to recall to mind essentially non-mathematical objects, properties, or processes."[31] Again we should remind ourselves that in viewing human, moral, and spiritual realities as number, the Pythagoreans were attempting a philosophical synthesis of experience which was fundamentally numerical. Browne's Garden of Cyrus attempts a parallel, but not identical, artistic synthesis. It is unified by the number five and a particular geometrical extension of that number.

Thus far it has been demonstrated that Browne borrows freely from the numerological tradition, but we still have not squarely faced the question of whether or not he himself was writing as a numerologist in the Garden of Cyrus. In what follows, I shall cite two brief definitions of numerology advanced by Butler and Bell and will then apply them to representative passages from the Garden. Butler's definition of numerology is clear: "The Pythagoreans, instead of saying that things could be conveniently described by means of number, took the ontological leap into saying that they were essentially number."[32] Browne argues in his chapter on the Great Climacterical that things can be "conveniently described by means of number"; whether or not he takes the "ontological leap" and believes that things are fundamentally number is the point at issue.

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[31]Butler, p. 8.

[32]Ibid., p. 10.

Bell's definition of a numerologist is consistent with Butler's definition of numerology: "The touchstone is belief, in the fullest sense of the word, theological, mystical or other. Whoever believes mathematical theories to be anything more than convenient maps that may be radically revised or torn up at any moment is a numerologist. A scientific worker who holds no such belief is a scientist."[33] Later Bell asserts that the dream of many modern physical scientists of encompassing all scientific studies -- electromagnatism, gravitation, radiation, in fact all physical phenomena in one mathematical theory would be numerological if it went one step farther -- a step which Pythagoras undoubtedly took -- and included all of human experience in the equation as well.[34] Since both Butler's and Bell's concepts of numerology rest on belief, our task is complicated because we are examining an artistic language which may or may not represent the author's enduring beliefs. Browne's often noted inconsistency muddies the question further. After all, it is Thomas Browne, who in Religio Medici wishes that men could procreate like trees, who also demonstrates not the slightest squeamishness in his discussion of sex in Vulgar Errors,[35] and who

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[33]E. T. Bell, p. 77.

[34]Ibid., p. 145.

[35]Both of Browne's references are humorous (II, 502-527). The first examines opium as an aphrodisiac, the second examines the possibility of a woman conceiving "in a bath."

fathered twelve children. By contrasting Browne's use of number in the Garden of Cyrus with what, it seems to me, we can safely assume are his candid beliefs about number in the Vulgar Errors, we can arrive at a satisfactory answer to this question.

Near the opening of Chapter II of the Garden of Cyrus, Browne laments the loss of ancient chess boards, which presumably evidenced the decussated figure.

> In Chesse-boards and Tables, we yet finde Pyramids and Squares, I wish we had their true and ancient description, farre different from ours, or the Chet mat of the Persians, which might continue some elegant remarkables, as being an invention as High Hermes the Secretary of Osyris, figuring the whole world, the motion of the Planets, with Eclipses of the Sunne and Moon (I, 189).

This passage at first appears to be an excellent example of numerology, of extrapolation from the geometric figures on a chess board to an explanation of "the whole world." But Browne clearly says, not that the board would explain, but that it would "figure" the whole world, and although his comparision is extravagant, it is not numerological. Browne is still in the realm of analogy or metaphor; he does not suggest that the fundamental figure of the chess board and "the motion of the Planets, Eclipses of the Sunne and Moon" are essentially identical.

In his consideration of the occurrence of the number five and the quincunx in nature, Browne again tempts us to see him ascending from the evidence of this order in natural

creation to the metaphysical suggestion that this order indicates the basic numerical character of all reality. "But five-leaved flowers are commonly disposed circularly about the Stylus, according to the higher Geometry of nature..." (I, 201). But Browne's nature, which "deleighteth to work, even in low and doubtful vegetations" (I, 193), is still the second cause, still subject to the "ordainer of order and the Mysticall Mathematics of the City of Heaven" (I, 226).

Even Browne's highly conjectural and somewhat vague suggestion that the quincuncial figure exists in the mind of man "whereby Things entering upon the intellect by a pyramid from without, and thence into the memory by another from within" (I, 219), ends not in metaphysical speculation, but in the humorous suggestion that the quincunxes of some brains are askew. This statement appears at the close of a long discussion of vision and Browne is conjecturing here about the possibility of other sensory data entering the brain in a decussated pattern analogous to that of the optic nerves. "Whether the intellectual and phantasticall lines be not thus rightly disposed, but magnified, diminished, distorted, and ill placed in the Mathematics of some brains, whereby the irregular apprehensions of things, perverted notions, conceptions, and incurable hallucinations, were not unpleasant speculation" (I, 219-20).

Several passages in the Garden of Cyrus strike the reader as apparently numerological, but when they are isolated and examined closely they prove to be consistent with Browne's

position in Vulgar Errors that all things are created in number, but nothing through its efficacy. But this is still not to argue, as Joan Bennet does,[36] that Browne's attitude toward numerology in the Garden is that of a rational scientist; Browne's positions in the two works, though not contradictory, are also not identical. In the Garden of Cyrus Browne avails himself of the imaginative suggestions of number mysticism without taking the ontological leap. Number mysticism provides Browne with a discipline with which he manages to conjoin the most disparate realities. As such, numerology is compatible with other standard Renaissance principles of order regarded as essentially true such as hierarchy, universal analogy, correspondences between spiritual orders of being, and universal correspondences among all things. It is as an artistic principle of order that we shall now turn to the number mysticism of the Garden of Cyrus.

III

In Basil Willey's discussion of the work of Sir Thomas Browne, he considers Browne first as a "metaphysical" and second as a Baconian, and it is my view that if subsequent criticism of his work had taken this distinction into greater account, studies of Browne's ideas and art would have arrived at more satisfactory explanations. Willey says of Browne:

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[36]Bennet, p. 212.

> The "divided worlds" are so equipollent that they are almost interchangeable. While Browne is writing as a Christian, his experience as a scholar is also available to him; while writing as an archaeologist, his experience as a mystic is available; as a naturalist, his experience as poet, scholar or seer. Like the metaphysicals, he seems to us to get his thrill rather out of the actual process of fusing disparates than from any "truth" that may emerge from the process.[37]

My discussion of Browne in this chapter, and my ultimate evaluation of Browne's use of occult sciences, follows very closely Willey's suggestions quoted here. I would therefore like to comment on two of the implications of this statement. First, Willey's discussion of Browne assumes as fact something that many writers on Browne's ideas do not assume, and that is that Browne is fundamentally and principally a writer of artistic prose. This, of course, is not to say that Browne is indifferent about the truth of his work, but that as an artist he directs his attention to the "process of fusing disparates." Second, even though the worlds of Browne's religion and science are almost interchangeable, those worlds remain divided, and his attitudes toward astrology, alchemy, the Cabala, and numerology are not identical in his separate roles as a scientist and as a writer of sacred prose. But these two roles appear to be in continuous interaction as Browne writes. And this fact accounts for not only the success of his "metaphysical" prose, but for the

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[37]Willey, p. 51.

success of his scientific writing as well. Vulgar Errors remains an interesting and entertaining book, not because of its scientific discoveries, which were relatively insignificant and soon eclipsed by those of other more talented scientists, but because of the prose in which it is cast.

Willey states, earlier in his essay on Browne, that the peculiar quality of the "metaphysical" mind is a detachment which preserves the mind from being finally committed to any one world.[38] To choose just one example of this detachment exhibited by Browne, we can recall his treatment of alchemy. Although Browne apparently does not believe that base metals can be transmuted into gold, he continues to hold out the possibility of projection, and as long as that possibility exists Browne draws on another rich source of metaphor which allows him to artistically fuse "scientific" and religious notions.

The Garden of Cyrus provides the clearest example of Browne the metaphysical, the artist who enjoys the fusion of disparates in one work. In the Garden of Cyrus Browne employs the figure of the quincunx, and the number five, as an extended and elaborate metaphor which joins such strikingly different objects as the "Rhomboidall protuberances in Pineapples" and the Hyades, the "Quincunx of Heaven." Except for Browne's digression on plastic nature, the single unifying thread which connects the disparate examples of his

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[38] Ibid., p. 50.

Garden is number mysticism understood as a synthesizing principle. Browne, however, does not depend solely on numerology, but rather employs it in combination with the two rhetorical devices of amplification and repetition in his tour-de-force of unity.

Through the retorical device of amplification -- that is by presenting numerous examples -- Browne keeps the quincuncial figure and the number five before the reader virtually at all times. Browne overwhelms us with impression of an ordered world, in large part by the sheer abundance of his examples. As our guide through the "garden" of reality, Browne calls to our attention many instances of the quincunx that are commonplace in the sense that any careful observer of ordinary natural objects could behold them. In this category we have a variety of natural and artificial objects: five leaved flowers, the honeycombs of bees, net works, fenestrae reticulate or windows which are constructed after Cyrus' order, the cinque side of the die, chess boards, countless common plants such as the French honeysuckle, bushes such as the houseleek, the protective shell of the pineapple, and on and on.

But Browne promises Nicholas Bacon in his dedicatory letter, that though writing nothing new, he will hopefully include someting to please "one so long out of trite learning" (I, 175). In this statement Browne recognizes Bacon's considerable erudition, and in doing so justifies the inclusion of numerous recondite examples of the quincunx. There are,

therefore, many examples of the number five which must be brought before us by a historian, physician, natural philosopher, biblical scholar, antiquarian, classicist, master of occult and esoteric learning, and other roles in which Browne poses as an expert. The quincunx is artificially, naturally, and mystically considered and Browne presents his multifarious examples, moving generally from the concrete and familiar to the abstract and esoteric.

Thus in his observation that many fish nets conform to the quincuncial order, Browne the classicist cannot resist speculating about whether or not the net in which Vulcan trapped Venus was of this order. As a military historian, he can assure us that "the Roman Batalia was ordered after this manner" (I, 189), also the Grecian cavalry, and the Macedonian Phalanx, which though not identical with the quincunx bore a striking resemblance to it (I, 190).

As a master of Hebrew and Egyptian history, Browne suggests that tradition has it that the Tables of the Law given to Moses by God were of this figure (I, 191), and the linen folds about Egyptian Mummies are also arranged in a quincuncial lozenge (I, 204).

Browne relies on his reputation as an absolutely reliable observer of nature, a recognized natural philosopher, when he assures us that the number five is not only remarkable in the "Sea Starre" (I, 225), but also the "dental sockets and egges in the Sea Hedgehogge" (I, 201). The order can be observed by "signal discerners" in the houses made by flies

and insects (I, 203), in the "outward tegument" of serpents and animals, such as the "Aspis, Dartsnake, Rattlesnake" and in the tail of the beaver (I, 203); also, in the skin of turkeys, geese and ducks, in the "finny feet" of waterfowl, in the "scaly covering of mullets, carp, and tenches," and finally in the skin of man (I, 204).

Turning to man, Browne, in his role as anatomist, unearths the figure of the quincunx in regions of the human body that only dissection can reveal. I quote the following passage not only because it illustrates Browne's anatomical learning, but also because it demonstrates one of the characteristic "metaphysical" fusions that this chapter concerns itself with.

> This Reticulate or Net-work was also considerable in the inward parts of man, not only from the first subtegem or warp of his formation, but in the netty fibres of the veins and vessels of life; wherein according to common Anatomy the right and transverse fibres are decussated by the oblique fibres; and so must frame a Reticulate and Quincuncial1 Figure by their Obliquations, Emphatically extending that Elegant expression of Scripture: Thou hast curiously embroydered me, thou hast wrought me up after the finest way of texture, and as it were with a Needle (I, 204).

Still in the role as anatomist, discussing specifically optics, Browne describes the decussated path of objects of sight to the retina: "For all things are seen Quincuncially; For at the eye the Pyramidal rayes from the object, receive a decussation, and so strike a second base upon the Retina or hinder coat, the proper organ of Vision ... (I, 219).

In his prefatory letter to the Garden of Cyrus, Browne declines the role of mathematician, instructing Nicholas Bacon to expect no "mathematicall truths," but it is as a mathematician that Browne examines the Rhombus which "containing four Angles equall unto four right, it virtually contains four right" (I, 214).

We could extend this examination, but these examples should suffice to demonstrate the way in which Browne keeps the figure of the quincunx constantly before us. This amplification argues an ordered world, since literally everywhere we turn in Browne's Garden, we are confronted with still another example of the quincunx.

But Browne does not rely on amplification alone to keep the notion of order before the reader; he also reinforces the idea by repeating with poetic regularity the word "order" or some synonym of it throughout the work. Cyrus the younger disposed "his trees like his armies in regular ordination," and his reputation as a planter was based on his garden's "splendid and regular" quality (I, 181). Constantine and his sons claimed to see this "pattern in the sky" (I, 182); Diomedes' trees were "orderly planted" (I, 183). Solomon is described as an "eminent Botanologer, and orderly disposer of all his works," (I, 184) and "that order so invariably maintained in the fixed Stars of heaven" is one of the examples of this "elegant ordination" in nature (I, 192). In leading up to his digression on the "plastic principle" in Chapter III, Browne adjusts for the fact that this digression contains not

a single reference to the number five or the quincunx or the word "order," by repeating the word "order" in virtually every paragraph which leads to the digression, and the first sentence after it picks up the repetition once again. Browne continues to underline the unity of the work in this way up to and including his justly famous passage near the close of the work which begins "All things began in order ..." (I, 226).

In the Garden of Cyrus there is repetition not only of the simple idea of order, but of a theme which occurs in each section of the work. In three parallel discussions, Browne variously considers the movement of invisible celestial emanations into the world. I shall examine these in reverse order of their appearance in Browne's Garden, beginning first with the Cabalistic Sephiroth and the Hermetic doctrine of emanations, which appear in the final section of the work, where the quincunx is "mystically" considered; second, the doctrine of plastic nature, which appears in the central section of the Garden; and third Browne's humorous explanation of the charm against strangling weeds, which appears with the "artificial" consideration of the quincunx.

Browne's ambivalent attitude toward the Cabala is consistent with his attitude toward occult and esoteric learning generally, at once condemning it, in his role as a rational scholar, but employing its imaginative suggestions in his meditative prose. In Vulgar Errors, he ridicules those "cabalisticall heads" that "wrackt numbers beyond their

symbolizations" (II, 381), and he holds that the belief in the Cabalists' ability to predict future events will not hold up under the scrutiny of rational inquiry (II, 430), but, on the whole, most of Browne's references to "that worthy inquiry Cabalism" (II, 30) are favorable. Joseph Blau, who has studied Browne's use of Cabalistic ideas,[39] and the Cabalistic tradition generally, isolates Browne as the only seventeenth-century writer on the Cabala whose Cabalistic ideas can be traced to specific sources.[40] Even though Browne's sources are well known, and even though he displays a thorough understanding of the Sephirothic system, Blau argues that Browne does not appear to be much influenced by Cabalistic ideas.

My interest in Browne's Cabalism, however, does not concern itself with whether or not he himself was an adherent, since, consistent with his attitude toward occult and esoteric learning generally, he manages to remain uncommitted and thus able to effortlessly weave figurative language drawn from occult studies into the fabric of his prose. The Cabala, itself, is a Jewish numerological system of theosophy and theurgy which, at least in its earliest forms, was a

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[39]Joseph Blau, "Browne's Interest in Cabalism" PMLA, 49 (1934), 963-4.

[40]Blau, "The Diffusion of the Christian Interpretation of The Cabala in English Literature," Review of Religion, VI, No. 2 (January, 1942), 153.

mystical method of interpreting the Scriptures[41] in such a way that God's transcendence and presence in man and the world could be reconciled.[42]

> As originally stated, the doctrine of the Sephiroth was that the Supreme and One God, the boundless, the limitless, the Ain Soph, by a voluntary reaction of self limitation, manifested himself in the highest of the Sephiroth, Keter, the Crown. This was not God; it was, however, a manifestation through which God could be seen, "as in a glass darkly" ... From Keter, there were three emanations, thus producing a total of four Sephiroth, each of which represented a manifestation of God at a level of grossness further removed from God's sublimity and transcendent Being. Further regression produced the complete system of ten emanations.[43]

According to the Cabala each of the mansions of the Sephiroth is numbered, and each of the Hebrew letters associated with each mansion as a sign also has a numerical designation. Browne draws from the "Cabalistical Technology" two numerological examples compatible with his mystical quincunx. In his discussion of five as the number of generation, Browne notes that had Abraham not had the letter He -- the number five -- added to his name he would have been unable to father Isaac, since "he received that power of generation from that measure and mansion in the Archetype" (I, 223). The specific

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[41]This aspect of the Cabala is called Gamatria. Browne attacks a specific example of this variety of interpretation in his discussion of the rainbow (II, 495).

[42]Blau, "Diffusion," pp. 150-1.

[43]Ibid., p. 150.

mansion Browne refers to, Binah -- the third manifestation from Keter --, he describes traditionally as the "mother of Life and the Fountain of souls... whose seal and character was He." Browne alludes to the processes by which this addition to Abraham's name had taken place as "involved considerations," which he rightly chooses to exclude since the technical explanation[44] in no way advances his purpose, which is to include still another example of a mystical consideration of the number five.

Browne's second reference to the Cabala, in Chapter V of the Garden, asks a question about the celestial emanations which had allegedly guided the ten harp strings of David. "Why the Cabalisticall Doctors, who conceive the whole Sephiroth or divine emanations to have guided the ten stringed Harp of David, whereby he pacified the evil spirit of Saul, in strict numeration doe begin with the Perihyphate Meson, or si fa ut, and so place the Tiphereth answering C sol fa ut, upon the fifth string ..." (I, 224) constitutes an abstrusity "of no ready resolution." Browne asks here, rather obscurely, why emanations from the sixth mansion, Tiperheth, should tune the fifth string of the harp. Neither this, nor any other Cabalistic notion is wholeheartedly embraced by the author, but he has nonetheless introduced another instance of celestial emanation in which the fundamental numbers of his quincunx obtain. It is such

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[44]For a complete explanation and possible source see: Sir Thomas Browne, ed. L. C. Martin, p. 359, n. 171.

accumulations of parallel examples that account for much of the impact of the Garden of Cyrus.

For still another example of emanation, Browne turns to the Hermetic notion that celestial influences move in a quincuncial path from the heavens, through the earth. "And if Aegyptian Philosophy may obtain, the scale of influences was thus disposed, and the geniall spirits of both worlds do trace their way in ascending and descending Pyramids, mystically apprehended in the Letter X, and the open Bill and straddling Legges of a Stork, which was imitated by that character" (I, 220). Athanasius Kircher, the German mathematician and archaeologist to whom Browne is heavily indebted for the Egyptian material in the Garden of Cyrus, is the probable source for Browne's description.[45] The stork with the "open Bill and straddling Legges "appears in a group of many similar characters in Obeliscus Pamphilius, which Browne possessed.[46] Kircher's description of the path of the celestial emanations differs from Browne's in that Kircher links those influences to the "Spiritus Mundi" while Browne makes no such connection in his discussion. The "Spiritus Mundi" is implicit, however, in the doctrine of plastic nature, another instance of the idea of the invisible presence and movement of the

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[45]Kircher, Obeliscus, p. 385. "Ibidis apertum, reditum Numinis ex inferioribus ad superiora denotabat, quibus quide in coniunctis verticibus, X emergebat, decussis illa celebris et mysteriosa, qua processum Spiritus mundi apte innuebat..."

[46]Ibid., p. 131. The stork Browne alludes to in this passage appears in a group of other letters and figures.

of the spirit in matter.

Richard Westfall, in a discussion of the English virtuosi of the seventeenth century, a group in which the author includes Sir Thomas Browne, comments upon the relationship of science and religion in the seventeenth century:

> So strong was the influence of Christianity upon them /English virtuosi/ that it helped to mold their conception of nature, softening the harsh mechanical outline with the comforting light of benevolence. At the same time the influence of natural science was helping to change their idea of Christianity profoundly, leading them to emphasize rational or demonstrable elements at the expense of suprarational mysteries, until by the end of the century some virtuosi were professiong a form of Christianity which scarcely differed from the enlightenment's religion of reason.[47]

For Browne, however, as Westfall confesses in his discussion of him, it is the suprarational, the mysterious, which always remains uppermost in his writing.[48] That Browne found religious motives for studying science is a critical commonplace. But how much space does science actually occupy in the Garden of Cyrus? Outside the digression we are about to examine, which itself parallels other discussions of celestial emanations in the same work, there is very little. The investigation of nature for examples of the quincunx is far closer in spirit to numerology than to science, and it is not difficult to

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[47]Richard S. Westfall, Science and Religion in Seventeenth Century England (New Haven, 1958), p. 11.

[48]Ibid., p. 148.

show that references to occult and esoteric learning far outweigh any actual scientific interest in the Garden of Cyrus. Still, Browne maintains the pose of the scientist, insisting on "Occular Observation" as an absolute necessity in tracing the "Labryinth of Truth." But it is clearly the striking fusion of disparates rather than objective truth which fires Browne's imagination. The generative principle in seeds and Hebrew and Egyptian mysticism appear to be widely divided subjects, but treating his readers as "Studious Observators," Browne reveals their "analogies and correspondencies." As Margaret Heideman has observed of the Garden, "Browne's scientific knowledge is rarely its subject matter ... scientific data is not here isolated from other worlds, but has imaginative contact with remote fact and fiction."[49]

The most striking fact about Browne's digression on the plastic principle is that it is precisely that, a digression; it is the only subject in the Garden of Cyrus that has nothing whatever to do with the numbers five, ten, or the figure of the quincunx. But as a theory of emanations, Browne draws it into the principle movement of the work. The theory of plastic nature was an attempt by scientists and philosophers, mainly of the seventeenth century, to account rationally for a spiritual presence in matter. Browne refers obliquely to two authorities in his discussion of the notion, Paracelsus, who affirmed, and Aristotle, who implied, that "bodies are first

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[49]Heideman, p. 245.

spirits" (I, 198). William Hunter, who has investigated the notion of plastic nature historically, asserts that it was scientists hoping to escape the charge of atheism who first devised this explanation,[50] which views matter as not absolutely separated from God or the soul. As a physician, Browne felt that he was open to the charge of atheism, so much so that his announced intention for writing Religio Medici was to oppose the scandal of his profession, that is, the belief that all medical doctors were atheists.[51] Browne is one of the first writers in the seventeenth century to employ the term plastic nature. Hunter says of this idea: "these men believed that God had at creation endowed matter with a spiritual power, the lowest such power in existence. It functioned as the last of the chain of incorporeal substances which descended from God through the angels and the rational soul; at the divine command it ordered rude matter successively into the creation of the six days."[52] It scarcely needs to be pointed out, how closely the descent of the spiritual power from God to matter resembles the other discussions of emanations we have been considering.

Cudworth, another seventeenth century adherent of the doctrine of plastic nature, attempts to carefully distinguish

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[50]William Hunter, "The Seventeenth Century Doctrine of Plastic Nature," Harvard Quarterly Review, 43 (July, 1950), p. 192.

[51]Kocher, Science and Religion, Chapter XII.

[52]Hunter, p. 200.

this shaping spiritual power from occult qualities: "he that asserts an occult quality for the cause of any phenomenon, does indeed assign no cause at all of it, but only declares his own ignorance of the cause: but he that asserts a plastic nature, assigns a determinate and proper cause, nay the only intelligible cause, of that which is the greatest of all phenomena of the world."[53] Despite such statements by Cudworth and others, the fact that plastic nature was ultimately indistinguishable from occult qualities, a fact most real scientists recognized immediately, accounted for its rapid demise at the close of the seventeenth century.[54] But Browne, far from attempting to distinguish plastic nature from occult qualities, suggests an affinity since this digression is linked to the rest of the Garden of Cyrus solely because it provides another example of invisible celestial power which moves from God into the material world.

The example of invisible emanations, spirits or influences which Browne presents in Chapters I and II of the Garden of Cyrus, where the quincunx is "artificially" considered, balances those examined earlier in the "natural" and "mystical" considerations of the quincunx. But the following instance is without a doubt humorous in intent. Douglas Bush describes Browne's sacred prose as a "solemn game,"[55] and playfulness

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[53]Ralph Cudworth, The True Intellectual System of the Universe (London, 1845), p. 234.

[54]Hunter, p. 210.

[55]Bush, English Literature, p. 351.

joined to high seriousness is as much a part of the Garden of Cyrus as of any other of Browne's works. Here he exposes the popular superstition by which the "vulgar" attempt to construct an amulet to convey harnessed celestial influences quincuncially to every part of a field.

> The Rurall Charm against Dodder, Tetter, and strangling weeds, was contrived after this order, while they placed a chalked Tile at the four corners, and one in the middle of their fields, which though ridiculous in the intention, was rationall in the contrivance, and a good way to diffuse the magick through all parts of the area (I, 188).

To paraphrase, Browne observes that even though there is no invisible power to kill the troublesome weeds, if there were such a power this would be an excellent way to disperse it throughout the field. These four examples of celestial emanation drawn from all three sections of Browne's treatment of the quincunx demonstrate again the way number mysticism is combined with repetition to underline the unity of the work, and the unity of all creation. And that unity is not greatly lessened by the fact that these three instances are merely analogical rather than identical. Browne makes no attempt to say that plastic nature is the "Spiritus Mundi" -- as Kircher had done -- or that the invisible spiritual emanations which guided David's harp strings are the same as those which account for the existence of the duckweed plant.[56]

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[56]Merton, p. 82 argues that Browne kept this aspect of his science separated from his teleology.

Another patterned repetition which unifies the Garden of Cyrus, and one suggested by our discussion of emanations, is the continuing suggested reconciliation of Hermetic-Egyptian, Hebrew, Greek, and Christian religions through the manipulation of rhetorical devices in combination with number mysticism. In the previous chapter, I have dealt with the notion of prisca theologia, the belief that all ancient religions in some way foreshadow Christianity. This belief was grounded in the mistaken assumption that Hermetic Philosophy, which was the supposed mystical religion of the Egyptians, antedated the Mosaic, the Greek, and the Christian religions. It is difficult to believe that a scholar of Browne's breadth and reputation could have overlooked the discovery of Isaac Casaubon in 1614 which more accurately dated the Hermetic literature at around the second or third century A.D., rendering the idea of prisca theologia groundless. It is certain that two of the authors on whom Browne relies heavily in the Garden of Cyrus, Athanasius Kircher and Robert Fludd (Browne possessed copies of the work of both men in his library) were aware of but totally ignored Casaubon's discovery.[57] The question of whether or not Browne follows Fludd and Kircher in this is examined at greater length in my chapter on Browne's use of Alchemy and the Corpus Hermeticum. In the Garden of Cyrus it is clear that Browne continues to adhere, at least for the purpose of his art, to the idea of prisca theologia.

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[57]Yates, pp. 403 and 416.

The opening paragraph of the Garden of Cyrus provides an excellent example of this idea.

> That Vulcan gave arrows unto Apollo and Diana the fourth day after their Nativities, according to Gentile Theology, may passe for no blinde apprehension of the Creation of the Sunne and Moon, in the work of the fourth day; When the diffused light contracted into Orbes, and shooting rays of those Luminaries (I, 180).

The reconciliation between the classical myth and Genesis is clear, but Margaret Heideman points also to the Hermetic undercurrent in the passage. "The image of the Roman Fire-God giving arrows to the God of the Sun and Goddess of the Moon dissolves into the Genesis account of the creation of the sun and moon while providing in the sequence another aspect of theme, for Apollo and Diana are as well the Hermetic Androgyne."[58] Sub-currents of this triple analogy, Heideman argues, pervade the work.

Even though Browne does not relate this opening reconciliation to the figure of the quincunx or the number five, this is seldom the case anywhere else in the Garden. One of the most interesting treatments in which the quincuncial figure becomes the device of synthesis occurs in the opening chapter when Browne declares openly that he will not look for analogies of the Christian cross in ancient religious symbols: "Where by the way we shall decline the old Theme, so traced by antiquity, of crosses and crucifixion: Whereof

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[58]Heideman, p. 241.

some being right, and of one single piece without transversion or transome, do little advantage our subject" (I, 182). Browne moves, however, from his rejection of this "old Theme" through two long paragraphs which draw examples of crosses from classical Greece, from the "mysterious crosses of Aegypt," and, finally, from the Hebrew Tenupha. Each statement begins with a disclaimer: "nor shall we," "we will not revive," "we shall not call in," but the number of examples far outweighs the force of the negative statements so that the reader is left with the distinct impression that there is indeed a connection between the many crosses of antiquity and the Christian cross. In her study of Religio Medici, Joan Webber describes this technique by which Browne employs negative statement for positive ends: "The farthest reach of this way of thinking, which is still an entirely typical and persuasive technique of Browne's speech, is a rhetoric of negativism that can be applied to a wholly positive end."[59] Employing this negative rhetorical technique, Browne begins his discussion of the crosses of ancient religions by suggesting that he will end the commonplace comparison of the Cross of Christ with visibly similar objects of antiquity, but by the close of his treatment Browne's argument has undergone a curious reversal.

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[59]Webber, p. 176.

> Though he that considereth the plain crosse upon a picher difusing streams of water into two basins, with sprinkling branches in them, and all described upon a two-footed Altar, as in the Hieroglyphs of the brasen Table of Bembus; will hardly decline all thought of Christian signality in them (I, 182).

And finally:

> We shall not call in the Hebrew-Tenupha, or ceremony of their Oblations, waved by the priest unto the four quarters of the world, after the form of a cross; as in the peace offerings. And if it were clearly made out what is remarkably delivered from the Traditions of the Rabbins, that as the Oyle was poured coronally or circularly upon the head of Kings, so the High-Priest was annointed decussatively or in the form of an X; though it could not escape a typicall thought of Christ, from mysticall considerations...(I, 183).

Instances of the device of negative argument appear throughout the Garden of Cyrus, but nowhere with such frequency as in the final mystical chapter. Joan Bennet quotes the chapter's opening sentence as evidence for her contention that Browne deliberately avoids number mysticism in this work.[60] But Browne's opening, "To enlarge this contemplation unto all mysteries and secrets, accommodable to this number were inexcusable Pythagorism" (I, 221), must be viewed in relation to the clauses which follow beginning with "yet cannot omit the ancient conceit of five surnamed the number of justice," and a catalogue of examples from number mysticism which follow hard upon this one. Through this rhetorical technique,

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[60]Joan Bennet, Sir Thomas Browne (Cambridge, 1962), p. 212.

Browne maintains the "metaphysical" detachment referred to earlier, taking advantage of the metaphorical force of the various mystical considerations he crowds into this chapter without committing his belief to all or any of them. But there is no avoidance, as Bennet suggests, of number mysticism. In fact, the reader's perplexity at being confronted with so many examples drawn from that tradition encourage him to take the "ontological leap," to generalize from the only "evidence" Browne places before him, and to concur that through the observance of a multitude of examples of the number five and the quincunx we have an intuition of the Great and Mystical Numerist.

My final analysis of the unity of the Garden of Cyrus focuses on the way Browne underlines the reconciliation of classical, Hebrew, Hermetic-Egyptian and Christian religion through his repetition of geometric imagery which fuses the figure of the quincunx, the Christian cross, and the circle.[61] One of the earliest occurrences of this pattern of imagery is located near the opening of Chapter II, where Browne calls attention to the decussations in the crowns of some ancient monarchs, "The Triumphal Oval, and Civicall Crowns of Laurel, Oake, and Myrtle, when fully made, were pleated after this order" (I, 186). Browne begins here a pattern of imagery which will be repeated to the conclusion of the Garden of Cyrus.

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[61]Heideman alludes to this aspect of the imagery (p. 241), but she is primarily concerned with the light and darkness imagery.

The circle, which later will be related to perfection and eternity because it is a figure for God, is here a characteristic of the ancient laurel crowns, presumably of the Greeks, which were held together by two decussated strips. Thus the first image is that of a circle circumscribing the letter X, an image repeated at the close of Chapter IV when Browne recalls that Plato used the figure of a decussated cross positioned inside a circle to "illustrate the motion of the soul, both of the world and man" (I, 220).

The crown which adorns the heads of some Christian princes appropriately contains the Christian Cross. Browne continues to put before us a variety of crowns which consist of various combinations of crosses and circles, for example that of Charles the Great, which "was framed after this manner, with an intersection in the middle from the main crossing barres, and the interspaces unto the frontall circle, contained by handsome network-plates, much after this order" (I, 186). Finally, Browne admits that we have no description of the two crowns which Ptolemy wore simultaneously, but Browne assures us that they conformed to some variety of this order. In these examples, Browne returns to the fundamental imagery of his work to begin again, in another way, to synthesize the disparate religious and cultural elements of his Garden. Not only Christian princes wore crowns composed of the spherical figure of perfection combined with some variety of the Christian or decussated cross, but Ptolemy, an Egyptian, and the ancient Greeks as well possessed crowns accommodable to this figure.

Browne's use of imagery to underline the idea of prisca theologia can be seen with equal clarity in the following example. Browne begins by calling attention to the fact that the fundamental figure of the quincunx, is notable not only in the folds of cloth he has observed on the Mummies, but also in the linen folds in which Isis and Osyris and the "Tutellary Spirits in the Bembine Table are wrapped" (I, 204). Browne apparently relies here on an elaborate illustration of the Bembine Table, which is an assemblage of hieroglyphs in bronze, that Kircher includes in Oedipus Aegypticus.[62]

Browne in this same passage alludes to the cruces ansatae or handed crosses, whose invention he traditionally attributes to Hermes Trismegistus.[63] This cross, which is identical to the astrological sign of Venus, is in the Christian figuration and it is attached to a circle. The important point for Browne's imagery inheres in the fact that this Christian cross attached to the symbol of perfection is an Egyptian creation. Browne returns to the handed cross in the mystical consideration of the quincunx where he asserts that Justin Martyr "took for granted, this figure had the honour to characterize and notifie our Blessed Saviour" (I, 220).

As Browne's Garden moves closer to the "ordainer of order and the mysticall Mathematics of the City of Heaven," the circle appears with greater frequency. As the quincunx is

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[62]Kircher, Oedipus, pp. 80-160.

[63]Yates, p. 419.

mystically considered Browne brings together the Platonic belief in the spherical nature of the soul, the notion that five is a circular number, and those other spherical numbers -- Hebrew -- which set forth "the Notion of Trismegistus, and that intelligible Sphere which is the Nature of God" (I, 223). Once again, we observe the fusion of the number symbolism and the religious traditions to figure the order of God.

It could not be clearer from Browne's analysis of numerology in Vulgar Errors that he is not a numerologist, but the Garden of Cyrus just as clearly demonstrates that this fact did not deter Browne from appropriating the poetic possibilities of the numerological tradition for his own uses. If the Garden of Cyrus is a polemic against number mysticism, as Joan Bennet suggests, it is a good deal like the polemic reportedly delivered by Hippolytus against numerology: "He /Hippolytus/ succeeded only in convincing everybody that 'Pythagorean Calculus" -- as he called numerology -- was true."[64]

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[64]Bell, p. 9.

CHAPTER IV

BROWNE'S PERSONA AND THE LANGUAGE OF OCCULT SCIENCES

Early in my study of Browne, I found evidence in numerous passages in his devotional prose, that he shared with other literary figures of the seventeenth century, notably Donne and Vaughan, a substantial debt to the occult and esoteric tradition. A number of literary scholars had raised this possibility, and students of the history of ideas had also found in Browne's prose flights to an o altitudo indebtedness to the occult tradition. De Santillana, for one, includes Browne in a group of philosophers and scientists --among them Nicholas of Cusa, Pico della Mirandola, Cardan, Paracelsus, and Kepler -- who turn to the Renaissance synthesis of Greek philosophy, especially Pythagoras and Plato, to the Hermetic tradition (both the Corpus Hermeticum and the numerous apocryphal allegories ascribed to Hermes Trismegistus) and to Christianity because these systems of thought restored to religion the dimension of mystery which had disappeared during the Middle Ages.[1] Walter Pagel, another

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[1]Giorgio De Santillana, The Age of Adventure (New York, 1956), p. 38.

historian of ideas, notes that Browne often interrupts his sober scientific investigations with statements about witchcraft and magic.[2] Browne himself acknowledges the influence of Athanasius Kircher, and he owned the works of Robert Fludd, both of whom had attempted a synthesis of all learning based upon occult and religious assumptions.

But closer examination of Browne's canon revealed in his work a dualistic attitude toward occult learning. In Religio Medici, for example, he writes in a meditation upon the Trinity, "I have often admired the mysticall way of Pythagoras, and the secret Magicke of numbers" (I, 21). Later he writes an entire work on the quincunx, although in a chapter in Vulgar Errors he marshals several arguments against number mysticism. This thesis has unearthed similar apparent contradictions in Browne's treatment of astrology, the Cabala, alchemy and the Corpus Hermeticum, and, in passing, of physiognomy and chiromancy (palm reading). Even when one turns to some of the assumptions, such as the macrocosm-microcosm analogy, upon which the occult sciences rest, Browne shows himself to be of two minds. Given these two distinct positions, the reader faces a question of belief. What precisely did Browne believe with regard to the occult sciences?

The question can be clarified by contrasting Browne's attitude toward the subject of universal analogy, or correspon-

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[2]Pagel, "Religious Motives," p. 217.

dence, another of the assumptions which underlie the occult sciences, with that of one of his literary contemporaries. Herbert's poem, "Man," published in 1633, approximately ten years before the publication of Religio Medici, states:

> More servants wait on Man,
> Than he'll take notice of: in ev'ry path
> He treads down that which doth befriend him,
> When sickness makes him pale and wan.
> Oh mighty love! Man is one world, and hath
> Another to attend him.[3]

Herbert is here undertaking to reveal the universal analogy between man and the natural world, to show man that he has an affinity with all of nature. Earlier in his poem, when Herbert writes: "Herbs gladly cure our flesh; because that they/ Find their acquaintance there," he speaks not merely figuratively, because he believes in the essential truth of universal correspondence. Browne was among the religious writers in the seventeenth century who considered it a duty to demonstrate man's kinship to the harmonious and orderly creation. This notion occurs throughout the Religio, and it is perhaps the principal theme of the Garden of Cyrus.

Browne, no less than Herbert, sought to call man's attention to the analogies between man and nature, and in Religio Medici he asserts that the interpretation of the "universal and publick manuscript" is one of the chief duties of the pious scientist.

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[3]George Herbert, The Selected Poetry of George Herbert, ed. Joseph Summers (New York, 1967), p. 140.

When we turn, however, from Browne's devotional to his scientific work, Vulgar Errors, we discover that the emphasis is placed not upon the interpretation of nature, but upon the operation of natural phenomena; the role of the scientist which emerges from Vulgar Errors is wholly in tune with the Baconian scientific revolution in progress in the seventeenth century. Browne was not a gifted scientist, but he clearly recognized that the flame of analogical thinking which had kindled the imaginations of scientific thinkers from antiquity to the Renaissance was "quite put out." We look in vain in Vulgar Errors for medical cures based on assumptions such as those recorded in Herbert's lines; rather, Browne regards such ideas, in true Baconian spirit, as invasions of figurative language into a domain where rigid rational inquiry must be the rule. Browne, like Boyle, the scientific genius who admired him, believed that God's existence could be confirmed by a close study of the creation, but both men insist that such recognition and knowledge depends upon prior religious faith. Herbert, assumes the same unity in the creation which underpins Paracelsian medicine, and the same unity that allowed the alchemists to view the process of gold making and the perfection of man as methodologically identical processes of purification. Since all creation, including man, emanates from one divine source which vitalistically pervades that creation, God is present both in individuals and in the "multiplicity of his manifestations."[4] There can be no question

[4]Pagel, "Religious Motives," pp. 109-110.

that Browne believes in divine immanence, but he asserts that God's presence cannot be known literally, as one knows the weight of a specific gas for example. It must be understood intuitively, symbolically, through the faculty of the mind he labels the understanding. The difference between these two positions may appear slight, but it is upon this difference that the worlds of Browne's science and religion truly divide. Belief in the essential truth of the doctrine of universal correspondence encouraged religious explanations for phenomena which could be explained better through comprehension of the natural principles which governed them. This is precisely the point Browne makes in his denunciation of mystical explanations of the loadstone (II, 116), and in his denunciation of the explanation Christians advance for the presence of a dark cross on the shoulders of the donkey (II, 475).

Browne never abandons metaphorical truth in order to turn his full attention, as Bacon does, to scientific investigation. He published both devotional works and editions of his scientific treatise concurrently throughout his lifetime. And even in Vulgar Errors, Browne insists upon the value of the metaphoric truth which speaks to man's understanding; he warns only that countless popular errors have embedded themselves in human thought because men have understood literally expressions intended metaphorically. As Gordon Chalmers points out, Vulgar Errors contains an incisive analysis of the limitations of metaphor: "a metaphor does not compel the mind to accept a necessary

conclusion; its truth is merely recognized."[5] Man truly lives in "divided and distinguished worlds." One world yields its secrets upon direct and methodical observation; the other through shadowed analogies, symbols, in short, metaphorically.

Browne views the occult sciences, as we have seen in each chapter of this thesis, as a source of metaphors which express his faith in a way which artistically joins his science and religion. His analysis of animal fables, another source of metaphor, provides a roughly parallel example. As Liselotte Dieckmann notes "Browne loved the animal fables and did not intend to deprive literature and art of their richly imaginative symbols. He simply attacked them insofar as they claimed to correspond to natural phenomena."[6]

Other scholars have noted Browne's distinctions between science, faith, and occult sciences, but their arguments do not follow the line of this thesis. Dewey K. Ziegler lays out Browne's two positions clearly: "the analogical and anthropomorphic thinking which he rejects as a scientist delights him as a religious man. As a scientist he tries to clarify and enlarge the field of knowledge, as a religious man he says 'I love to lose myself in a mystery.'"[7] Huntley, wrongly, rejects Ziegler's statement of these two attitudes because

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[5]Chalmers, p. 557.

[6]Dieckmann, p. 320.

[7]Ziegler, p. ix.

he feels that this conclusion suggests that Browne is merely playing with religion, and that he is either trivial, or worse, insincere.[8] In fairness to Huntley, Ziegler's discussion of Browne's use of occult learning does lead one to the conclusion that he was frivolous, and although I reject that conclusion entirely, the fact that Browne's work clearly manifests these two points of view remains, and so does the unsettling suggestion of deception.

Joan Webber's recent book, which applies the notion of the persona, or "implied author," to seventeenth-century prose, helps to dispell the suggestion of deception by demonstrating that one of the personalities which emerges from Religio Medici is a created persona. Her analysis can also lead to a more complete understanding of the place of the occult tradition in effecting an apparent bridge between Browne's faith and science. In her rhetorical analysis of Religio Medici, Webber compares Browne's method to trompe-l'oeil art,[9] an apparently straightforward but actually complex form. In her discussion, which deals with Religio alone, she finds that Browne's "I" alternates between Thomas Browne, Norwich physician and natural philosopher speaking in his own undisguised voice, and a created literary personality who expresses himself metaphorically and symbolically.[10] I suggest that when Browne

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[8]Huntley, "Sir Thomas Browne and the Metaphor of the Circle," Journal of the History of Ideas, XIV (1953), 353.

[9]Webber, p. 157.

[10]Ibid., p. 153.

discusses occult sciences in Vulgar Errors he does so as a physician and scientist, but in the devotional works he assumes a created personality which has remarkable affinities with the Renaissance magus, and he avails himself of the richly suggestive symbols which abound in the occult and esoteric tradition.

Webber describes Browne's persona as a "cosmic personality," static and carefully posed. The world inhabited by this persona resembles the Paracelsian world where the microcosm-macrocosm analogy is an article of faith which draws separate realities like religion and natural philosophy into a single unity, where the Spirit of God, present in man and nature, leaves visible "signatures" of his presence, and where nature seems, at times, only an extension of human consciousness. De Santillana describes Paracelsus' three-principled theory as "essentially a science of psychic events" because his three essential principles, salt, sulphur and mercury, are principles of matter, sidereal principles, and principles of the human soul.[11] Frances Yates describes the tendency to draw the world into the human psyche as the principal characteristic which distinguishes the Renaissance magus from the modern scientist, who strives to detach himself from the material objects he studies.[12] It would be difficult to find a better illustration of the magus' approach than

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[11]De Santillana, p. 126.

[12]Yates, p. 422.

Browne's statement in Religio Medici: "we carry with us the wonders, wee seeke without us: There is all Africa, and her prodigies in us ..." (I, 24).

Browne's "cosmic personality" inhabits a world, like the mind of man, without limitations of time and space, through which his metaphysical wit can range freely.

> Before Abraham was, I am, is the saying of Christ; yet is it true in some sense if I say it of my selfe, for I was not onely before my selfe, 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 was I dead before I was alive; though my grave be England, my dying place was Paradise, and Eve miscarried of mee before she conceiv'd of Cain (I, 68).

In the following passage Browne incorporates the astrological prediction of the length of his life in a similarly playful treatment of time.

> If there bee any truth in Astrology, I may outlive a Jubilee /Jewish computation for 50 years/; as yet I have not seene one revolution of Saturne, nor hath my pulse beate thirty yeares, and yet, excepting one, have seene the ashes, and left under ground all the Kings of Europe, have beene contemporary to three Emperours, foure Grand Signiours, and as many Popes; mee thinkes I have outlived my selfe, and begin to be weary of the Sunne; I have shaken hands with delight in my warme blood and Canicular days; I perceive I doe Anticipate the vices of age, the world to mee is but a dreame, or mockshow, and we all therein but Pantalones and Antickes to my severer contemplations (I, 52).

Browne's persona, his "cosmic personality," is not only timeless but also infinite. In the example which follows Browne celebrates the fact that no spatial boundaries limit his being.

> The world that I regard is my selfe, it is the Microcosme of mine owne frame, that I cast mine eye on; for the other, I use it but like my Globe, and turne it round sometimes for my recreation. Men that look upon my outside, perusing onely my condition, and fortunes, do erre in my altitude; for I am above Atlas his shoulders, ... The earth is a point not onely in respect of the heavens above us, but of that heavenly and celestiall part within us: that masse of flesh that circumscribes me, limits not my mind: that surface that tells the heavens it hath an end, cannot perswade me I have any; I take my circle to be above three hundred and sixty; though the number of the Arke do measure my body, it comprehendeth not my minde; whilst I study to finde how I am a Microcosme or little world, I finde myselfe something more than the great. There is surely a peece of Divinity in us, something that was before the Elements, and owes no homage unto the Sun. Nature tels me I am the Image of God as well as Scripture; he that understands not thus much, hath not his introduction or first lesson, and is yet to begin the Alaphabet of man (I, 87).

In Chapter I of this thesis we observed that as a scientist Browne rejects the macrocosm-microcosm conceit, but in the passage above he uses the device to argue the superiority of his own microcosm to the greater world which he "turns about for his recreation." Browne, speaking through the voice of his "cosmic personality," asserts that the piece of divinity within him frees him from both the confines of body and geographical locale. He, and by extension all men, is greater than Atlas, who must remain bent beneath the weight

of the heavens; his spirit soars to the empyrean where he enjoys, in mystical fashion, union with God.

Browne's manipulation of time and space through language recalls still another quality of the Renaissance magus. Ishmael Reed describes it in this way: "manipulation of the word has always been related in the mind to the manipulation of nature."[13] Although Browne, even in his "cosmic personality," never utters conjuring words, he seems to sense the proximity of the roles of magician and artist. French, in his study of John Dee, notes that Philip Sidney's "poet and the Hermetic magus are extraordinarily close in their conceptions of the imagination: both -- and this is crucial -- worked through images operating within the psyche."[14] This similarity of roles surely has not escaped Browne.

In Chapter II, of this study, Browne's complex attitude toward the Hermetic tradition was examined in detail. Although the nature of Browne's debt to this movement is difficult to fix certainly, allusions to Hermes Trismegistus appear in all of Browne's works, and he shares the Renaissance proclivity to associate Hermes and the Egyptians with "abstruse and mysticall sciences" (I, 73). French argues that not only the Renaissance magus John Dee, but also literary figures such as Spenser and Sidney, found in the Hermetic tradition an

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[13]Ismael Reed, 19 Necromancers From Now (Garden City, N.Y., 1970), Introduction.

[14]French, p. 147.

alternative to the excessive rationalism of the Middle Ages, which had divested religion of its mystery.[15] Browne's "cosmic personality" reflects the central thrust of the Hermetic tradition which is "essentially a religious philosophy based on the tenet that man is able to discover the divine through a mystical rapport with the world and with mankind."[16]

I shall close this chapter with two examples, the first from Vulgar Errors, the second from the Garden of Cyrus, which clearly demonstrate the point not only of the chapter, but also of the entire thesis. In the passage from Vulgar Errors, Browne speaks in the voice of the true scientist as he separates observable truth from metaphor. In the passage from the Garden of Cyrus, he speaks in the voice of the persona or "cosmic personality."

The discussion from Vulgar Errors confutes the belief that Genesis sanctions the idea that no rainbow appeared in the heavens before the Flood in the passage," I do set my bow in the clouds, and it shall be token of a Covenant between me and the earth." Browne proceeds by offering a scientific explanation of exactly what the rainbow is:

> Now by decree of reason and Philosophy, the Rain-bow hath its ground in Nature, as caused by the rayes of the Sun, falling upon a roride and opposite cloud: whereof some reflected,

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[15] Ibid., pp. 129, 147, 156.

[16] Ibid., p. 69.

> others refracted, beget that semi-circular variety we generally call the Rain-bow; which must suceed upon concurrence of causes and subjects aptly predisposed. And therefore, to conceive there was no Rain-bow before, because God chose this out as a token of the Covenant, is to conclude the existence of things from their signalities, or of what is objected unto the sense, a coexistence with that which is internally presented unto the understanding (II, 493-4).

The argument here is familiar. "Vulgar heads" have mistaken a metaphoric expression for a statement of literal truth and they have reasoned to an absurd conclusion. Two similar confusions, Browne continues, one from the Jewish Cabala and another from "Christian conceits," grow out of a Biblical passage from Isaiah on the rainbow.

> Cabalistical heads, who from that expression in Esay, do make a book of heaven, and read therein the great concernments of earth, do literally play on this, and from its semicircular figure, resembling the Hebrew letter Caph, whereby is signified the uncomfortable number of twenty, at which years Joseph was sold, which Jacob lived under Laban, and at which men were to go to war: do note a propriety in its signification; as thereby declaring the dismal Time of the Deluge. And Christian conceits do seem to strain as high, while from the irradiation of the Sun upon a cloud, they apprehend the mysterie of the Sun of Righteousness in the obscurity of flesh; by the colours green and red, the two destructions of the world by fire and water; or by the colours of blood and water, the mysteries of Baptism, and the Eucharist (II, 495-6).

Browne closes his chapter by describing as "laudable" the custom of regarding the rainbow as a reminder of God's convenant with mankind and of his goodness and grace. But here, as elsewhere, he condemns drawing literal conclusions

from figurative language.

Browne's analysis of the superstitions which surround the rainbow is typical of the "true scientist." In the passage from the Garden of Cyrus to be examined next his scientific language is a literary pose which masks a religious purpose. As Browne leads into this passage we are tempted to regard the preparatory discussion as evidence of his experimental concerns. He asks, for example, why "magnetical Philosophy excludeth decussations, and needles transversely placed do naturally distract their verticities" (I, 255). But this inquiry about why the study of magnetism does not include the figure of the quincunx, or why compass needles do not form the decussated figure because one always continues to point north[17] is not scientific. It is followed by inquiries about why geomancers have failed to observe the quincuncial figure in the Lady Bug, and why palm readers have decried the figure in the hand, and on and on. Questions such as these, asserts Browne, are not "trite or triviall disquisitions," but they await an answer from trenchant intellects. Although the passage which follows is often quoted as an example of Browne's scientific interest as he expresses it in his devotional works, it is in fact not scientific, but religious and literary.

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[17]distract their verticities. Turn away their vertices (OED, Verticity, ii, 3), sc. so as to point north again, avoiding the decussation." L. C. Martin, p. 362.

> Flat and flexible truths are beat out by every hammer; But Vulcan his whole forge sweat to work out Achilles his armour. A large field is yet left unto sharper discerners to enlarge upon this order, to search out the quaternio's and figured draughts of this nature, and moderating the study of names, and meet nomenclature of plants, to erect generalities, disclose unobserved proprieties, not only in the vegetable shop, but the whole volume of nature; affording delightful Truths, confirmable by sense and ocular Observation, which seems to me the surest path, to trace the Labyrinth of Truth. For though discursive enquiry and rationall conjecture may leave handsome gashes and fleshwounds; yet without conjunction of this, expect no mortal or dispatching blows unto errour (I, 225-6).

Scientific insistence upon direct observation of nature is certainly here, but what is Browne advocating observance of? He suggests that since he has uncovered examples of the quincunx throughout nature, perhaps someone, or some group of observers, might search for examples of the quaternio, which refers to the mystical Pythagorean relationship of the "quaternary numbers": 1+2+3+4= 10. Pythagoreans considered ten the perfect number because of this relationship. Even though Browne does not intend to promote numerology here, but rather a search for other signatures of order, other patterns in nature,[18] the search he advocates is hardly scientific. If members of the Royal Society understood this passage as Browne's idea of a serious scientific project, there would no longer be any mystery about why he was never admitted. How

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[18]Browne probably refers merely to as yet undiscovered evidences of order in the world, but he may have a square figure in mind to balance his triangular quincunx. See Chapter III, p. 122, of this thesis.

great, one may ask, is the difference between a search for fives and fours in nature, and the association of the Hebrew letter Caph with the rainbow, a superstition which, we have seen, Browne condemns.

I suggest that this passage is not scientific in any sense, but consummately literary. Browne here speaks in the voice of the "cosmic personality" whose "metaphysical" cast of mind allows him to draw upon all worlds available to him. The passage contains arresting and allusive imagery ("his whole forge sweat to work out Achilles his armour," and "handsome gashes and fleshwounds"), a blend a sinewy Anglo-Saxon monosyllables with the more rhythmic Latin polysyllables, balanced phrasing without euphuism ("to erect generalities, disclose unobserved properties"), Hebraic synonymy ("handsome gashes and fleshwounds"), and cadenced endings ("to trace the Labyrinth of Truth"). Browne assumes the persona detecting and pointing out to his readers evidences of the Divine Artist; he uses his literary powers to impress upon his reader the presence of God in his creation, a presence manifested through the mystical figure of the quincunx. The Garden of Cyrus, including the passage quoted above, is much closer in spirit to numerology than to science.

Sir Thomas Browne is not a young mystic who becomes a hard-headed, rational scientist by the time of his death in 1682. Browne realizes that nature yields her secrets only to the investigator who accepts science's rigorous, uncompromising methodology, but that method is neither appropriate

nor adequate for expressing his deeply felt, unshakable religious faith, for reaching the "portal of divinity." For that purpose, Browne created a persona, a "cosmic personality," who draws upon the rich language of occult sciences as an abundant source of metaphors for reconciling his faith and his science.

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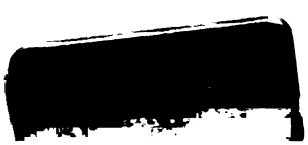

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