Medicine, Science and the Quakers: The 'Puritanism-Science' Debate Reconsidered

I

As far as I am aware, no comprehensive study exists of early Quaker attitudes to science and medicine. This is particularly surprising in the light of the recent historical debate concerning the "puritan" origins of scientific reform in seventeenth-century England, yet it must be said that Quaker sources have on the whole been ignored.[1] Moreover, where the scientific and medical opinions of early Friends have elicited historical comment, it is customarily assumed that Quaker attitudes to science were to a large extent related to the general "puritan" predilection for educational and scientific reform. As a result, historians of Quakerism such as Frederick Tolles and Richard Greaves have been able to establish the progressive nature of Quaker science which they believe to have derived from the "puritan" commitment to the utilitarian natural philosophy of Francis Bacon. According to Greaves therefore, the Quakers are to be firmly located within the "puritan Baconian" tradition, for:

> their pronounced interest in science and their embrace of the utilitarian approach to education mark them as men in the vanguard of the movement to restructure education along . . . new and progressive lines.[2]

[1] The arguments for and against the "puritanism-science" hypothesis are neatly summarised in C. Webster (ed.), *The Intellectual Revolution of the Seventeenth Century* (London, 1974). The most recent and persuasive account of the "puritan" contribution to scientific reform is to be found in C. Webster, *The Great Instauration: science, medicine and reform, 1626–1660* (London, 1975).

[2] Richard L. Greaves, "The Early Quakers as Advocates of Educational Reform," *Quaker History*, 58 (1969), p. 30. For similar views on early Quaker science, see Frederick B. Tolles, *Meeting House and Counting House: the Quaker merchants of Colonial Philadelphia 1682–1763* (Chapel Hill, N.C., 1948), pp. 205–210; Brooke Hindle, "The Quaker Background and Science in Colonial Philadelphia," *Isis*, 46 (1955), p. 243. The Baconian character of "puritan" science is discussed by Webster in his *The Great Instauration*, *passim*.

There are, I believe, two fundamental objections to this approach. First, though it is tempting to accept this highly favourable view of the Quakers as leading proponents of the "new science", there is little evidence to support any supposition which links the Quakers with Baconian science. On the contrary, as I shall attempt to show in much greater detail, the intellectual and scientific heritage of the Quakers was highly eclectic and included *inter alia* the doctrines of the hermetic and iatrochemical schools of natural philosophy.[3]

Secondly, any attempt to envisage Quaker science as essentially synonymous with "puritan" science rests on the rather tenuous historical understanding that separatist groups such as the Quakers were by and large the inevitable by-product of "puritan" disunity and disintegration in the 1640s. Accordingly, the differences of opinion between the radical sects and the more orthodox, conservative "puritans" are minimised, and sects such as the Quakers are portrayed as sharing a common theological heritage with other "puritans" as characterised by their mutual emphasis upon the spiritual or experiential nature of religious worship. There is however an alternative approach to the "sectarian–puritan" dichotomy which not only stresses the doctrinal *differences* between the two groups, but which also seeks to establish the roots of radical English non-conformity within the tradition of continental mysticism. If so, it may indeed help to explain why the Quakers and other "spiritual puritans" (as opposed to orthodox, Calvinist "puritans") were among the leading exponents of "mystical" science and "occult" medicine in England.[4]

[3] For earlier attempts to display Quaker sympathy for the doctrines of the hermetic philosophers, see Geoffrey F. Nuttall, "'Unity with the Creation': George Fox and the Hermetic Philosophy," *Friends' Quarterly*, 1 (1947), pp. 134–143; Henry J. Cadbury, "Early Quakerism and Uncanonical Lore," *Harvard Theological Review*, 40 (1947), pp. 177–205, esp. pp. 197–202. For an introduction to Renaissance hermeticism, see Frances A. Yates, *Giordano Bruno and the Hermetic Tradition* (London, 1964). Broadly speaking, hermeticism refers to the alchemical or occult study of the universe. Iatrochemistry refers to the chemical theory of medicine and physiology which was first developed by the hermetic philosopher Paracelsus in the early sixteenth century.

[4] A good example of the assimilation of Quakerism to the wider tradition of "puritan" thought is to be found in R. L. Greaves, "The Nature of the Puritan Tradition," in R. B. Knox (ed.), *Reformation, Conformity and Dissent* (London, 1977), pp. 255–274. Cf. Rufus M. Jones, *Spiritual Reformers in the Sixteenth and Seventeenth Centuries*, 2nd ed. (Gloucester,

II

With these objections in mind, I should like now to concentrate upon the specific question of Quaker attitudes to medical science with particular reference to the Quaker predilection for hermetic and iatrochemical explanations of disease and its cure. However, prior to considering the general meaning and significance of "occult" medicine in seventeenth-century England, it might be useful to recall the general fascination of those sects of "spiritual puritans" for all branches of medical learning. The Quakers were therefore unexceptional in their attachment to the study of medicine as witnessed by the various physicians, surgeons and chemists who participated in the early stages of the movement. Among those actively involved in medical practice were John Goodson, Daniel Phillips, and the Welsh Friends Thomas Wynne, Edward Jones and Griffith Owen who were all, with the exception of Phillips, prominent in the establishment of medical facilities in the new colony of Pennsylvania. Phillips, who graduated from Leyden in 1696, wrote a tract on small-pox which was largely indebted to contemporary medical sources including the work of Thomas Willis, Thomas Sydenham and the continental chemist Francis Sylvius de la Boe.[5]

Interest in medicine was not confined to the lesser figures of the Quaker movement. George Fox, for example, almost certainly underwent some form of mystical experience in his youth whereby he was unsure as to whether he should "practise physic for the good of mankind, seeing the nature and virtues of the creatures were so opened to me by the Lord." This concern with "unity with the creation" or divine intuition, which Fox perceived as a necessary accompaniment

---

Massachusetts, 1971), chs. 12–17, where Jones attempts to trace the influence of mystical authors such as Paracelsus and Jacob Boehme upon the radical sects of the English Revolution.

5 D. Phillips, *A Dissertation of the Small Pox* (London, 1702). A useful list of early Quaker physicians and scientists is available in the appendix to C. E. A. Turner, "The Puritan Contribution to Scientific Education in the Seventeenth Century in England" (unpub. Ph.D. diss., University of London, 1952). Cf. Greaves' assertion that "the number of sectaries with sufficient medical knowledge to enable them to criticize medical practice was slight," in his *The Puritan Revolution and Educational Thought* (New Brunswick, New Jersey, 1969), p. 139.

to the process of spiritual regeneration, has been widely interpreted as evidence of Fox's early interest in the doctrines of the hermetic philosophers.[6]

Though Fox eventually chose to refrain from medical practice, his fascination with medical issues continued unabated. Thus on his frequent tours through Britain, Fox recorded various incidents in his Journal which amply illustrate his continuing interest in medicine, such as the occasion at Lyme Regis in 1657 when he and his followers encountered a large group of itinerant mountebanks. Among queries propounded by Fox and his companions to test the moral integrity of the quacks one was "whether any knew ye virtue of all ye Creatures in ye creation . . . except they (that) was in ye wisedome of God by which they was made & created." Reminiscent of the belief held by hermetic physicians that intellectual enlightenment was concomitant with divine grace, Fox's understanding of disease was clearly related to the "spiritual" character of his religion.[7]

As a representative of that tradition which stressed the superiority of the "inner light" to all external forms of religious worship, Fox was certainly not alone in his sympathetic appreciation of hermetic doctrines. Indeed, the attraction for the "inner light" sects or "spiritual puritans" of the ideas propounded by hermetic and chemical physicians is a well-documented fact of recent research.[8] The key figure in this movement for medical and scientific reform in seventeenth-century England was the Swiss iatrochemist or chemical physician Theophrastus Paracelsus (1493–1541). Paracelsism itself was not simply a theory of medicine which stressed the value of chemotherapy above all other forms of recognised treatment. On the contrary, its origins lay deep in

[6] George Fox, *Journal*, bi-centenary ed. (2 vols., London, 1891), i, pp. 28–29. Cf. G. F. Nuttall, *op. cit.*, pp. 136–137; R. Barclay, *Inner Life of the Religious Societies of the Commonwealth* (London, 1876), pp. 213–215.

[7] George Fox, *Journal*, ed. N. Penney (2 vols., Cambridge, 1911), i, p. 269. See also G. F. Nuttall, *op. cit.*, pp. 141–142. Among those books in the possession of George Fox was the work of the contemporary medical reformer Nicholas Culpeper, *The English Physitian Enlarged* (London, 1653); see J. L. Nickalls, "George Fox's Library," *Jnl. F.H.S.*, 28 (1931), p. 10.

[8] See especially P. M. Rattansi, "Paracelsus and the Puritan Revolution," *Ambix*, 11 (1963), pp. 24–32; C. Webster, "English Medical Reformers of the Puritan Revolution: A Background to the Society of Chymical Physitians," *Ambix*, 14 (1967), pp. 16–41.

the Renaissance revival of hermetic wisdom and neo-platonic magic which emerged in the early years of the sixteenth century as a rival system to the universal authority of scholastic science. In the field of natural philosophy, the Aristotelianism of the Schools was selected as the object of particular censure by the advocates of hermetic and Paracelsian reform. In place of the unproductive study of Galen and Aristotle, Paracelsus recommended the investigation of the reformed hermetic arts of alchemy, astrology and natural magic which were to be based upon an experimental approach to the study of nature. Moreover, the "chemical world-picture" stressed the existence of limitless occult or spiritual powers in the creation which, according to Paracelsus and the hermeticists, might be used for the benefit of man and the glory of the Creator. Indeed, the study of the creation as envisaged by Paracelsus was no less than the search by man for God.[9]

Given the heretical implications of such beliefs, it is not surprising that Paracelsism was largely unheard of in England before the Civil War, and that its appearance in this country should coincide with the emergence of the "inner light" sects in the 1640s and 1650s. Sectarian interest in hermetic and Paracelsian science was especially evident in the debate over university education which occurred during the interregnum and which displayed the growing disenchantment of the radicals with traditional methods in science and learning. Attracted to the theosophical or mystical quality of Paracelsism, "spiritual puritans" such as John Webster and Henry Pinnell were convinced of the ungodly character of Aristotelian natural philosophy which they thought to have produced little in the way of practical achievement.[10]

Similar sentiments are to be found among early Friends. Charles Lloyd for example, who was educated at Oxford during the 1650s, was converted to Quakerism in 1662 after

9 For an introductory survey of the life and thought of Paracelsus, see Walter Pagel, *Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance* (Basle, 1958). The religious background to Paracelsism is discussed more fully in the same author's "Religious Motives in the Medical Biology of the XVIIth Century," *Bulletin of the Institute of the History of Medicine*, 3 (1935), pp. 97–128, and "Paracelsus and the Neoplatonic and Gnostic Tradition," *Ambix*, 8 (1960), pp. 125–166.

10 John Webster, *Academiarum Examen* (London, 1654); Henry Pinnell, *Philosophy Reformed & Improved in Four Profound Tractates* (London, 1657).

he became disillusioned with the "empty Notions and fruitless Speculations" of the universities. Described by his son as a seeker in religion, Lloyd was evidently well-versed in the radical thought of the sects for by his own account he had traversed unusual paths in his youth, "amongst the . . . levellers, familists, Behmenists and those above ordinances as called by the world." Moreover, in the medical advice which Lloyd freely proffered to family and fellow Friends one can detect a distinct preference for medical innovation. Thus in the case of his sick daughter Elizabeth Pemberton, he stressed his abhorrence of excessive blood-letting ("though it's the court fashion and mode of late"), and prescribed amongst other drugs the use of van Helmont's "liquid laudanum".[11]

III

This reference to van Helmont is especially interesting since it refers to the Flemish iatrochemist John Baptist van Helmont whose novel medical philosophy, based upon a mystical approach to the study of nature, was popular in English radical circles. From 1650 onwards, Helmontianism became increasingly influential among medical reformers and, despite its subversive affiliations, posed a major threat to the traditional practice of Galenic medicine. It is therefore of special interest to note the growth of Quaker involvement in this new and radical medical philosophy. Among those who are known to have read van Helmont are William Penn who owned his own copy of the physician's collected works and the English Quaker Benjamin Furly who, whilst resident in Amsterdam after the Restoration, owned Dutch editions of the Flemish iatrochemist.[12]

Indeed the first English translation of van Helmont's complete works was in all probability the work of the

[11] T. M. Rees, *A History of the Quakers in Wales and their Emigration to North America* (Carmarthen, 1925), p. 20; Friends House Library, London, Lloyd MSS, I/19, I/165 (no. 18); British Library, Additional MS 23, 217, f. 25 (C. Lloyd to F. M. van Helmont, 12 Feb. 1678).

[12] *Catalogue of Books, Manuscripts, Maps, . . . from the Libraries of William Penn* (London, 1872), p. 25; William I. Hull, *Benjamin Furly and Quakerism in Rotterdam* (Swarthmore, Penn., 1941), p. 142. The introduction of Helmontian thought into England is discussed in P. M. Rattansi, "The Helmontian–Galenist Controversy in Restoration England," *Ambix*, 12 (1964), pp. 1–23.

Southwark Quaker John Chandler, who according to the frontispiece of the *Oriatrike* (1662) was an ex-student of Magdalen Hall, Oxford, but of whom little else is known. However internal evidence in the preface and appendix to this work would seem to point to the Quaker origins of the translator Chandler who was probably identical with the Quaker apologist of that name writing in the period from 1659 to 1663. Thus in an adulatory poem to the author, Chandler expressed the feeling that:

> "My self doth tremble, and my flesh doth quake,
> While I the King of Saints my Subject make . . .
> My Soul is melted, and my heart is broke,
> In feeling of the force of thy Love-stroke."[13]

Confirmation of the Quaker origins of the translator of van Helmont is provided by an obscure reference to the Quakers and the *Oriatrike* in the journal of two Dutch Labadists Peter Sluyter and Jaspar Dankers who were touring the American colonies in the late seventeenth century. According to the Dutchmen, whilst lodging with a group of Quaker settlers in a remote region, they:

> found lying upon the window a volume of Virgil, . . . and also Helmont's book on medicine, whom, in an introduction, which they have made to it, they make pass for one of their sect, . . .[14]

If we are to believe the testimony of Sluyter and Dankers, the American Quakers would appear to have held van Helmont in high esteem, so much so, that they attempted to assimilate his medical thought to their own brand of religious speculation. Why the philosophy of van Helmont should have made such an impact upon the Quakers is evident in the

[13] J. B. van Helmont, *Oriatrike or, Physick Refined* (London, 1662), appendix entitled "A Poetical Soliloquie of the Translatour". Between 1659 and 1663 John Chandler wrote four works defending Friends. Cf. C. Webster, *The Great Instauration*, p. 276n. where he refers to the Quaker author with regard to the translation of the *Oriatrike*, yet fails to make any explicit connection between the Quaker Chandler and the translator of van Helmont.

[14] J. Dankers and P. Sluyter, *Journal of a Voyage to New York and a Tour in Several of the American Colonies in 1679–80*, ed. Henry C. Murphy (Memoirs of the Long Island Historical Society, i, Brooklyn, 1867), p. 167. Henry Cadbury was undoubtedly correct in his assertion that the book which the Labadists had seen in the Quaker home in Burlington was the *Oriatrike*. He goes on to say that "John Chandler, a Friend, had translated it and supplied a further preface, which made it seem all the more Quakerly," W. I. Hull, *op. cit.*, p. 122n.

semi-mystical quality of Helmontian science. Unlike the Paracelsian school of natural philosophy, van Helmont had stressed the essential goodness of the creation which he believed to be unaffected by the transgression of Adam in Eden. Consequently disease and death did not arise from men partaking of the corrupted elements of nature since all natural things in their essence were beneficial to the life and well-being of man. The Helmontian God was basically a benevolent deity who had not created diseases and medicine as a punishment for original sin. On the contrary the Helmontian asserted that:

> the endowments of simples are from the Creation, and not from the usurpation of possession. For the proprieties were in herbs, before sin, death and necessity.[15]

As a result, van Helmont rejected the Galenic emphasis upon dietetics as well as repudiating the belief that God had created poisons in the earth, "for he made not death; nor any exterminating medicine in the earth." Moreover if, as the Helmontians averred, the creation was devoid of "contrariety" or discord and retained its original perfection, all disease was little more than a natural aberration which was amenable to natural cure. The repercussions of Adam's fall from grace were therefore restricted to the sphere of mankind, and in particular to the mind or soul of man where the *archaeus* or life-force was to be found. As a result, the most difficult and stubborn diseases originated in the depraved mental faculty of man, for as van Helmont's son, who later became a Friend, observed "the principle Cause of Diseases, is an apprehension, or strong Imagination, and Fear with the rest of those Passions we stir up in our selves."[16]

If the cure of such maladies was the responsibility of the individual sufferer, one might compare van Helmont's notion of the anthropocentric source and cure of disease with the Quaker belief that spiritual regeneration was the moral

[15] Noah Biggs, *Mataeotechnia Medicinae Praxeωs. The Vanity of the Craft of Physick* (London, 1651), p. 35.

[16] *Ibid.*, pp. 87, 216; cf. J. B. van Helmont, *Oriatrike*, pp. 160–175; F. M. van Helmont, *The Spirit of Diseases* (London, 1694), p. 138. Van Helmont the younger certainly incorporated many of his father's ideas into his own peculiar version of mystico-alchemical thought. He was also responsible for the posthumous publication of his father's works, *Ortus Medicinae* (Amsterdam, 1648), to which he supplied a lengthy preface.

responsibility of the sinful individual who must seek for divine guidance. The Quakers therefore believed that, like the objects of the creation, all men were essentially good or leastways all of the "seed of Adam" were capable of obtaining the fruits of divine absolution. Such thinking is clearly evident in the lengthy preface by John Chandler to the 1662 edition of the *Oriatrike* where he states that:

> this Son of God is the Eternal Eye of the Father, which runs thorrow the whole Creation, beholding the evil and the good; it is that Eye which knows and sees the essence and frame of all things: *it doth not behold any thing in its essence to be evil; because every thing in its Essence and Being is good, and that, because it is one, and true;* but that which is double, varie-form, seeming, or false, that it sees to be evil, and that is the fleshly and sensual apprehension and desire in man, which vailes or taints his Spirit of Understanding and Will, that they are not able . . . rightly to apply themselves unto Objects intelligible or desirable, whereby irregular and evil effects, in Word, Action, and Conversation do visibly appear.[17]

In a manner reminiscent of ranter speculation concerning the nature of good and evil, Chandler argued that all men possessed the spirit of darkness for it co-existed with the spirit of light. However, Chandler's portrayal of this struggle between the two principles of light and dark (or good and evil) is certainly Quaker in tone, as evinced by his description of the process of self-enlightenment for:

> That eye being opened in Man, or Candle lighted, so far as it is lighted or opened, makes first to behold the evil and the good, . . . and so far as he doth this, he is truly said to know himself; for he consists of darkness and light, till by a holy war, the light hath comprehended the darkness.[18]

The Quaker concept of man as essentially sinless, or consisting of both darkness and light, may therefore be compared with the Helmontian insistence upon the perfection of nature wherein "unity is not contrary to duality . . . nor is generation contrary to corruption." Similarly both van Helmont and the Quakers shared the same faith in an

[17] J. B. van Helmont, *Oriatrike*, sigs. a1v–a2r (my italics).

[18] *Ibid.*, sig. a2r. The Quaker John Chandler was in fact converted from the doctrines of the ranters. See G. Fox, *Journal* (Cambridge, 1911), i, p. 166; J. F. McGregor, "Ranterism and the Development of Early Quakerism," *The Journal of Religious History*, 9 (1976–77), p. 357; John Chandler, *A Seasonable Word* (London?, 1659), pp. 3, 5.

immanent deity whose presence in the world was motivated by the merciful character of his divine being. Helmontianism thus stressed the great charity of the Creator in providing mankind with medicines for all diseases, whilst the Quakers maintained that all men might be saved, if they so chose, through the instrument of free grace. In effect they both stressed the common notion that through the exertion of the individual all men might finally attain the gifts of mortal as well as immortal happiness.[19]

IV

Any comparison of Quaker and Helmontian thought must also include mention of the belief common to both concerning the divine origin of religious and scientific wisdom. According to van Helmont, knowledge of God and the creation originated from within the human soul which, if obscured by sin or "darkness", was unable to comprehend intuitively the properties of the creation. The Helmontian therefore spoke of the innate power of the "optic" sense contained within the regenerate soul which once united with material objects was able to perceive their inner virtues. This intuitive process of *ecstasis* or divine illumination, which was not unique to Helmontianism, was often said to have been experienced by the mystical sects of the English Revolution. It was almost certainly adopted by George Fox in the 1640s in describing that mystical experience which led to his discovery of the innermost secrets of the natural world.[20]

Fox's conviction that he had achieved "unity with the creation" as a result of divine enlightenment and ecstatic communion with nature suggests that the early Quakers were likely to have favoured hermetic and iatrochemical explanations of the universe in preference to the "heathen" learning taught in the universities. Further evidence of Fox's indebtedness to the hermetic tradition is apparent in the description given by Edward Bourne of Worcester of a conversation he witnessed in 1655 in which Fox spoke:

[19] J. B. van Helmont, *Oriatrike*, p. 170.

[20] For Fox see above p. 267–68. Cf. Walter Charleton, *A Ternary of Paradoxes* (London, 1650), sigs. F3v–F4r; N. Biggs, *op. cit.*, p. 45.

of the Glory of the first body, and of the Egiptian Learning, & of the Language of the birds, & of wt was wonderfull to mee to heare, soe that I beli[e]ved he was of a Deep & wonderfull understanding in naturall but especially in spirituall things.[21]

Bourne, who was a chemist by profession, accompanied Fox to Ragley Hall in 1678 where among those whom they met at the residence of the Quaker noblewoman, Anne, Viscountess Conway, was the son of J. B. van Helmont. The meeting of Fox with Francis Mercury van Helmont would appear to strengthen the claim of historians such as Henry Cadbury that the early Friends were profoundly influenced by the doctrines of hermetic and occult philosophy. However, in a recent study of George Fox and his reaction to the cabalist notions propounded by F. M. van Helmont, Alison Coudert has suggested that Fox's suspicion of "intellectualism," combined with the general Quaker distrust of occultism, meant that the "Quakers could not assume responsibility for van Helmont's . . . imaginings." Clearly the career of the younger van Helmont, particularly that period of his stay in England amongst the Quakers, is an important episode in this study of early Quaker science and one that merits further investigation.[22]

Van Helmont first came into contact with Quakerism through the visit of William Ames to the Palatinate in 1659–60. He renewed acquaintance with the sect in the late 1670s following his arrival in England in 1670 to petition for the pension which the government had promised to pay Princess Elizabeth, Abbess of Herford. By 1677 he was resident at the Quaker home of Lady Conway where he defended the despised sect from the evil slanders of its enemies and praised the Friends for having "ye Experiences

[21] G. Fox, *Journal* (Cambridge, 1911), ii, p. 384. Of Bourne, Penney states that he was described as a "chemist" in the register of his marriage in 1661 to Margaret Paine of Kings Capel. As a Quaker, he suffered various terms of imprisonment. Unfortunately, nothing is known of his chemical or medical beliefs.

[22] For Fox's meeting with van Helmont, see W. I. Hull, *op. cit.*, p. 111; Alison Coudert, "A Quaker–Kabbalist Controversy: George Fox's Reaction to Francis Mercury van Helmont," *Journal of the Warburg and Courtauld Institutes*, 39 (1976), pp. 171–189. Fox's concern with F. M. van Helmont's theosophical opinions was expressed in the form of a memorandum to a meeting of Quakers in London in 1684. One of the queries raised by Fox was "Whether van Helmont's questions are Learned or unlearned? . . . And if Learned, whether they are Learned by ye Holy Ghost, or unclean Ghost," *ibid.*, p. 182.

of all mystical writers verifyed in themselves tho' they are such as can neither read nor write."[23]

Mild and tolerant in religion, van Helmont was especially well-affected toward the Quakers whom he admired as the true exponents of the virtues of apostolic christianity. Moreover, his involvement with the Friends at Ragley was not limited to discussion of theological topics for among the many friends and guests of Lady Conway were various men of a similar scientific temperament to that of van Helmont such as the Quaker convert George Keith. Despite the aversion of many leading Quakers to cabalistic speculation, which van Helmont and Keith keenly discussed, there seems little doubt that such mystical explanations of natural events appealed to the "looser sort" among the general fraternity of Friends. Van Helmont himself was not averse to preaching the merits of such ideas, as seen in the following explanation which he propounded to a group of troubled Quakers concerning the trials of imprisonment:

> when 50 of them were together in prison & one of them dying, they could none of them believe that he was dead for as much as they invariably found him alive in them, . . . so they asked me how this came to pass & what this was, and I told them of antient Cabalists who called this *Ibbur*, or a Doubling of Spirits, to wch that passage of Elijah and Elias refers.[24]

Van Helmont, it should also be remembered, was invited to Ragley because of his reputation as a physician, for as the son of the famous iatrochemist it was hoped that he might be able to cure the excruciating headaches from which Lady Conway suffered. It seems likely therefore that among those subjects discussed by van Helmont and the various guests at Ragley were issues of medical and chemical importance. Charles Lloyd and Edward Bourne both met van Helmont at Ragley and they both shared van Helmont's enthusiasm for chemistry. Lloyd's attendance at Ragley is especially interesting since he was apparently responsible for confirming van Helmont's early faith in the sincerity and piety of the Quakers. Furthermore, in 1670 van Helmont was introduced

[23] William Sewel, *The History of the Rise, Increase and Progress of the Christian People called Quakers* (London, 1722), p. 202; A. Coudert, *op. cit.*, p. 171; British Library, Sloane MS 530, f. 54r ("Some Observations of F. M. van Helmont"). For van Helmont's sojourn at Ragley, see especially Marjorie H. Nicolson, *Conway Letters* (London, 1930), pp. 309–457.

[24] British Library, Sloane MS 530, ff. 54r–v.

to Ezekiel Foxcroft, Fellow of King's College, Cambridge, "whose curiosity," Henry More believed, "it would gratify to converse with van Helmon, they both haveing a genius to Chymistry." Foxcroft, who as far as we know was not formally attached to the Quakers, shared Anne Conway's predilection for Behmenism, and prior to his death in 1674 was responsible for the translation of the Rosicrucian work, *The Chymical Wedding*, which was subsequently printed in 1690 by the Quaker printer Andrew Sowle.[25]

On the death of Anne Conway in 1679, van Helmont quit England and the company of the Quakers and resumed his travels through Europe where he maintained links with continental Friends such as Benjamin Furly. The publication of much of van Helmont's work in this period testifies to the interaction of his religious and scientific beliefs as in his description of the origin of human knowledge. According to van Helmont, Adam in his innocency possessed "an inward illuminating knowledge of all things", which being obscured by sin meant that man must resort to the use of his senses, "which Knowledge at the best is very dark, as all men can witness from sad Experience." Consequently, van Helmont advised the natural investigator to "know oneself" for without this prior knowledge all else was merely illusory:

> for we find that the reason why so few attain to a true and experimental knowledge of themselves, is, because instead of clearing up the Light that is hid in them, they do more and more darken and cloud it, by their pursuing of Truth in things without them, . . . supposing them to be the Causes of those Effects they see produc'd in the World, . . . Wherefore he that would be a right and genuine Enquirer into Truth, must first of all search into his own Essence.[26]

Quite clearly, van Helmont was not the sole beneficiary of that relationship which arose at Ragley between himself

[25] British Library, Additional MS 23,217, f. 25; M. H. Nicolson, *op. cit.*, pp. 317, 323. For Foxcroft's translation of *The Chymical Wedding*, see Paul M. Allen (ed.), *A Christian Rosencreutz Anthology*, 2nd ed. (New York, 1974), pp. 67–162 where a facsimile copy of the 1690 edition is reproduced. According to Allen, "it is highly probable that *The Chymical Wedding* was discussed with considerable interest" by the group at Ragley, "and it may well have been here that Foxcroft's attention was drawn to the work in the first place," *ibid.*, p. 63.

[26] M. H. Nicolson, *op. cit.*, pp. 452–457; H. J. Cadbury, *op. cit.*, p. 195; Kenneth Dewhurst, *John Locke (1632–1704) Physician and Philosopher* (London, 1963), pp. 230, 232, 274; W. I. Hull, *op. cit.*, pp. 105–123; F. M. van Helmont, *The Spirit of Diseases*, pp. 2–3, 82–84.

and the Quakers, for many of the latter were keenly interested in van Helmont's peculiar synthesis of iatrochemical, mystical and hermetic thought. In spite of Fox's wariness of cabalist speculation, which he felt would undermine the essential simplicity and anti-intellectual foundation of Quaker theology, there seems little evidence to suggest, as does Alison Coudert, that "the fertility of van Helmont's thought . . . proved too much for the Quakers." On the contrary, his beliefs appealed to a large number of the Quaker community in England and Europe, just as the medical philosophy of van Helmont senior attracted the attention of various Friends who appreciated the mystical basis of Helmontianism.[27]

V

Further evidence of the Quaker affinity with iatrochemical thought, particularly that of van Helmont senior, is provided by the German chemist Albertus Otto Faber who visited England in 1660 at the invitation of the restored monarch Charles II. Faber, whose medical beliefs display a marked familiarity with a variety of chemical sources, including van Helmont, was soon attracted to the Quakers and was arrested in 1664 for attending one of their meetings. Consequently he undertook to defend the Quakers in a pamphlet which advocated freedom of conscience and the immunity of foreign residents from the act prohibiting non-conformist conventicles. Faber's Helmontianism is apparent in his suggestion voiced in 1677 that life and ill health sprang from one and the same source, the *archaeus*, which according to Faber:

> by reason of the Curse and Transgression is like Tinder, . . . And therefore very apt to be disturbed in his Operations by some small accident: Nay, Sometimes by his own fantasie, . . . in so much that he never can hit the right way again, and yet worketh on still, not as before, to maintain Life and Health, but to work Diseases and Death it self.[28]

[27] A. Coudert, *op. cit.*, p. 189. The edition of the *Oriatrike* owned by William Penn was probably a gift from the author's son, who was in fact responsible for the eventual publication (London, 1694) of Penn's *Account* of his travels in Holland and Germany; see M. H. Nicolson, *op. cit.*, p. 453.

[28] For details of Faber's stay in England, see John L. Nickalls, "Albertus Otto Faber, the German Doctor," *Jnl. F.H.S.*, 32 (1935),

Faber's insistence that life and death were incorporated as one in the Helmontian notion of the *archaeus* may therefore be compared to van Helmont's belief that nature was devoid of contrariety, thereby precluding the existence in the natural world of such opposite qualities as bitter and sweet, white and black, or even life and death. Similarly F. M. van Helmont confirmed that all things in nature must be "produc'd by Unity," so that:

> Death or Dying, to speak properly, is not contrary to Life, but a mean serving for the meliorating of it. And accordingly there is nothing in the World that can be meliorated or advanced without manifold dying.[29]

Yet another Friend who shared the Quaker predilection for the new medicine was the eminent Bristol Quaker Charles Marshall who wrote a short medical treatise in 1670 in praise of those medicines that were "prepared by the fire." An opponent of traditional medical therapy, Marshall believed that the chemist held the key to the spiritual properties that were confined to the *materia medica*, "and so consequently that Chymical Medicines truly prepared, are not, nor cannot be so dangerous as those called Galenical." Whether Marshall was attracted to the medical theories of van Helmont is not known, though the fact that he envisaged an implicit relationship between religious and medical ignorance would seem to imply some form of acquaintance with the radical views of the medical reformers.[30]

The medical careers of Charles Marshall and A. O. Faber also shed important light upon the practical organisation of Quaker medicine. Thus the correspondence between Marshall, Richard Snead (a Bristol Friend) and various Quakers in London, including William Penn, Richard Whitpane and John Bellers, testifies to the importance of physicians such as Marshall in the production of suitable chemical medicaments for the use of Friends. An even more striking example of the

---

pp. 54–57; Harriet Sampson, "Dr. Faber and his Celebrated Cordial," *Isis*, 34 (1942–43), pp. 472–496. See also A. O. Faber, *A Remonstrance in reference to the Act, to prevent and suppress Seditious Conventicles* (London, 1664); *idem*, *De Auro Potabili Medicinali* (London, 1677), p. 13.

[29] F. M. van Helmont, *The Spirit of Diseases*, p. 56.

[30] Charles Marshall, *A Plain and Candid Relation of the Nature, Use, and Dose of Several Approved Medicines* (London, 1670), pp. 6–7, 16.

inter-action of medicine and religion in Quaker circles is provided by the Faber–Mason correspondence of 1668 which was mainly concerned with Faber's role as a supplier of chemical drugs to the Quaker fraternity in Lincolnshire. According to Martin Mason, a renowned advocate of the principle of religious toleration, Faber's appreciation of the "noble art of Chymistry" was certain proof of his "dwelling in that which is the spring of true Wisdom . . . setting Truth above error." However, Mason went on to defend a fellow Quaker physician by the name of John Mills, whom Faber had accused of professional malpractice, seeing as "the Country (i.e. Lincolnshire) is poor, his practise inconsiderable though he makes the best of it, better have one honest Practitioner than many in a County not of a Chimicall, of a Noble Temper."[31]

The Quakers undoubtedly went to great lengths in their choice of physicians and apothecaries, and in some areas of England they seem to have developed a well-organised network of medical care. Moreover, in their attachment to the new doctrines of the iatrochemists, Quaker physicians were often in the forefront of the movement for medical reform in the seventeenth century. As late as 1714, the Quaker reformer John Bellers was demanding the introduction of legislation which might establish public laboratories for medical research in England. That he failed to gain the support of Parliament for such a scheme may be due in part to Bellers' openly declared acceptance of the principle of divine illumination as the source of natural wisdom.[32]

VI

In common with the various sects of "spiritual" reformers that rose to prominence in England during the Revolution, the Quakers were clearly attracted to the mystical doctrines

[31] Richard Snead, *A letter in recommendation of some Medicines prepared by Charles Marshall* (signed Bristol and London, 1681). For the Faber–Mason correspondence, see especially H. Sampson, *op. cit.*, p. 485; Friends House Library, London, Martin Mason MSS, ff. 80–81, 76. See also *Extracts from State Papers Relating to Friends, 1654 to 1672*, ed. N. Penney (*Jnl. F.H.S.*, London, 1913, supps. 8–11), p. 214.

[32] John Bellers, *An Essay Towards the Improvement of Physick* (London, 1714), pp. 8, 54, 57. Bellers was familiar with that tale of van Helmont's concerning one Butler "that was in England in King James the First's time, who had an Oyl of Extraordinary Virtue," *ibid.*, p. 12.

of the hermetic and iatrochemical philosophers. Moreover, Quaker attachment to these ideas was probably reinforced by the eirenic implications of the hermetic approach to the study of nature which Frances Yates has described as "the effort to avoid doctrinal differences, to turn from them to the exploration of nature in a religious spirit." Thus among those Quakers who advocated liberty of conscience and objected to the doctrinal strictures of established religion were the physicians Faber and F. M. van Helmont, the latter having experienced at first-hand the horrors of religious persecution in Europe. It is no coincidence therefore that when the tolerant van Helmont arrived in England in 1670 he was immediately attracted to the like-minded Quakers who shared his scientific and religious concerns. Unconcerned with religious dogmatism and doctrinal controversies, van Helmont acknowledged:

> only but two sorts of men viz: ye good & ye bad: ye good are those who really know, love & obey God without all pretext, & really are taught and live by ye spirit of God, . . . & ye bad are those who are . . . such as hide and cloake wickedness under some forme or profession of Religion. The sort I own, & am one with are men of ye first sort, lett them be called by any name whatsoever & I disowne any of ye other sort lett him be amongst what sort of people soever professing Religion.[33]

Van Helmont's denial of formal religion and his faith in the power of spiritual religion therefore provided a solution to the religious persecution which had divided Europe since the early days of the Reformation. There was nothing novel in van Helmont's eirenic or tolerant attitude to the problem of religious discord, nor was there anything strange in his combination of religious and scientific interests. On the continent, the views of eirenicists and iatrochemists frequently coincided and fused to form one pansophic vision of man, nature and God which appealed to men of a variety of seemingly incompatible religious backgrounds.[34]

[33] F. A. Yates, *The Rosicrucian Enlightenment* (London, 1972), p. 227; A. O. Faber, *A Remonstrance*, p. 5 and *passim*; British Library, Sloane MS 530, f. 53v. See also A. Coudert, *op. cit.*, p. 181, where Coudert suggests that van Helmont was originally drawn to the Quakers because of their eirenic tendencies.

[34] See e.g. P. J. French, *John Dee: the World of an Elizabethan Magus* (London, 1972), pp. 135–136; R. J. W. Evans, *Rudolf II and his World: A Study in Intellectual History, 1576–1612* (Oxford, 1973), pp. 66–67, 82, 92, 100, 142, 197; Owen Hannaway, *The Chemists and the Word: the Didactic Origins of Chemistry* (Baltimore, 1975), pp. 56–57.

In England, a similar combination of religious and scientific aspirations is evident in the thought of the Elizabethan magician John Dee and the Anglican physician Sir Thomas Browne.[35] Between 1640 and 1660, the cause of religious toleration was increasingly adopted by those "spiritual puritans" like the Quakers who were most affected by religious persecution. Radicals like John Webster, Peter Chamberlen and William Walwyn, who were all closely involved in the movement for medical reform, were conspicuous advocates of the principle of liberty of conscience. In Webster's case it is clear that his support for eirenicism stemmed from his adherence to a form of "spiritual puritanism" which elevated faith above reason and castigated the logical methods of scholastic theologians. Of the latter Webster wrote:

> they do but lead and precipitate men into the caliginous pit of meer putation, and doubtfull opination; making the word of God nothing else but as a Magazine of carnal Weapons, from whence they may draw instruments to fight with and wound one another.[36]

Many of the spiritually-inclined chemical reformers who proposed freedom of conscience did in fact possess first-hand experience of the military struggle of the 1640s. Reformers such as John Webster, John French, Nicholas Culpeper and Henry Pinnell all served the side of Parliament during the Civil War. Pinnell, who translated Paracelsian texts in the 1650s and who acted as chaplain to the parliamentary army, expressed profound regret in 1657 for his previous "complyance with men of violence, . . . whose feet have been swift to

35 According to Dee's biographer, Dee believed that a "religion of the world, one of love and unity, could be developed through the rediscovered *prisca theologia*," P. J. French, *op. cit.*, pp. 55–56, 118–124; Thomas Browne, *Religio Medici* (London, 1642), pp. 11, 20, 25–26, 60. Browne was himself approached by the Norwich Quaker Samuel Duncon who conceived of inducing Browne to join the Society of Friends, *D.N.B.*, vii, p. 66. Moreover, Browne's works were translated into Dutch by the Quaker historian William Sewel in 1688; see C. W. Schoneveld, "Holland and the Seventeenth-Century Translations of Sir Thomas Browne's *Religio Medici*," in J. A. van Dorsten (ed.), *Ten Studies in Anglo-Dutch Relations* (London, 1974), pp. 148–149.

36 J. Webster, *op. cit.*, pp. 12–13, 15–16, 17; P. Chamberlen, *A Speech Visibly Spoken* (London, 1662); W. Walwyn, *Tolleration justified, and Persecution condemn'd* (London, 1646). Chamberlen, who after the Restoration sought to unite all the churches of Christendom, referred to Paracelsus as one of the "great Doctor-makers of the World," *A Vindication of Publick Artificiall Baths* (London, 1648), p. 1.

shed the blood of men more righteous than themselves." Consequently Pinnell demanded that such oppressors of the spirit should quit their violent ways and turn instead to the contemplation of the hermetic creation for they are:

> not to make the pretence of Religion or Civill Right a stalking horse to proud and imperious designes and ends, but to fight the good fight of Faith, and earnestly contend for it, not with carnall weapons, but spirituall. *It stands in all the Creation to poynt out the Creator: in the Sun, to shew us the true Light, . . . Thus every part of the Creation doth its part to publish the great mysteries of mans Salvation.*[37]

Similarly, the German chemist Johann Rudolph Glauber, whose works were extremely popular in radical medical circles, reacted strongly to the wars of religion which had devastated Europe in the first half of the seventeenth century. He therefore inveighed against religious intolerance and the persecution of Christian by Christian on the grounds that all men were fundamentally united in religion despite the evidence of history to the contrary. An eirenicist at heart, Glauber depressingly reported that:

> every one thinketh himself better than others, and for a word's sake which one understandeth otherwise, . . . (and though it be no point, where in salvation doth depend) one curseth and condemneth another and persecuteth one another unto death which Christ never taught us to do, but rather did earnestly command us that we should love one another, reward evil with good, and not good with evil.[38]

The clue to Glauber's eirenicism lies in his firm conviction that the words or physical expressions of religious worship do not constitute the essential matter of divine salvation. Faith cannot be acquired through the imposition of human authority or dogma, yet it could, according to the hermetic philosopher, be infused through the contemplation of the universe which God had created for that very purpose. This mystical approach to religion and science was also evident in the writings of the chemical physician John French who was responsible for the English translation of Glauber's *Furni Novi Philosophici* in 1651, and who shared that author's concern for the cause of religious freedom. Indeed French would have extended the concept of liberty of conscience to

[37] H. Pinnell, *op. cit.*, sigs. a1v, A7r–v (my italics).
[38] J. R. Glauber, *A Description of New Philosophical Furnaces* (London, 1651), pp. 104–105 (orthography slightly modernised).

encompass not only protestant non-conformists but also members of the Roman Catholic church.[39]

That iatrochemists such as Glauber and French should intersperse their chemical writings with appeals for religious moderation and forbearance is, I believe, indicative of the eirenic character of the medical reform movement in revolutionary England. Regardless of denominational affiliation, the proponents of the new medicine were united in their common distrust of doctrinal orthodoxy and state-imposed conformity which they regarded as detrimental to the cause of christian reunion. In this atmosphere of intolerance engendered by the bitter divisions of the Civil War, eirenicism therefore offered a peaceful solution to religious discord and influenced many of the radical scientific fraternity (including many Quakers) who believed that true religion lay in the mystical contemplation of the divine creation.

The period of relative freedom of religious expression which began in the chaotic years of the 1640s and flourished during the interregnum came to an abrupt end in 1660 with the restoration of monarchical government and the re-imposition of religious conformity under Charles II. The radical sects, who had enjoyed unprecedented freedom of expression before 1660, were now faced with the prospect of having to submit to the uniform rules and liturgy of the Anglican church. Sects such as the Quakers however continued to demand the introduction of a comprehensive system of religious toleration, as did the proponents of hermetic and chemical medicine. Thus the prolific translator and publisher of hermetic and astrological works William Salmon wrote two works in defence of the Quakers in 1674 in which he described their opponents as the "men of Belial, and profest Enemies to Christ and Christianity." Salmon, who was not at this time attached to the Society of Friends, certainly shared their enlightened concept of religious worship and was thoroughly acquainted with Quaker thought and writings.[40]

Perhaps one of the most remarkable pieces to be written after 1660 demanding an end to religious persecution

[39] John French, *The York-shire Spaw* (London, 1652), p. 123.

[40] William Salmon, *An Apology for the Innocency and Justice of the Quakers Cause* (London, 1674); *idem*, *William Salmon's Answer to Jeremiah Ives's Request* (London, 1674).

emanated from the pen of the unknown Helmontian physician Robert Godfrey, whose single known work in favour of the chemical philosophy has hitherto passed unnoticed by historians of science and medicine. Not only did Godfrey subscribe to the Helmontian notion that the "Soul hath its prime residence in the Stomach," a view which he believed might be verified by those who had undergone spiritual regeneration, but he also reiterated in full the familiar argument in favour of universal religious toleration. Godfrey therefore declared himself:

> one of those who doubt whether or no the most holy God minds a name or a Form so much as the Heart of a Person . . . And if in different things every one were allowed to walk as he is perswaded, seeing 'tis Antichristian to domineer over, and prescribe Laws to mens Consciences, . . . it would do very well . . .
>
> . . . We may also suppose that it will not be said in the last Day, come hither, yee Episcopalians, . . . or ye Papists, or yee Presbiterians, or yee Independents, or yee Anabaptists, or yee Quakers, (which are all but Nicknames) and enjoy the Kingdom prepared you . . . But rather; Come hither yee that served me with an upright Heart in Self-denial . . . That obeyed my Law of Light in your Hearts, . . . That imbrued not your hands in the Blood of the innocent, but rather for my sake endeavour'd their preservation: I say to such as these it will rather be say'd, Come yee blessed of my Father, and inherit a Kingdome.[41]

VII

In contrast to what I have termed the eirenic mood of the medical reform movement in England, it is interesting to examine if but briefly the attitude of mainstream "puritan" physicians and divines to the new advances in medical science.[42] Not only did "puritan" ministers such as Thomas Hall and Richard Baxter condemn as diabolical the practice of Paracelsian medicine, but "puritan" physicians such as Robert Wittie and Edward Alston were determined to resist the implementation of those reforms demanded by the radical supporters of Paracelsus and van Helmont. Wittie, described by George Fox as a "great Presbyterian" who had "taken ye Scotch Covenant," completely rejected the

[41] Robert Godfrey, *Various Injuries & Abuses in Chymical and Galenical Physick* (London, 1674), pp. 109–110, 136–138.

[42] These are examined more fully in my "Medicine, Medical Reform and the Puritan Revolution" (unpub. Ph.D. diss., Swansea University, 1980).

hermetic emphasis upon divine illumination as the source of medical learning. Alston, who was president of the College of Physicians from 1655 to 1666, was highly successful in repudiating the radical challenge to medical authority in London for which service he was knighted in 1660.[43]

One might tentatively suggest therefore that the aim of Christian reunion and religious toleration played a more decisive role in the promotion of medical reform in England than the conservative ethos of orthodox state-church "puritanism". In contrast to the moderation implicit in eirenicism, the fanatical tenets of mainstream "puritanism" condemned absolutely the principle of religious toleration. Moreover the growth of a multitude of heretical and "detestable" sects during the English revolution only helped to strengthen even further the "puritan" resolve to maintain, by force if necessary, uniformity in the English church. It is against this background of "puritan" antipathy to religious and scientific innovation that one should therefore attempt to assess the significance of the medical interests of such groups as the Quakers whose assimilation of the new doctrines may indicate the underlying eirenicist appeal of the chemical philosophy in the seventeenth century.

PETER ELMER

[43] Thomas Hall, *Histrio-Mastix* (London, 1654), p. 209; Richard Baxter, *The Practical Works of . . . Richard Baxter*, 4 vols. (London, 1707), ii, p. 320; G. Fox, *Journal* (Cambridge, 1911), ii, pp. 95–96; R. Wittie, *Pyrologia Mimica* (London, 1669), sig. A6r; pp. 224, 225–226; *idem*, *Scarbrough Spaw* (London & York, 1660), p. 166. For Alston, see William Birken, "The Puritan Connexions of Sir Edward Alston, President of the College of Physicians, 1655–1666," *Medical History*, 18 (1974), pp. 370–374; Valerie Pearl, "London Puritans and Scotch Fifth Columnists: a mid Seventeenth-Century Phenomenon," in A. E. J. Hollaender and William Kellaway (eds.), *Studies in London History* (Edinburgh, 1969), pp. 321, 324.