

## THE VITALISM OF FRANCIS MERCURY VAN HELMONT: ITS INFLUENCE ON LEIBNIZ

BY CAROLYN MERCHANT\*

THE natural philosophy of the wandering "scholar-gipsy" Francis Mercury van Helmont, son of the seventeenth-century chemist, Jean Baptiste van Helmont, represents a heretofore neglected link in the history of vitalistic philosophies which span the period from Paracelsus to Leibniz. Although his life and thought have been treated in earlier histories of mysticism and philosophy by such scholars as Christoph Adelung (1787) and Heinrich Ritter (1853), Ritter's account of his natural philosophy was based upon a startling scholarly confusion.<sup>1</sup> In his *Geschichte der Philosophie* he erroneously attributed to van Helmont the key text upon which he based his analysis, a work which bore van Helmont's name as editor, but which was in reality the Latin translation of the only book ever written by Helmont's protégé Anne, Viscountess of Conway, *The Principles of the Most Ancient and Modern Philosophy*.<sup>2</sup> Ritter's discussion is therefore almost wholly unreliable. More recent publications on the younger van Helmont by Marjorie Nicolson and Alison Coudert have focused primarily on his life, his relationships to Henry More and Anne Conway, and his involvement with cabalism and Quakerism.<sup>3</sup> A re-evaluation of his philosophy of nature is therefore in order.

Secondly, as was pointed out by Ludwig Stein in his book, *Leibniz und Spinoza*, it was van Helmont and not Giordano Bruno from whom Leibniz obtained the term, monad, which, after 1696, he used to characterize his concept of vital substance.<sup>4</sup> Stein not only based his discussion of the term's transmission to Leibniz upon Ritter's erroneous interpretation of van Helmont, the passages cited containing the term monad being actually from Anne Conway's *Principles*, but Ritter did not refer to the book in which van Helmont had discussed the monad, *The Cabbalistical Dialogue*.<sup>5</sup> Elsewhere I have evaluated Anne Conway's impact on Leibniz' vitalism and concept of the monad.<sup>6</sup> But because of the important influence of both van Helmont and the cabala on the development of this central concept of Leibnizian philosophy, a discussion of Leibniz' relationship with and assessment of van Helmont is also called for.

In the ensuing pages, therefore, I shall briefly review the relevant biographical background before presenting a synthesis of van Helmont's philosophy of nature together with a discussion of Leibniz' critique of these ideas. In so doing I shall limit my discussion to his ontology, focusing on those texts which deal with his unification of matter and spirit, primarily his *Cabbalistical Dialogue*, *Sedar Olam*, *Paradoxical Discourses* and the unpublished manuscript, "Observations Physical, Chemical, and Theological . . ." The response of Leibniz to his *Alphabeti vere Hebraici . . .* (1667) which contained his theory of language and speech as a radiation of spiritus and vital breath has been discussed extensively by Coudert.<sup>6a</sup>

\* Department of Conservation and Resource Studies, University of California, Berkeley. The research for this paper was supported by grants from the National Endowment for the Humanities, the Rockefeller Foundation and Andrew W. Mellon Foundation through the Center for Advanced Study in the Behavioral Sciences, Stanford, California, the National Science Foundation, and the American Council of Learned Societies. I am grateful to Drs. Alison Coudert and Walter Pagel for their encouragement and valuable references. An earlier version of this paper was presented to the Herbert Evans History of Science Club, Berkeley, California, September 1977. Prior papers by the same author have been published under the name, Carolyn Pittis.

## I. BACKGROUND

The younger van Helmont (1614-98), colourfully depicted by Marjorie Nicolson as the real wandering "scholar gipsy" in the tales of Joseph Glanvill and Matthew Arnold, was an eclectic intellectual and physician whose roots lay not only in the alchemical and medical tradition of his father, but also in cabalism, theosophy, and mysticism.<sup>7</sup> He is said during his eighty-one years of life to have wandered throughout most of Europe and to have associated with princes, cardinals, and philosophers on the one hand and to have learned the trades of weaver, turner, and painter, and lived with a group of gipsies who taught him their language on the other. The story of his life, set down in an unpublished manuscript, describes his encounters with robbers, the mob, storms at sea, and the Inquisition.<sup>8</sup>

During his checkered wandering existence, he arrived in England for the first time in 1670, visiting Henry More at Christ College, Cambridge, for the purpose of delivering to him several letters from Princess Elizabeth of Bohemia and discussing their mutual interest in the cabala. He had only planned to remain in England one month, but through the joint efforts of More and Viscount Edward Conway, he was finally persuaded to travel to Ragley to visit the brilliant philosopher Lady Anne Conway in order to attempt a cure of her incessant and intolerable migraine headaches.<sup>9</sup>

Van Helmont's initial month in England turned into eight long years during which he remained with Lady Conway, unsuccessful in treating her terrible headaches, but providing stimulating new intellectual avenues for her mind. Henry More likewise spent much time there, experimenting with van Helmont in the laboratory which the wandering alchemist had set up, and discussing Hebrew and cabalistic texts. Eventually both Conway and van Helmont were converted to Quakerism--van Helmont in the spring of 1676 and Conway at least by 1677.<sup>10</sup>

Together with George Keith and Anne Conway, van Helmont collaborated on a treatise entitled the *Two Hundred Queries . . . Concerning the Doctrine of the Revolution of Humane Souls*, published in 1684. In subsequent years, the *Two Hundred Queries* became the bone of contention between the Quakers and Keith and van Helmont because of their emphasis on the transmigration of souls and the reality of the historical figure of Christ.<sup>11</sup> During his stay at Ragley, van Helmont also wrote his *Cabbalistical Dialogue* which was included in Knorr von Rosenroth's *Kabbalah denudata* in 1677.<sup>12</sup>

Eventually in March of 1696, still alert and vital at the age of 82, he reached Hanover where he visited Leibniz, then Librarian at Hanover, and Sophie, Electress of Brunswick. Leibniz had become acquainted with van Helmont's philosophy in 1671 during his first visit, and in 1694, had corresponded about it at length with the Electress Sophie, who had sent him two of van Helmont's books. Van Helmont arrived in Hannover wearing the simple brown cloak of the Quakers and a plain undecorated hat.<sup>13</sup> There he remained for several months, rendezvousing with Leibniz each morning at nine in the rooms of the Electress. According to Leibniz, van Helmont took the desk while he became the pupil, interrupting frequently to ask for greater clarification. Van Helmont recounted to Leibniz the history of the "extraordinary woman", the Countess of "Kennaway", and his own relationship with Henry More and John Locke.<sup>14</sup> From him Leibniz learned of Anne Conway's metaphysics and her studies of the works of Plato, Plotinus, and the Cabala.<sup>15</sup> In December 1698 van Helmont died, his death and burial being reported by Leibniz as occurring "without trumpet or chime".<sup>16</sup>

Leibniz spoke subsequently with praise and approval of both Lady Anne Conway and van Helmont, although the latter he often found puzzling and quixotic. In the *New Essays*, begun in 1697, he referred to both as explicating the doctrine of vitalism better than their Renaissance predecessors, writing that he sees:

how it is necessary to explain rationally those who have lodged life and perception in all things, as Cardan, Campanella, and better than they, the late Countess of Connaway, a Platonist, and our friend, the late M. François Mercure van Helmont (although elsewhere bristling with unintelligible paradoxes), with his friend the late Mr. Henry More.<sup>17</sup>

Describing van Helmont in an essay of 1711, Leibniz wrote:

I believe there is a reference . . . to the late Mr. van Helmont, the younger, who was a prisoner of the Inquisition at Rome and who took it into his head, in his solitude, to examine the function of the organs in pronouncing letters and thought he had found how these characters are formed. I have known this same person unusually well, and I must do him the justice of saying that . . . his conduct was without reproach, his actions were full of charity and disinterestedness. Except for certain chimeras which remained with him from the impressions of his youth like a hereditary illness, he was an excellent man whose conversation was very instructive to all who could benefit from it. His works reveal only that part of him which was least praiseworthy.<sup>18</sup>

## II. VAN HELMONT'S VITALISM

Although much attention has recently been focused on Renaissance hermeticism and the natural magic tradition, much work remains to be done in establishing a taxonomy of the many natural philosophies in the era prior to the rise of the mechanical philosophy. By restricting the task to the category of ontology, progress can be made by examining the assumptions made with respect to the relationship between matter and activity.<sup>18a</sup> Thus Neoplatonic philosophies such as those of Ficino, Pico della Mirandola, Agrippa, and Giovanni Battista della Porta accepted a tripartite hierarchical division of the cosmos into body, soul, and spirit, the components of a living organism; they held that matter was passive and that the world soul was the immanent source of activity in nature, the spirit serving as an intermediary vehicle for the transmission of power.

Secondly, naturalism of the type found in the philosophy of Telesio, Campanella, and Bruno reduced the tripartite structure of Neoplatonism to two ultimate terms of explanation by unifying the world soul and spirit into a single all-pervasive active entity. The passivity of matter was retained while activity was explained by a dialectical opposition of contraries which produced the immanent self-motion of nature.

Thirdly, vitalism as developed by Paracelsus, Jean Baptiste van Helmont, and Leibniz further reduced the explanatory principles to an active substance, a monistic unity of matter and activity. The universe was composed of a plurality of living organic parts, each active and alive yet in harmony and consensus within the larger whole.

These natural philosophies could all be subsumed under the general rubric *organic* in as much as they held that activity was immanent within nature, assigned primary importance to change and process and emphasized the organic unity of the parts of the cosmos. In contrast to the organicists, seventeenth-century mechanists such as Descartes

and Newton conceived of nature as a stable structure of imposed laws, held that matter was passive and forces external in origin, and asserted that the motion put into the cosmos at the creation was transferred among inert corpuscles and was either conserved (Descartes) or replenished through active principles (Newton).

The vitalist tradition within which Francis Mercury van Helmont's philosophy falls emphasized the monistic unity of body and spirit, change as internal to matter, and maintained that the universe was composed of a plurality of living organic parts in a total unity of individual actions. The activity of each individual-being expressed its freedom and spontaneity within the larger organic whole. The perfection and good of the whole was achieved through the accommodation and consensus of the parts.

Vitalism as a philosophy had roots in the sixteenth- and seventeenth-century world-views of Paracelsus and the elder van Helmont. In the Paracelsian philosophy, each of the four elements formed a world of its own and each of these four worlds developed and evolved independently of the others, through a consensus of actions. Like the monads of Leibniz, the elements of Paracelsus were souls rather than matter; they were spiritual self-active forces with a self-determining principle, or *archeus*, guiding their unfolding lives through time. The observable elements and material objects were merely phenomena—or gross manifestations of the subtle soul which was the real element itself. Like the monads, the elements did not mix in composition, but existed simultaneously and independently in each object. Each element was a matrix or mother of the four worlds emanating from it. The harmonious unfolding of the four worlds operated on the principle of the consensus of actions. Activity was primary; matter was secondary but both were sides of the same coin and hence formed a monistic ontology.<sup>19</sup>

Walter Pagel, whose work emphasized the principle of consensus in Paracelsian thought, saw the same monistic vitalistic principles operating in the thought of Jean Baptiste van Helmont, the seventeenth-century follower of Paracelsus.<sup>20</sup> The elder van Helmont transformed Paracelsus's four elements into a plurality of living, developing seeds of matter, or *semina*. The efficient cause, activity, was "joyned or knit together" with the material cause, matter, into a single indissoluble unit—the generating seed. Each seed was guided by its own internal workman or *archaeus* which "with a bodily cloathing . . . begins to transform matter . . .". In taking issue with Aristotle's separation of explanatory principles into four distinct causes, van Helmont explained, "Wherefore after diligent searching, I have not found any dependence of a natural body but only on two causes, on the matter and the efficient, to wit, inward ones . . ." These two explanatory entities were fused into a single unit: "Every natural definition is to be fetched from the conjoyning of both causes, because both together do finish the whole essence of the thing."<sup>21</sup>

Van Helmont's philosophy of the unity of body and activity was in turn transmitted to his son, Francis Mercury van Helmont, and thence to Anne Conway. The work of both the younger van Helmont and Lady Conway was important to the development of Leibniz's "Monadology", the term *monad* itself being introduced to Leibniz not from Bruno but by the younger van Helmont and Anne Conway.

Consistent with the monistic vitalist tradition which formed his intellectual heritage, Francis Mercury van Helmont held that matter and spirit were interconvertible and differed from each other only gradually.<sup>22</sup> In the *Sedar Olam* (1693) he discussed the body-spirit ontology. Spirit and body were not contrary essences, but every spirit was in some degree corporeal, since it was extended, bounded, and movable.<sup>23</sup> Conversely, every body was in

some sense spiritual, for it had "life, sense, and knowledge" or was capable of such.<sup>24</sup> The result was a chain of excellence from the most base to the noblest of creatures:

Seeing therefore every spiritual thing is corporeal, and every corporeal thing is spiritual, in some degree or measure; therefore all creatures from the highest to the lowest, have some relation and natural affinity one to another.<sup>25</sup>

Creation was fundamentally spiritual, working immanently from within, in the same way that motion was immanent within fire.<sup>26</sup>

To assume that matter was dead was a sin of atheism, since nothing "dead or unliving could come from Him who is life itself", and nothing in the universe was so dead as to be incapable of life.<sup>27</sup> All body was alive and vital. Matter was not a thing "wholly inanimate and void of life" as was the "false and vain imagination of sundry philosophers".<sup>28</sup> It was only an appearance that all things in the earthly fabricated world seemed more "to move in a manner mechanically, than from a vital principle".<sup>29</sup> He objected to the designation of matter as "dead and stupid".<sup>30</sup> The inferior world seemed so only "in comparison to the superiour worlds, where indeed the vital principle is far more predominant than in this inferiour world. . . ."<sup>31</sup> Conversely, even the most excellent and superior creatures such as Jesus Christ were in some degree corporeal.<sup>32</sup>

God did not create matter out of nothing by fiat; rather, spirit and matter emanated from his perfection. God who was "omnipresent, eternal, unchangeable, wise, good, omnipotent, incomprehensible", and "all comprehending" was the centre of emanation of all things, and was "the fountain of life from which nothing that is dead can proceed".<sup>33</sup> He was, also, in alchemical language, the great workmaster of the universe who by circulations and recycling formed corporeal matter out of spirit and spiritual matter out of the corporeal. By rarefaction, corporeal matter became spiritual and by condensation the spiritual became corporeal.<sup>34</sup>

In the *Cabbalistical Dialogue*, van Helmont stated his belief that after the first spiritual beings called monads had been created by God, some of them became dull and spiritless and slipped away from their perfect state of knowledge and mutual penetration.<sup>35</sup> Moving into a state of impenetration, they clung together to form matter and material objects for an indeterminate period of time, after which they were able to return to their loosened free state: "Matter is made by a coalition or clinging together of spiritual degenerate dull monades or single beings, and this coalition is called creation."<sup>36</sup> He wrote:

For these are our positions. 1. That the creator first brings into being a spiritual nature. 2. And that either arbitrarily (when he please;) or continually, as he continually understands, generates, etc. 3. That some of these spirits for some certain cause or reason, are slipt down from the state of knowing, of penetrating or of moving into a state of impenetration. 4. That these monads or single beings now become spiritless or dull, did cling or come together after various manners. 5. That this coalation or clinging together, so long as it remains such is called matter. 6. That out of this matter, all things material do consist, which yet shall in time return again to a more loosened and free state.<sup>37</sup>

In the common or vulgar opinion, matter was conceived to be an accident or mode of spirit, passive, dull, sluggish, and dead, rather than a substance interconvertible with spirit.<sup>38</sup> But in reality, matter was to spirit as a dead man to a living man; it was the same

in substance, but dull, blind, resting, and "in privation of its former happiness".<sup>39</sup> After a spirit was created it could "descend into that state of death, that it admitteth of the qualities and name of matter, being now a natural monade or single being and a very atome".<sup>40</sup> Matter was thus like a sleeping or dead spirit:

Matter as such, . . . doth not so much as exist positively but privatively only, just as doth a shadow, or rest, etc. And *whatever is, is a spirit*, whether it be only fundamentally so, as a dead man is a man, or whether it be also formally and really so, as is a soul, an angel, God.<sup>41</sup>

Much of van Helmont's system of thought was derived from the cabala to the study of which he had devoted a great deal of his time and energy. The *Cabbalistical Dialogue*, published separately in 1682, was a reprint from the 1677 *Kabbalah denudata*, edited by his friend Knorr von Rosenroth. Even prior to van Helmont's visit of 1696, Leibniz, through his own acquaintance with Knorr von Rosenroth, knew the *Kabbalah denudata* and thus had knowledge of cabalistic ideas.<sup>42</sup>

Van Helmont's interpretation of the Cabala stemmed from the teachings of Isaac Luria (*d.* 1572), an influential sixteenth-century Spanish cabalist.<sup>43</sup> Luria recognized no distinction between the vital and the material and held that the universe was full of souls. Luria's follower Hayim Vital (1543-1620), the author of *Concerning the Revolutions of Human Souls* (also reprinted in the *Kabbalah denudata*), was responsible for writing down the basic components of Luria's system. It was Luria's theory that by means of transmigration souls could gradually, by degrees, progress up the ladder of creation towards increasing perfection. Conversely a human being could revert to an animal or vegetable existence, if his or her life had been conducted as such.<sup>44</sup>

For van Helmont, following Luria, matter existed in a constricted form, secreted and separated like sparks out of the myriads of spirits united to God, in the same manner as earthy particles and little pebbles are separated out of a "clear fountain".<sup>45</sup> "And this constriction may be called a sleep . . . or a death."<sup>46</sup> Just as there are degrees of descent from perfection into the imperfection of death, so the awakening or ascent takes place in degrees. In the idea of an ascending chain of perfection his cabalism merged with the neoplatonism of the Renaissance. Drawing upon the concept of "the best" which was also to characterize Leibniz' philosophy, van Helmont argued that it would be repugnant to God's wisdom to create dead matter by fiat when alternatively he could have "done that which was best, as for example, he might have made every creature a spirit".<sup>47</sup> Those beings not made spirits therefore would not be "the best".<sup>48</sup>

Not all spirits sunk to the lowly degree of matter; some stopped at an intermediate level and became souls. The transmigration or revolution of souls, central to the Lurianic Cabala, also became an important cornerstone of van Helmont and Anne Conway's philosophies, as expressed in their collaborative *Two Hundred Queries Moderately Propounded Concerning the Doctrine of the Revolution of Humane Souls* (1684), inspired by Luria's book. The interconvertibility of body and spirit implied that there was an eternal revolution of bodies as well as souls, for, like souls, the substance or essential reality of bodies was incorruptible and could not be annihilated.<sup>49</sup> Through purification by the inner light, human souls or sparks of light trapped by the privation of matter strove through repeated transmigrations to return to unity with divine light.<sup>50</sup> The idea of transmigration or metempsychosis of souls was, however, a doctrine not acceptable to Leibniz, although he did hold to a gradual transformation or metamorphosis.<sup>51</sup>

Not only was matter, for van Helmont, spiritually alive and vital, but the earth, as well, was a living spiritual being, a nurturing mother. The place of these ideas in the cosmic scheme of popular culture is exemplified in van Helmont's book, *The Paradoxical Discourses Concerning the Macrocosm and Microcosm or the Greater and Lesser Worlds and Their Union* (1685), describing the importance of the male-female dualities, the cycles of nature, and the earth-mother.<sup>52</sup> The basis for these ideas could be found not only in Paracelsus' concept of the elements as matrices and in the elder van Helmont's emphasis on water as the underlying element of all terrestrial life, but in hundreds of Renaissance treatises on the origins of rocks, crystals, and metals.<sup>53</sup> Thus stones born from the earth were not dead and lifeless things but involved in a continual revolution from which they returned again to the heavens.<sup>54</sup>

A stone is a part of the great world . . . when this stone dies or consumes it doth not therefore go to nothing . . . the same is reduced to a sort of earth . . . when it dies also, it brings forth by means of another birth divers herbs, trees, and creeping things.<sup>55</sup> Because the corruption of one thing is the generation of another, the fields must die and lie fallow before they can bring forth corn again.<sup>56</sup>

The rock of the earth is a living mother which "opens her self for to bring forth her child, and this child doth afterwards still change itself into other shapes untill it arrive to perfection".<sup>57</sup>

The image of the nurturing mother earth was also brought out in van Helmont's *Paraphrastical Exposition of the First Chapter of Genesis*, appended to the *Cabbalistical Dialogue*. Upon God's direction the "earth brought forth various plants, or grass and vegetables both within and without its bowels or womb. . . ." <sup>58</sup> Metals in the earth were placed in the same class as vegetables, herbs, seeds, and fruits, which were brought forth by the earth during the seven days of creation.<sup>59</sup> The unity of male and female principles so crucial to the alchemical dream was still fundamental to van Helmont's world. "All things", he wrote, "are double, male and female, solar and lunar, heavenly and earthly, the predominating quality giving denomination."<sup>60</sup> All cosmic births took place by the impregnation of the mother by the father.<sup>61</sup> The warm daylight was the male sun while the cool night lights, the moon and stars, were the day's wife. The two existed in a cosmic unity, the sun dwelling in the moon in impregnation.<sup>62</sup>

Governing the changes and recirculations of the great cosmic cycles was the spirit of the world which dwelt in every created being superintending and guiding its alterations, multiplications, and vicissitudes.<sup>63</sup>

And this dominion and rule which is the universal spirit of the world hath (as a mother) over the creatures (as over her children) doth continue so long in every creature as the same, like a member or part of this world, is fastened to and united with it, as a child to its mother, whilst yet in the womb.<sup>64</sup>

Related ideas such as the Neoplatonic world soul, the "spirit of nature" of Henry More and the general plastic nature of Ralph Cudworth were central concepts in schemes which viewed nature as a living organic being. Even Isaac Newton who most clearly set out the mechanical system of nature in his *Principia Mathematica* was unable, in his unpublished writings, to give up the concept of the cyclical cosmos, the vegetation of metals, and the vitality of matter.<sup>65</sup> Van Helmont's philosophy was thus not alone in attempting

to retain the old holistic unity between human beings and nature, the dialectic of continual change and cyclical revolutions, and the basic unity of male and female principles, tenets which were steadily losing ground to the new mechanical philosophy.

### III. LEIBNIZ' RESPONSE TO VAN HELMONT

There was much in common between van Helmont's concept of the monad and Leibniz' individual substance that could have influenced the latter's decision to appropriate the term monad after van Helmont's 1696 visit to Hanover: the idea of an atomistic soul, the immanence of active impulse, the coalescence of monads to form a created being, and the idea of sleep or death as a state of stupor in the naked monad. Like van Helmont, Leibniz called his monads "simple substances", and "true atoms of nature".<sup>66</sup>

Reminiscent of Helmont's language is Leibniz' discussion of the perception of monads in his "Monadology" of 1714. Sleep, like death, he said, was the diminution of perception in which the soul is like a simple monad. If perceptions were not activated we would be continually in a state of stupor, like the naked monads. "When there is a large number of small perceptions with nothing to distinguish them we are stupified . . . Death can produce this state in animals for a time." Life and death, therefore, like activity and passivity, were reciprocal and interconvertible states of substance.

But for as many convergences, there were equal numbers of differences and criticisms specified in several reviews which Leibniz made of van Helmont's published works. That Leibniz had read most of van Helmont's books is clear from his papers and letters dating back to the year 1694. In a letter written that year to the Electress Sophie, Leibniz commented that the *Paradoxical Discourses* of "the late Mr. Helmont indeed contained strange products of the imagination".<sup>67</sup> In a subsequent letter, Leibniz observed that van Helmont held that God always acted equally and in such a manner that there was a great variety among his creations. Nature attained its beauty through variety. But, he pointed out, as in a song, despite the diversity of sounds, harmony consists of affinity and concord. The art of poetry calls for unity of design even within a tragedy. Thus changes within the universe accord with the uniformity of divine action because the same law of change continues to operate.<sup>68</sup>

In a letter written on 3 September 1694, Leibniz acknowledged receiving and reading two of the books van Helmont had sent to Sophie. He stated that someone should preserve for posterity the several fine discoveries made by van Helmont, particularly since one of the books did not bear the author's name. In the same connection Leibniz praised the cleverness of the late Knorr von Rosenroth of Sulzbach for his book on the cabalistical science of the Jews (*i.e.*, his *Kabbalah demudata*).<sup>69</sup> He also discussed a third book explaining the principles of the theology of van Helmont as set out by Buschius (probably Paulus Bachinus, *The Divine Being and its Attributes Philosophically Demonstrated from the Holy Scriptures and Original Nature of Things According to the Principles of F. M., Baron of Helmont*, London, 1693). In its insistence upon the unity of theology and philosophy and its dependence upon the value of human reason, this work, in Leibniz' opinion, vindicated van Helmont from those who had accused him of enthusiasm.<sup>70</sup>

Leibniz stated that he agreed with van Helmont's denunciation of the systems of the Cartésians and Gassendists, whose corpuscular philosophy explained everything by matter and extension. He also agreed that it was necessary to introduce the principle of



force through which the connection between spiritual and corporeal things was made possible. Metaphysical principles alone were insufficient to explain the laws of nature and the principles of physics without recourse to the concept of force.<sup>71</sup>

Although he concurred that all substances existed eternally and did not perish, there was no transmigration of souls as van Helmont had asserted, only, transformations, sometimes large, sometimes small, such that new forms could be assumed, as in the metamorphosis of a butterfly.<sup>72</sup> Strictly speaking there was no generation or death in animals, but only envelopment and development, the soul remaining always united with its organic body, even though that body might become incomparably more subtle than sensible objects. He was also strongly in concordance with van Helmont's refutation of the opinion of certain mystics and quietists that human souls were one with the universal spirit, a position contrary to the doctrine of the immortality of individual souls.<sup>73</sup>

Leibniz assumed that when van Helmont stated that all things were composed of fire and water, he was speaking allegorically and that these in reality signified an active and a passive principle. Agreeing also with his view of the infinity of the parts of things, Leibniz referred to his own articles published in the *Journal de Scavans*, that each part was composed of other parts to infinity and that there was no portion of matter that did not contain an infinity of living creatures.<sup>74</sup> Each of these creatures, no matter how small, would reach its own perfection.<sup>75</sup>

Van Helmont had spoken of the generation of all men from the first Adam and of his formation from the blood of the earth or the living soil.<sup>76</sup> Likewise, Adam and Eve contained within them each man and woman, and in time, at the end of the cycles and revolutions, each would be again reunited with the original Adam and Eve. Again Leibniz chose to interpret these ideas as allegorical and beyond specific comment, being founded, apparently, upon the Jewish Cabala.<sup>77</sup>

The subject of Leibniz' second discussion of the views of van Helmont, occurring after the latter's arrival at Hanover, was the *Paradoxical Discourses on the Macrocosm and the Microcosm*, which had been translated into German from English.<sup>78</sup> Leibniz disagreed with the main point of the book which concerned metempsychosis or the theory that the souls of dead persons passed immediately into the bodies of the newborn. He concurred, however, with the widespread opinion that animals had sensitive souls (and were not mere machines) and with the opinion of those ancient philosophers who held that all of nature was full of force, life, and souls. The microscope had revealed a vast world of minute living creatures imperceptible to the naked eye, hence there were more souls even than grains of sand or atoms.<sup>79</sup> He held, as did Pythagoras, Plato, and the Oriental philosophers, that no soul, not even that of an animals, ever perished. Although all bodies had parts, they were not merely a heap or group of parts as in a herd of sheep, a pond full of droplets of water or fish, or a watch composed of springs and other parts. Instead, each soul constituted a unity, indivisible, and therefore incorruptible. Everything was full of souls. He stressed the opinion of Thomas Aquinas that even the souls of animals were indivisible and therefore they too must be incorruptible.<sup>80</sup>

Nothing in nature, he wrote, is done in vain and nothing is lost, but everything tends toward perfection in accordance with the image first imprinted upon it, the soul acting like a mirror. The soul is like a governor, or little god, within the microcosm of the body, mirroring the governorship of God in the macrocosm.<sup>81</sup> The human soul tends toward maximum happiness and contentment just as the greater world tends towards its own

ultimate purpose, without external hindrance. Subsequently, in an undated letter to Sophie, written after van Helmont's death in late 1698, Leibniz stated his disagreement with van Helmont's view of revolutions or cycles within nature in which all creatures were annihilated together and then reborn as a new age began.<sup>82</sup>

The idea that each substance is akin to a mirror of God, which Leibniz had already used in the 1686 "Discours de Metaphysique", has been discussed in a little known paper by Hans Leisegang, "La Connaissance de Dieu au miroir de l'âme et de la nature".<sup>83</sup> Leisegang pointed out that in the *Paradoxical Discourses* Francis Mercury van Helmont used the symbol of a globe of mercury to represent a mirror. If such a ball of mercury is placed in the open air, we can see, distinctly represented, the horizon and all objects. These globes, each of which can be seen to reflect anew the entire horizon and universe, Leisegang wrote, are like the monads of Leibniz, except that they are non-living.<sup>84</sup> The use of the mirror metaphor was part of a tradition of writings going back to Plato, Zosimus, St. Paul, Hildegard von Bingen, Witelo, Meister Eckhart, and Jacob Boehme. Permeating the references is the comparison of the living soul with a living mirror which actively produces within itself the images of objects made clear by the rays of the sun, which a material mirror would only reflect mechanically. The essence and divinity of God are thus actively reflected in the soul.<sup>85</sup>

Two sets of remarks on van Helmont's *Sedar Olam*, written by Leibniz, were published by Foucher de Careil in a volume entitled, *Leibniz, la philosophie juive et la cabale*.<sup>86</sup> In the first set he stated that he did not believe the book had been written by van Helmont, but rather by someone of his persuasion. In it there were some very good ideas, but also a number of misconceptions. The opinions of the ancient cabalists expressed therein did not prove anything substantial because they were written in the later cabalistic tradition rather than that stemming directly from Moses.<sup>87</sup>

The second group of remarks offered more specific criticisms. Leibniz disagreed with the author that all created spirits have a subtle corporeal body; it would have been more accurate to call them incorporeal. It was probable, however, as the author argued, that there were no corporeal substances in nature not endowed with some degree of life, sense, or perception, or having a force of action analogous to perception and appetition. The general intent of these remarks would thus be acceptable, but other particulars were not.<sup>88</sup>

He objected to the author's idea that God had created two separate worlds, a superior world of pure souls and an inferior world, stupid and, like a form of death, acting mechanically rather than vitally. Another objection was to the idea of the revolutions of worlds and souls, *i.e.*, the belief that the visible world and its souls were not created but were pre-existent, this present world being, according to the author, a world of formation rather than one created.<sup>89</sup>

There is, Leibniz stated, only one world created continually by God, animated throughout. Instead of an inferior and superior world, one should consider two kingdoms, one of spirits ruled by God conceived as a prince or person governing other persons; the other that of bodies governed as by an architect or a machinist—as a master caring for his machines. These two worlds each relate and respond to the other, without interfering with the laws of the other. There are differences between superior spirits, intelligences, or souls, and entelechies inferior to souls, but they all compose one continuous world of beings. One can therefore distinguish two spheres or worlds intelligible to God—one is the world of spirits whose laws act in accordance with moral law; the other that of bodies obeying

mathematical laws. This combination expresses the perfection of all things and is always executed in the best way possible.<sup>90</sup>

To say that souls descend from a superior to an inferior world is only a metaphysical belief. It can be said, however, that a soul can change the state of its perfection without resorting to several separate sequential worlds. It is thus more reasonable to recognize an infinity of degrees of perfection in the creatures of the same world than to postulate different worlds.<sup>91</sup>

#### CONCLUSION

From the attention Leibniz gave to van Helmont's books, from his careful criticism of their ideas, as well as from the many positive statements he made about van Helmont, it seems clear that the "scholar gipsy" should be accorded a place in the maturing of Leibniz' own vitalistic philosophy in the late 1690s and 1700s. He appropriated the term monad to characterize his already developed concept of individual substance as a result of van Helmont's influence in bringing to his attention its use in the *Kabbalah denudata*, van Helmont's own *Cabbalistical Dialogue*, and Anne Conway's *Principles of the Most Ancient and Modern Philosophy*.

Moreover, his evaluation of van Helmont's other books served to buttress and sharpen his own view of the vital nature of the cosmos. Like Paracelsus, the two van Helmonts and Anne Conway, Leibniz held a monistic view of the relation between matter and activity. What was real in nature was activity, not the passive inert matter held as reality by the mechanists. Activity was a primitive force coupled with a striving toward a future state; nothing was fixed or static, but dynamic and alive. In the real world of substance, monads represented these active forces or simple unities while primary matter was the passive or reciprocal aspect of action, a laziness, inertia, or repugnance to motion.

The phenomenal world could be described by mechanical laws, but this mechanical world did not depict reality and was merely a well-founded phenomenon. The inertness or passivity of dead matter which was an essential property for the mechanists was for Leibniz simply an expression of the limitation placed on the monad by its accommodation to the unfolding activity of all other monads.

The real world was organic; every being in the universe from living animals down to the simple monad was alive or composed of living parts. "Thus there is nothing fallow, sterile or dead in the universe; no chaos, no confusions, save in appearance."<sup>92</sup> The tradition of monistic vitalism which spanned the period from Paracelsus to Francis Mercury van Helmont, was thus kept alive by Leibniz, despite the century's dominant trend toward mechanism and the tendency to view all of nature as dead and manipulable through external forces.

#### REFERENCES

1. Johann Christoph Adelung, *Geschichte der menschlichen Narrheit*, Leipzig, 1787, vol. IV, p. 306; Heinrich Ritter, *Geschichte der Philosophie*, Hamburg, 1853, vol. 12, pp. 3-47, see note 1, p. 7.
2. Although Ritter used three other books by van Helmont, the most substantial part of his account of Helmont's ideas is based on Anne Conway's book in Helmont, *Opuscula Philosophica Quibus Continentur Principia Philosophiae Antiquissimae et Recentissimae Ac Philosophiae Vulgaris Refutatio*, Amstelodami, 1690. English retranslation: *The Principles of the Most Ancient and Modern Philosophy*,

- Concerning God, Christ, and the Creatures*, trans. prob. by J. Drull, London, 1692, p. 28. Preface to the English translation states the book is the work of "a certain English Countess, A Woman learn'd beyond her sex, being very well skilled in the Latin and Greek tongues, and exceedingly well versed in all kinds of Philosophy".
3. Marjorie Nicolson, *Conway Letters, The Correspondence of Anne, Viscountess Conway, Henry More and their Friends*, 1642-1684, New Haven, 1930, p. 453, and "The Real Scholar Gipsy", *Yale Review*, January 1929, pp. 347-63; Alison Coudert, "A Quaker-Kabbalist Controversy", *J. of the Warburg and Courtauld Institutes*, 39, 171-89, 1976, and "A Cambridge Platonist's Kabbalist Nightmare", *J. Hist. Ideas*, 36, 633-52, 1975; Alison Coudert Gottesman, "Francis Mercurius van Helmont: His Life and Thought", Doctoral Dissertation, University of London, 1972. See also Joseph Politella, *Platonism, Aristotelianism, and Cabalism in the Philosophy of Leibniz*, Doctoral Dissertation, Philadelphia, 1938, pp. 13-19.
  4. Ludwig Stein, *Leibniz und Spinoza*, Berlin, 1890, pp. 209-13. See p. 212, note 1, which cites Helmont on the monad from: *Princ. phil.* III, 9, p. 25 . . . angeführt von Ritter, *Gesch. d. Phil.* XII, 22. Stein went even further than Ritter by quoting the passages from the *Kabbalah denudata* which Conway had cited in her discussion of the monad, attributing them all to van Helmont.
  5. Francis Mercury van Helmont, *A Cabbalistical Dialogue in answer to the Opinion of a learned doctor in Philosophy and Theology that the world was made of nothing. As it is contained in the second part of the Cabbala denudata and Apparatus in Lib. Sohar, p. 308, etc., 1677. To which is subjoyned a Rabbinical and Paraphrastic Exposition of Genesis I, written in High Dutch by the author of the Foregoing dialogue, first done into Latin but now made into English*, London: Benjamin Clark, 1682, pp. 4, 9, 13.
  6. Carolyn Merchant, "The Vitalism of Anne Conway: Its Impact on Leibniz' Concept of the Monad", *Journal of the History of Philosophy*, July 1979.
  - 6a. Gottesman (= Coudert), doc. diss., *op. cit.* (3).
  7. Nicolson, "The Real Scholar Gipsy". Helmont was born in Vilvorde, near Brussels, in October 1614. See his baptismal record in P. Nève de Mevergnies, *Jean Baptiste van Helmont: Philosophe par le Feu*, 1935, p. 80, n. 40 and Coudert, "A Quaker-Kabbalist Controversy", p. 171.
  8. British Library, Sloane 530.
  9. Nicolson, *Conway Letters*, pp. 1-9, 39-51. See also Gilbert Roy Owen, "The Famous Case of Lady Anne Conway", *Annals of Medical History* 9, 567-71, 1937.
  10. Nicolson, *Conway Letters*, pp. 316-18, 419, 421, 430. On this subject see especially, Coudert, "A Quaker-Kabbalist Controversy".
  11. Gottesman (= Coudert), doc. diss., pp. 495, 497, 584-5, 597, 613, and Coudert, "A Quaker-Kabbalist Controversy". See J. H. (John Hall), *An Answer to Some Queries Proposed by W. C. or A Refutation of van Helmont's Pernicious Error . . .*, 1694. The conflict between van Helmont, Keith, and the Quakers was noted by Leibniz in a letter of 1696 (Leibniz, Gottfried Wilhelm, *Otium Hanoveranum*, ed. Joachimus Fredericus Feller, 2nd edition, Lipsiae, 1737, p. 30).
  12. Christian Knorr von Rosenroth, *Kabbalah denudata*, Sulzbach, 1677-8, 3 vols.; Helmont, *A Cabbalistical Dialogue*.
  13. Gottfried Wilhelm Leibniz, *Correspondance de Leibniz avec l'Electrice Sophie de Brunswicke-Lunebourg*, ed. Onno Klopp, Hanover, 1874, vol. I, pp. 300-6; vol. II, pp. 8-11.
  14. Gottfried Wilhelm Leibniz, *Philosophischen Schriften*, ed. C. I. Gerhardt, Berlin, 1875-90, vol. III, pp. 176, 180.
  15. Politella, *op. cit.* (3), p. 16; Nicolson, *Conway Letters*, p. 455.
  16. *Historia Bibliothecae Augustae*, vol. II, p. 326.
  17. Leibniz, *Nouveaux Essais*, Paris, 1886, p. 167. *New Essays Concerning Human Understanding*, trans. Alfred G. Langley, Lasalle, Ill., 1949, p. 67.
  18. Gerhardt, III, p. 427; translation in Leroy E. Loemker, ed., *Leibniz Philosophical Papers and Letters*, Chicago, 1956, vol. II, p. 1027.
  - 18a. See my forthcoming book, *The Death of Nature*, New York: Harper and Row, 1979.
  19. On Paracelsus' theory of the elements, see his "Archidoxis" in *Sämtliche Werke*, ed. Karl Sudhoff and Wilhelm Mattiessen, München, 1922-33, vol. III, Bk. 3. The philosophy of the elements was also expounded in the pseudo-Paracelsian treatise, *Philosophia ad Athenienses*, Sudhoff, vol. XIII, pp. 389-423. On the similarities between Paracelsus, van Helmont and Leibniz, see Walter Pagel,

- "The Religious and Philosophical Aspects of van Helmont's Science and Medicine", *Supplements to the Bulletin of the History of Medicine*, Baltimore: Johns Hopkins Press, 1944, No. 2, p. 34, and *idem*, *Paracelsus*, New York, 1958, pp. 36, 38, 108. Also, Carolyn [Merchant] Iltis, "The Leibnizian Newtonian Debates: Natural Philosophy and Social Psychology", *The British Journal for the History of Science*, 6, 349-51, 1973.
20. Pagel, "Religious Aspects", p. 22.
  21. Jean Baptiste van Helmont, *Works*, trans. John Chandler, London, 1664, pp. 29, 30, para. 14, p. 35, para. 6.
  22. Francis Mercury van Helmont, "Observations Physical, Chemical, and Theological" (1682), British Library, Sloane 530, p. 27, No. 82.
  23. Francis Mercury van Helmont, *Sedar Olam, sive ordo seculorum*. *Historia enarratio doctrinae*, 1693; English translation, *Sedar Olam: or, the Order of Ages*, trans. J. Clark, London, 1694, p. 11, No. 82.
  24. *Ibid.*, p. 12, No. 30.
  25. *Ibid.*, p. 12, No. 32.
  26. Helmont, *Cabbalistical Dialogue*, *op. cit.* (5), p. 6.
  27. Francis Mercury van Helmont, *Two Hundred Queries moderately propounded concerning the doctrine of the Revolution of Humane Souls and its conformity to the truths of Christianity*, London, 1684, p. 106, Qu. 126, and *Sedar Olam*, p. 13, No. 33.
  28. *Sedar Olam*, p. 13, No. 33.
  29. *Ibid.*, p. 15, No. 39.
  30. *Ibid.*
  31. *Ibid.*
  32. *Ibid.*, p. 11, No. 27.
  33. *Observations Physical, Chemical, and Theological*, Sloane 530, p. 27, No. 76, 78.
  34. *Ibid.*, p. 30, No. 87.
  35. *Cabbalistical Dialogue*, p. 4.
  36. *Ibid.*, p. 9.
  37. *Ibid.*, p. 4.
  38. *Ibid.*, pp. 8, 10.
  39. *Ibid.*, p. 20.
  40. *Ibid.*, p. 13.
  41. *Ibid.* (italics mine).
  42. A. Foucher de Careil, *Leibniz, la philosophie juivre et la cabale*, Paris, 1861, pp. 56-9.
  43. On Isaac Luria, see Gershom G. Scholem, *Major Trends in Jewish Mysticism*, New York, 1941, pp. 253-86.
  44. Gottesman (Coudert), diss., *op. cit.* (3), pp. 425, 428.
  45. *Cabbalistical Dialogue*, pp. 14, 15.
  46. *Ibid.*, p. 16.
  47. *Ibid.*, p. 12.
  48. *Ibid.*
  49. *Two Hundred Queries*, *op. cit.*, p. 106, Qu. 123.
  50. Gottesman (Coudert), diss., *op. cit.* (3), pp. 424, 497, 500.
  51. Gottfried Wilhelm Leibniz, "The Monadology", Gerhardt, IV, pp. 607-23, prin. 72.
  52. Francis Mercury van Helmont, *Paradoxical Discourses*, London, 1685.
  53. See Walter Pagel, "Das Rätsel der Acht Mutter im Paracelsian Corpus", *Sudhoff Archive für Geschichte der Medizin*, 59, 254-66, 1975; Walter Pagel and Marianne Winder, "The Eightness of Adam and Related Gnostic Ideas in the Paracelsian Corpus", *Ambix*, 16, 119-39, 1969. On the life of rocks, crystals, and metals in Renaissance works, see Frank Dawson Adams, *The Birth and Development of the Geological Sciences*, New York, 1938, esp. ch. 4, 5, 6, 9.
  54. *Paradoxical Discourses*, p. 66.
  55. *Ibid.*, p. 20.
  56. *Ibid.*, p. 66.
  57. *Ibid.*, pp. 70-1.
  58. *Paraphractical Exposition*, bound with *Cabbalistical Dialogue*, *op. cit.* (5), p. 24, verse 12.
  59. *Ibid.*, p. 24, verse 1.

60. "Observations Physical, Chemical, and Theological", *op. cit.* (22), No. 83.
61. *Paradoxical Discourses*, p. 10.
62. *Ibid.*, p. 11.
63. *Ibid.*, p. 20.
64. *Ibid.*
65. See David Kubrin, "Newton and the Cyclical Cosmos; Providence and the Mechanical Philosophy", *J. Hist. Ideas*, 28, 326-46, 1967; P. M. Heimann, "Nature is a Perpetual Worker", *Ambix*, 20, 1-25, 1973; Betty Jo Teter Dobbs, *The Foundations of Newton's Alchemy*, Cambridge, 1975; J. E. McGuire, "Force, Active Principles and Newton's Invisible Realm", *Ambix*, 15, 154-208, 1968.
66. Leibniz, "The Monadology," Gerhardt, VI, p. 607, sec. 2, 3.
67. Klopp, ed., *op. cit.* (13), vol. I, p. 155.
68. *Ibid.*, p. 300.
69. *Ibid.*, p. 301.
70. *Ibid.*, p. 302.
71. *Ibid.*, p. 303.
72. *Ibid.*
73. *Ibid.*, p. 304.
74. *Ibid.*
75. *Ibid.*, p. 305.
76. *Ibid.*
77. *Ibid.*
78. *Ibid.*, vol. II, p. 9.
79. *Ibid.*
80. *Ibid.*, p. 10.
81. *Ibid.*, p. 11.
82. *Ibid.*, p. 117.
83. Hans Leisegang, "La Connaissance de Dieu au miroir de l'âme et de la nature", *Revue d'histoire et de philosophie religieuses*, 17, 145-71, 1937. Leibniz had compared minds to a mirror in his 1682 "On the Elements of Natural Sciences": "There are as many mirrors of the universe as there are minds, for every mind perceives the universe, but confusedly" (Loemker, I, p. 429). In the *Discours de metaphysique* (1686), he wrote, "Every substance is like an entire world and like a mirror of God, or of the whole world which it expresses, each one in its own manner" (sec. IX, Loemker, I, p. 473).
84. *Ibid.*, p. 171.
85. *Ibid.*, pp. 145ff.
86. Foucher de Careil, *op. cit.* (42), pp. 47-54.
87. *Ibid.*, p. 47.
88. *Ibid.*, p. 50.
89. *Ibid.*, pp. 50-1.
90. *Ibid.*, p. 51.
91. *Ibid.*, p. 53.
92. Leibniz, "The Monadology," Gerhardt, VI, p. 618-19, sec. 69.