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THE TERROR OF NOVELTY:

JAN BAPTISTA VAN HELMONT’S EXPERIMENTAL MAGIC

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A Thesis
Submitted to the Faculty of Science
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Master of Science
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A NOTE ON REFERENCING

All quotations from Jan Baptista van Helmont included in the body of the text appear in English taken from the 1662 translation of his collected works, Oriatrike, or Physick Refined, unless otherwise indicated. In the English quotations, I have retained all of the eccentricities that accompany the original text, including variations in spelling, capitalization, and punctuation. In addition, I have transliterated all ampersands as “and” in the English and “et” in the Latin. For all material quoted in English, I have included in footnotes the Latin either from the original 1648 publication of van Helmont’s collected works, Ortus Medicinae, or from his 1644 publication of disease treatises, Opuscula Medica Inaudiita, as relevant. The footnotes are formatted thusly:

van Helmont, “[Treatise],” [page # in Ortus / Opuscula]; [page # in Oriatrike]: [Latin text].

and where I have referred to one of van Helmont’s treatises in its entirety:

van Helmont, “[Treatise],” [first page # in Ortus / Opuscula]; [first page # in Oriatrike]).

Publication information and full titles of the above texts have been provided in the bibliography.
INTRODUCTION:
THE FIRST CHEMIST

“I sate beginning to write in a closed Chamber; but the cold was great, and I bad an earthen Pot or Pan to be brought, with burning Coals …” – Jan Baptista van Helmont was at work again, braving December of 1643 with an obsessive dedication that, while unreservedly intent on illuminating nature’s darkened arcana, remained oblivious to personal health. The room was, in other words, rapidly and furtively filling with smoke. When van Helmont’s daughter found him blithely suffocating in a smoke-filled room, she quickly took away the coal brazier, and van Helmont stood to leave. Upon rising, however, he immediately fainted and hit his head on the stone floor, at which point he was presumed dead.

While he neglects to relate many of the particulars of his social and familial life, van Helmont describes anecdotes like this coal brazier incident with a thoroughness that exemplifies the character of his work. To him, this otherwise regrettable experience was relevant to his practice as a physician; it presented a singular opportunity to study the causes and effects of fainting and dizziness, carefully distinguished from the myriad symptoms of head trauma. This is the portrait of an “empirick” – an alchemist, a physician, a philosopher, and a mystic. But over the course of his life, spanning 1579 to 1644, van Helmont developed a unique natural philosophy that eludes these distinctions. He was motivated by practical concerns as a physician and reliant upon the non-textual knowledge offered by his experiences, yet his determination to improve medicine established a need for an uncompromising knowledge of and control over nature that would drive him to find solutions remote from this familiar practicality.

It was in magic that van Helmont found the unifying principles for the diverse ambitions of his natural philosophy. The power and utility of magical practice allowed him to render the body accessible to his medical intervention, and the resources of magical thought allowed him a fierce criticism of human reason that made it possible for him to seize divine illumination and place it within a systematized epistemological practice. Though often described as the first

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2 The term “magic” does, of course, carry uncertain definitions and connotations. In this thesis, I use the term to identify the quality of van Helmont’s work that assumes immaterial forces underpinning natural operations, that presumes to manipulate these forces through a uniquely human power, and that seeks to access true knowledge of nature through personal illumination. Discussion of these magical qualities features less often in history of science than in history of religion, wherein the phrase “Western esotericism” has been proposed to describe this often disparate suite of ideas, practices, and traditions. See: Wouter J. Hanegraaff, Esotericism and the Academy: Rejected Knowledge in Western Culture (Cambridge: Cambridge University Press, 2012).
chemist, van Helmont’s true novelty was, in fact, the new experimental and epistemological magic with which he answered the uncertain intellectual climate of the seventeenth century.

JAN BAPTISTA VAN HELMONT

Van Helmont’s desk-bound endeavors may appear somehow harrowing, but in fact he led a relatively quiet life professionally, with only a handful of marginal publications and perhaps more ignominy than fame in his lifetime. He wrote defensively and secluded himself when working. Neither was he a popular destination on anyone’s grand tour, as many of his more famous contemporaries would be. In fact, one record of such an attempt, surviving third-hand, claims:

[…] being in Brussels, [Doctor Krafft] enquired after van Helmont, and demanding of some persons which had lived long in the same street that he did, where is house was? they could not tell him, and protested they had never heard of his name: whereat he was surprized, as deeming it impossible, that a Physician, who, like another Aesculapius, performed so miraculous cures, and to whom multitudes might be presumed to resort, having lived so many years in one place, should not be so much as known to his next neighbours, amidst whom he had lived.3

However, contrary to what Dr. Krafft may have reported – and in spite of this apparent isolation – van Helmont was primarily a physician. For someone allegedly estranged from the plight of his next-door neighbors, van Helmont pointedly expresses a concern for their welfare that he fails to recognize in his academic counterparts: “For Physitians seem to have rested on a soft pillow, while their Neighbours house is on fire.”4 He claims they are only capable of informing their patients that diseases such as the plague are “exceeding dangerous.”5 And concerning the development of remedies, he notes that “hitherto little pains hath been taken, nothing known, but much promised, and very much neglected, long expectations, and everywhere errores.”6 Van Helmont’s curiously detached professional interest in his own coal brazier mishap exhibits the same vested interest with which he gathered and analyzed case studies from his patients, whose reports shaped his understanding of disease – an odd display of opportunism, perhaps, but no less indicative of this unrelenting emphasis on the experience, arising from the disturbing

4 van Helmont, “Tumulus Pestis,” Opuscula, p. 34; Oriatrike, p. 1102: Videntur enim Medentes suavi pulvinari cubuisse, paries dum proximus ardet […]
5 van Helmont, “Tumulus Pestis,” Opuscula, p. 34; Oriatrike, p. 1102: valde periculosus
6 van Helmont, “Promissa Authoris,” Ortus, p. 9; Oriatrike, p. 4: In quo postremo cardine, haec tem sudatum parum, sicium nihil, multum vero promissum, plurimumque neglectum, exspectatum duobum, et errorem ubique invenio.
realization that physicians, in fact, have entirely neglected to cure diseases. This disillusionment with contemporary medicine forms the fundamental motivation behind van Helmont’s new natural philosophy: to create a completely new medical practice, supported by a completely new approach to medical knowledge.

The majority of van Helmont’s works were published collectively after his death, at which point his ideas incited considerable debate. He both denied the power claimed by traditional physicians and in the same turn empowered other physicians (often unqualified by universities) to practice a more proactive form of medicine, and his polemical writing manages to be highly confrontational as well. George Starkey, a prominent alchemical physician and contemporary of van Helmont, demonstrates well the divided response to his work:

The only whine of the Galenists against Helmont, that ever I could hear, is and hath been, that he pulls down, but doth not build up, labours to overthrow the used method of Medicine, but doth not introduce a better.

How farre that Noble Philosopher hath proceeded in the discoverie of the true Medicinal Art, there is no Candid Son of Art, but must confess it, and hath cause to bless God for the same.7

Whether or not van Helmont managed to adequately replace traditional medicine was strongly contested, but the impact of his work – whether inciting positive or negative responses – was clearly considerable regardless.

A BRIEF HISTORIOGRAPHICAL CONTEXT

The questions of legitimacy that followed the publication of van Helmont’s works have reproduced themselves in the ambivalent portraits painted by modern scholarship. Rather than question the efficacy of his medicine, however, modern texts present varying interpretations that arise from a distinction between scientific and magical practices, with the uncomfortable acknowledgement that both appear to inform his natural philosophy. Van Helmont has received few dedicated studies, but he is often discussed in studies of seventeenth century “chymistry.”8

In this context, the presence of magic in his work is identified with and represented almost exclusively by alchemy, a topic that many scholars in recent decades have sought to integrate

more fully into narratives of early modern science. However, with these attempts to legitimize alchemical practices, it has become more apparent that the historiographical treatment of alchemy – and by extension, magic more generally – has nevertheless continued to isolate topics in magic as fundamentally distinct from scientific ideas and practices. This more sympathetic perspective – that magic deserves to be thoroughly researched and integrated into current scholarship – is qualified by the assumption that magic remains disparate. From this perspective, magic represents a point of departure for the new science rather than an indispensable aspect of it – an outdated tradition from which progressive epistemic practices were taking their leave.

In reference literature, wherein van Helmont’s life and works must be greatly condensed, this distinction between the scientific and the magical is particularly conspicuous. A paper on occultism appearing in *The Cambridge History of Seventeenth-Century Philosophy* describes him as an “heir of the older occult philosophy,” with an additional bibliographical entry that qualifies “evidence of his modernity” with the admission that he was “inclined to religious mysticism.” This apologetic acknowledgment of his association with occult or magical tradition likewise appears in the more recent *Concise Dictionary of Scientific Biography*, wherein his identification of carbon dioxide is qualified by the admission that he was involved in mysticism, “despite the scientific soundness of many of [his] theories and experiments.” This echoes the perspective offered by van Helmont’s entry in the earlier *Dictionary of Scientific Biography*, which insists that his works are characterized by a “combination of mysticism with genuine scientific research.”

This last evaluation was penned by Walter Pagel, whose book on the life and works of van Helmont remains, after thirty years, the persisting authority on his natural philosophy. Pagel’s work also offers a more nuanced perspective than his above quotation may imply; though identifying a seemingly dichotomous “inclination to religio-mystical meditation and legitimate scientific research,” he insists that the priority of any historical study of van Helmont must acknowledge the “coherence which must have existed between them in his mind.”

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13 See: Joan Baptista Van Helmont: Reformer of Science and Medicine, Cambridge Monographs on the History of Medicine (Cambridge; New York: Cambridge University Press, 1982).
14 Ibid., p. 208.
perspective follows the late-century shift in scholarship to a more sympathetic treatment of magical topics, but his acknowledged need for a balanced perspective maintains traditional dichotomies. As this more balanced approach to magic continued to develop in subsequent scholarship (and indeed continues to do so today), these dichotomies likewise persist.

More recent evaluations of van Helmont by notable scholars such as Allen Debus, Antonio Clericuzio, William Newman, and Jole Shackelford weave his work and its influences into the new science of the seventeenth century. Van Helmont is often referred to as one of the earliest chemists, and in this context, he becomes ancillary to Robert Boyle within narratives that trace a line of creative influence from Helmontian chymistry to Boyle’s mature corpuscular theories, an influence largely limited to van Helmont’s vocal rejection of Aristotelian elements and Galenic medicine. Studied independently, his work is often limited to specific topics of interest: he coined the word “gas,” for instance, and his inclusion of semina in his natural philosophy bears formative potential for the corpuscular philosophy mentioned above. Newman, in his recent *Atoms and Alchemy*, emphasizes van Helmont’s gravimetric analyses and his use of mass balance. Evident within these recent treatments is a symptomatic reliance upon older works, including the persisting authority of Pagel’s book, largely used as a resource for extracting information relevant to tangentially related topics. For example, while elements of van Helmont’s alchemy are often presented to serve a discussion of developing chemistry, his medicine remains either absent completely or present as a backdrop for his chemical theories. Thus, when Debus reached van Helmont’s theory of disease in this context, he simply deferred

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to Pagel on the topic. Likewise, Clericuzio, when discussing van Helmont’s influence on chemistry in the seventeenth century, began by citing the same book as a principal source for his discussion. These works are reflective of the source upon which they rely. Pagel’s discussion of van Helmont as an alchemist and a physician aims to evaluate his work independently of its apparent relevance to later scientific developments; this self-contained treatment attained longevity but only by dissociating its subject from a historiographical discussion of influence. It seems that what exists for the most part as a comprehensive historical study cannot, when considering the influence of a scientific work, avoid emphasizing what is most recognizably modern. Although Pagel’s work on van Helmont (and works following his) excels as a biographical portrait, it somehow finds its subject isolated from contemporary discourse within the particulars of his natural philosophy – and outside this often perplexed inclusion of topics in magic, what Debus refers to as the “specific discoveries and concepts” that make van Helmont important.

Shortly after Pagel published his work on van Helmont, Debus edited a collection of essays that demonstrate well this problem of assigning worth to historical topics. He prefaces the scope and approach of this collection by presenting the historiographical treatment of magic as necessitating a degree of separation. As Debus describes it, the proper integration of traditionally neglected topics such as magic involves not only a more thorough, balanced study of magic as a facet of intellectual life in early modern science, but also a need to identify and separate the concepts in these theories that are ultimately the most important. In this study and many others, the criteria of importance hinges upon the historiographical emphasis on scientific discoveries (such as van Helmont’s identification of carbon dioxide), contrasted against the topics in magic that are often separated from this developmental narrative. The need articulated by Debus to differentiate topics of importance results in a clear separation between van Helmont’s holistic natural philosophy and the discoveries that, in hindsight, make him relevant to the historian. In turn, the topics in magic that frame this natural philosophy then become irrelevant. Because magic has been given an independent role, displaced from the development of science, there can likewise be no account of such theories placed independently within a historical context. Instead, magic has been repurposed as a new context for a history of scientific discovery.

19 Debus, *Chemistry and Medical Debate: Van Helmont to Boerhaave.*, p. 43.
In Pagel’s work and others following it, the separation between science and magic has been presented as an alternative to the inevitability of scientific progress. The 2014 volume of the journal Osiris, *Chemical Knowledge in the Early Modern World*, characterizes well this enduring perspective. It describes in its introduction the “‘rehabilitation’ of alchemy as a rational investigative enterprise for the sixteenth and seventeenth centuries.”

This need to rationalize the alchemical enterprise in order to determine continuity with the history of chymistry is an enterprise that, however sympathetic, maintains superficial distinctions between scientific and magical ideas. Proceeding from the understanding that science cannot endeavor to become something that will later develop, it is characterized instead in opposition to magic, now perceived as a framework from which novel ideas may be released to develop, intermingle, and contribute to scientific discourse. While no longer discarded against an ideal of scientific progression, magic is now instead assigned a static position against which the dynamic narrative of scientific development can be cast.

Through this project’s evaluation of van Helmont’s works, it will become clear that, in spite of the common historical narrative, a fundamental aspect of his contribution to the development of scientific thought in the seventeenth century was decidedly opposed to the “rational” and entirely dependent upon magical practices that remained nonetheless formative in the development of early modern science and continuous with the scientific practices and perspectives that would later coalesce from this formative era.

**A Proposal**

When van Helmont fainted and hit his head after inhaling too much smoke, he followed with an assessment of his experience that reflects his dedication to personally involving himself in his investigative process. He was adaptive and responsive to such singular experiences, reliant both on systematic approaches and magical perspective that followed from a critique of reason. He utilized experimental magic – a phrase I use to describe his rationalized approach to magic and his “irrational” approach to practical medicine. With this in mind, to assign Janus faces to van Helmont and his work would imply that his medical research and his magical practices are somehow separable, when in fact his laboratory work is entirely dependent upon a theoretical framework appropriated from magical tradition. By extension, to describe a decline of magic.

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would imply that it merely persisted within the rise of the new science in the seventeenth century before ultimately giving way to the rise of modern science.

This work is neither an apology for magic nor a nod to an inscrutable yet undeniable part played by magic in the rise of a new science. I have not attempted to rationalize the magical qualities of van Helmont’s natural philosophy, nor, in turn, to survey in detail the particulars of his work that appear the most significant to modern sensibilities. Instead I have presented a portrait of van Helmont as a philosopher cognizant of and reactive to his position in a rapidly evolving intellectual climate, within which his utilization of traditionally magical ideas and attitudes allowed him to maneuver the same novel territory and with the same finesse as his more celebrated contemporaries, and, in fact, in opposition to human reason, which these contemporaries allegedly praised. I have focused on van Helmont’s use of experimental magic: a transformation of traditional ideas to meet the intellectual demands of a rapidly changing and expanding world.

DESCRIPTIVE OUTLINE OF THE THESIS

This thesis is divided into three parts, with a supplemental essay following the final part. The first part, “A Strange Guest,” will describe van Helmont’s theory of disease and how his motivations as a physician shaped his novel explanation of its operation. Here, the familiar narrative of van Helmont’s ontological theory will be addressed, through his metaphorical illustration of disease as a guest in an inn. Disease in his natural philosophy will be revealed as independent from and unfamiliar to the body but also continuous in operation with its physiological mechanisms and, ultimately, entirely dependent upon the power of the body’s immaterial and material faculties to gestate, grow, and fruit into mature disease. I will emphasize the way in which van Helmont empowers the victimized body as the ultimate source of a disease’s power over human health and how, in the same turn, he increases the accessibility of the body to the intervention of the physician.

Part two, “Principalities,” turns to van Helmont’s earliest published treatise in order to illuminate the magical foundations of his theory of disease. His motivations in espousing such a controversial interpretation of magic will be discussed in light of its foundational importance to his natural philosophy as a whole. I will present van Helmont’s early rejection of academic learning; his social, institutional, and personal isolation; the placement of all magical power within human beings; and the necessity of magical practices in enabling him to formulate the
theory of disease described in part one. Here, van Helmont’s appropriation of magic will become more apparent, along with the problems he identified as endemic to occult knowledge and the solutions he devised in order to adapt this knowledge to his purposes. Again, we see him empower humans by assigning the only source of magical efficacy to a potential in human beings.

In part three, “The Sepulcher,” the necessity of magic for van Helmont will be further demonstrated through an evaluation of his epistemological practices, particularly his reliance on the divine knowledge imparted in dreams. His theory of disease will again be used to demonstrate the continuity of natural operations in his natural philosophy through a demonstration of the epistemological problems of rational interpretation. We will see van Helmont attempt to compensate for the inherent inadequacies of reason by developing systematized approaches to inducing visions. Through such methods, he demonstrates his determination to assign humans a natural dominancy over nature, with limitless potential to know and control it. Furthermore, through an evaluation of van Helmont’s treatise on the plague, the theory behind his overtly magical epistemology will be demonstrated as continuous with his medical practice. Finally, the state of Helmontian medicine after van Helmont will be briefly evaluated to determine how effectively he was able to communicate what is essentially a very personal practice derived from occult tradition, in accordance with his professed desire to establish a new medical discipline.

The final part of this thesis is followed by a short essay entitled “The Mountain,” in which I will briefly discuss contemporaneous attitudes toward the mountain as an object with historical and epistemological significance, in order to assign a heightened perspective to the preceding discussion of van Helmont’s works.
PART I:
A STRANGE GUEST

“I have seemed to my self, to be a new Author of Medicine, hitherto known onely by way of name.” ¹

Van Helmont was nearing the end of his life. He had amassed before him a life’s work of expansive tracts and fragments, discontinuous and often overlapping and divergent. In spite of his considerably prolific life, van Helmont only published a handful of short tracts: one in 1621 followed by a work in 1624, and a short collection the year before his death in 1644.² His twenty-year absence from the press was the souvenir of an academic scandal; tried by the Spanish Inquisition in the 1620s, he was thereafter forbidden from publishing without official approval.³ He was, says his son, remarkably prescient about the circumstances of his own death; after weeks of illness, he indicated that he would die within twenty-four hours and duly followed suit, after first entreating his son to publish all of his works.⁴ He was sixty-five years old. But some years beforehand, he started preparing the whole of his works, preserved in manuscript, for imminent publication, perhaps motivated by how much he had to discuss. Van Helmont was having dreams:

I saw before me, a most exceeding beautiful Tree, spread forth as it were through the whole Horizon; whose greatness and largeness, notably amazed me. It was bespangled with flowers innumerable, odoriferous, and of a most pleasing and lightsome Colour: every one whereof, had a bud behinde them, a pledge of Fruit. Therefore I cropt of one of so many ten thousands, for my self, and behold, the smell, colour, and whole grace of the Flowre, straightway perished.⁵

Now with the flowers withered, van Helmont finds himself in a difficult position, unable to recompense the fruit that he has stolen. This dream is partly a self-deprecating praise of humility; all of the good that comes of his labors, he says, is really owed to divine grace. But in

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¹ van Helmont, “Promissa Authoris,” Ortus, p. 10; Oriatrike, p. 5: [...].
⁴ Francisicus Mercurius van Helmont, “Amico Lectori,” prefacing J. B. van Helmont’s collected works, Ortus, sig. **1r-**1v; Oriatrike, sig. b1r-b1v.
Figure 1: Portrait of Jan Baptista van Helmont, included in the 1683 German translation of his works, *Aufgang der Artzney-Kunst*. (Image courtesy of Bayerische StaatsBibliothek digital and Münstener DigitalisierungsZentrum Digitale Bibliothek.)
this dream, van Helmont also indicates part of his precept to become a physician, entangled with the gravitas of an unmistakably Edenic scene. Van Helmont’s dream allows him to place a divine impetus behind the medical theory that he spent his life constructing: a product of divine knowledge that, like the flowers in his dream, he determines not to arrogate to himself.

But it is difficult to reconcile this picture of humility with the same author who disdains with endless invective the works of every ancient and contemporary physician known to him. Of Paracelsus, the physician with whose work van Helmont is most commonly associated, he concedes to some extent that the man could make effective medicine; but he also ridicules him, who died at forty-seven, for claiming to know the secrets to immortal life:

In the mean time, his own followers are astonished, and wonder, by what Disease, or chance the true partaker or obtainer of that Stone which maketh Gold, was snatched away, being as yet in his flourishing Age; and who, with Hercules Club, slew thousands of the more grievous Diseases up and down, as it were by mowing them down with a Sithe.6

Van Helmont makes aggressive claims to his contributions, loathe to be heaped together with mere followers of Paracelsus: “For by Haters, I am called a Paracelsian, and a Forsaker of the Schooles; and yet I am esteemed an Adeptist, the Obtainer of some Secrets.”7 His claim is that he does what he must when he rejects traditional medicine in order to benefit the wellbeing of mankind, and yet – in spite of his humbling dream – he maintains an exclusive claim to secret knowledge, that very fruit that he was warned in his dream not to take. Van Helmont was aware that his ideas were novel, a product of what he regarded as singular experiences that distinguished his work and repeatedly deny his claim to humility.

The tree in van Helmont’s dream – with the flowers he stole (and the fruits they were ready to produce) – is indeed very Edenic, representative of divine knowledge and its promised works. This illustration serves a discussion of credit, without in any case limiting van Helmont’s access to divine knowledge (or his claims to such access). Like many traditional magical texts, his work is necessarily private, tailored for the individual.8 In spite of distancing himself from Paracelsus’ legacy, van Helmont maintains a seemingly comparable air of privilege; after all, he has access to knowledge that most people do not. And like Paracelsus, though van Helmont’s grasp of nature does include revelation, he hardly limits himself to revelation alone.

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6 van Helmont, “Arcana Paracelsi,” Ortus, p. 787; Oriatrike, p. 802: Stupent sui interim, miranturque, quo morbo, casu, adules floridus aetate sit abruptus, lapidis illius chrysopoei versus compos, quique graviorum morborum myriads passim, velut falce demetede, Herculis clava trucidavit?


When van Helmont discusses disease, he refers to it in the same terms as the divine tree in his dream. It is botanical in that it is generative in the human body, beginning as a seed that grows into disease – the object that provides van Helmont with knowledge of nature. As the primary object of van Helmont’s natural philosophy, disease acquires a number of novel identities. He calls it a strange guest – an unwelcome intruder who, lacking his own house, steals into the human body to exploit the generative potential of this “inn”:

For truly in all seminal Diseases, I find an occasional matter, which like a violent guest, making an assault, doth violate the Inne, and right, and disturbs the administration of the Family.⁹

Disease acquires a degree of independence in van Helmont’s theory, accompanied by qualities that make it violent, parasitic, and subversive. This is disease as something considerably more monstrous than the traditional theories advocated by van Helmont’s contemporaries, but this “semenal” disease also provides an independent target for the physician, who now has a greater capability and responsibility to intervene in the patient’s state of health to remove the offending agent. His theory of disease encourages proactive medicine and claims a heightened influence over nature – but perhaps more significantly, this theory is ultimately contingent upon a magical tradition that assigns considerable power to the generative potential of imagination.

THE INN

I: The Separation of Disease

Van Helmont made disease more familiar to the physician by estranging it from the body. This ontological distinction was part of his opposition to established medicine, targeting a particular notion of what disease is and how it operates. This response to academic medicine began with a rejection of his own medical education conducted within the small medical faculty at the University of Louvain, whose wholly unremarkable curriculum was composed almost exclusively of the works of Hippocrates, Galen, and Avicenna, with some limited instruction in anatomy following Vesalius.¹⁰ Louvain’s theory-based approach to medicine was rooted in the Galenic tradition, wherein health is defined by the unique balance of an individual’s humors or

humoral fluids, and illness, defined by disturbance of these humors. In this system, disease becomes a dysfunction of the body. When the humors are imbalanced, the body enters a state of disease — a state which is then assigned a name (such as “asthma” or “rheume”) according to a suite of symptoms. But van Helmont establishes at the very beginning of his works that “the composition, connexion, qualities, effects of humours, and the diseases that are dreamed to arise from thence, are meer fictions.” In van Helmont’s interpretation, disease is separated from the body entirely and assigned an agency that persists beyond the body’s fluctuating state of health. By divorcing any given disease from the individual, van Helmont allows it to be studied as an independent and largely invariable agent with consistent manners of infection and operation among patients.

Van Helmont’s determination to estrange disease does not, however, limit the extent to which he attends to the individual. He describes an impressive number of case studies; for every claim about how a disease manifests or operates, he provides an anecdote — sometimes many, sometimes amusing. One of his tracts on disease contains no less than ten such detailed accounts of patients suffering specifically from respiratory illnesses, referred to categorically as asthma. One man in his late thirties developed difficulty breathing after first losing his voice; another — this one a consul — fell from a ladder on a ship and thereafter suffered sudden attacks of strangulation; yet another only felt his breathing labored when walking uphill. Van Helmont’s interest in respiratory diseases — primarily, his attempt to localize the operation of asthmatic disease — is largely an attempt to counter the common Galenic explanation involving imbalance of the humor “catarrh,” or mucus. Catarrh is produced in the head and thence descends into the body, where it propagates general mayhem and diverse diseases, including asthma and pleurisy — a theory that, in van Helmont’s view, lacks explanatory power and clinical utility. He specifically denigrates Paracelsus for utilizing aspects of this catarrh theory in his study of asthma, in a deferral motivated by uncertainty.

11 Galen’s use of the humoral explanation derives largely from Hippocrates; for a brief explanation of Galenic humors as traditionally taught in universities into the Renaissance, see: Nancy G. Siraisi, Medieval & Early Renaissance Medicine: An Introduction to Knowledge and Practice (Chicago: The University of Chicago Press, 1990), pp. 101-6. For a more focused study of Galen’s medical works, see: Galen and Ian Johnston, Galen on Diseases and Symptoms (Cambridge; New York: Cambridge University Press, 2006), especially Johnston’s translation of Galen’s On the Differentiae of Diseases (chapter II.1) and pp. 134-5 specifically, regarding the definition of disease.

12 van Helmont, “Promissa Authoris,” Ortus, p. 6; Oriatrike, p. 1: Nimirum humorum compositionem, connexionem, qualitates, effectus, et inde somniatos morbos, esse merum figmenta […]


14 van Helmont dedicates a separate chapter to refuting theories of catarrh: “Catarrhi Deliramenta” (Ortus, p. 426; Oriatrike, p. 429). For his discussion of Paracelsus in this chapter, see: Ortus, p. 429; Oriatrike, p. 432. Paracelsus’ theory of “tartar,” in which food or drink can leave a persisting deposit in
catarrh, van Helmont looks for a common “root” (*radix*) in his patients’ varied and often seemingly unrelated anecdotes. All of these symptoms include an affliction of the lungs, along with varied auxiliary symptoms reflecting the disease’s varied onset. Van Helmont acknowledges the often idiosyncratic manifestations of disease and the practical difficulties that diseases present, focusing on a concern for the trials of his patients – and from there derives his theory of disease.

Van Helmont’s evaluation of asthmatic diseases begins with a refutation of humoral medicine. In support of his opposing theory, he provides a lengthy collection of case studies – and using these case studies, he demonstrates how his theory of disease emerges. In the third case mentioned above, van Helmont treated a 60-year-old man who complained of having particular difficulties breathing while walking uphill or otherwise negligibly exerting himself. His case can immediately be identified as a “dry asthma,” since he suffers without expectorating excesses of phlegm. But why, asks van Helmont, should breathing be labored by walking uphill but not by walking along level ground? And if the movement of the muscles can be implicated, why is it that in similar cases, it also becomes more difficult to breathe during exertion after eating a heavy meal? There are possibilities: perhaps the movement of the abdominal muscles or the fullness of the stomach can agitate the function of the lungs, or perhaps exertion in these situations prompts fewer breaths to be taken, leading to shortness of breath. But none of these explanations can satisfactorily explain why this man has difficulties breathing in such situations when healthy persons do not – especially considering the lack of material obstruction. It must be, says van Helmont, “that his defect be fetched from elsewhere.”

Van Helmont’s explanation of how disease operates is largely dependent upon this potential for spatial distinction between the locus of the disease and the part of the body in which it produces symptoms. Focusing on the latter can be useful in identifying the disease and determining how it operates, and van Helmont does, of course, condone the use of medicines the body (such as kidney stones), bears many similarities with catarrh; van Helmont included neither in theory of disease, addressing tartar specifically in a number of treatises spanning pp. 233-58 in *Ortus* and pp. 229-53 in *Oriatrike*. Van Helmont discusses tartar and disease specifically in: “Inventio Tartari, in morbis temeraria” (*Ortus*, p. 238; *Oriatrike*, p. 235).


van Helmont, “Asthma et Tussis,” *Ortus*, p. 374; *Oriatrike*, p. 367: *Necesse est, et suam labem aliunde peti*
that ease difficult or painful symptoms. But one of his primary criticisms of traditional medicine is the inordinate emphasis it places on treating symptoms—a practice he had initially followed to the ultimate detriment of his patients:

I acknowledge, that I then spread Masks and Cloaks over Diseases, that I healed none, but deluded as many as relied themselves on my Ignorance. Therefore, after that I stood cast on the Shoar, as unprofitable Froath, by the Storms of vulgar Ignorance [...]

Asthma has the problematic quality of reappearing after lengths of absence, a chronic disease that expectorants and lozenges merely “spread Masks and Cloaks over.” This disease is, manifestly, an affliction that persists largely independent of the symptoms it produces. And for this kind of disease, van Helmont’s theory of estrangement is particularly well-suited.

Disease as a “strange guest” acquires foremost an external agency, which van Helmont describes as seminal; in other words, disease first exists as a “seed” (semina) which must then enter the body to reach maturation. While the disease itself cannot be formed independently of the human body, its potential or “seminal idea” (idea seminalis), as van Helmont calls it, exists independently of the human body as an immaterial seed that can become attached to and transmitted by material objects, without in any way altering that which carries it. This seed of disease, entirely incorporeal, has an agency distinct from the symptoms or material cause of the disease that it forms in the body.

Van Helmont’s theory, although distinct, was not the first to describe disease as seminal. An earlier proponent was Jean Fernel, a French physician whose 1548 work De abditis rerum causis (“On the Hidden Causes of Things”) espouses a similar ontological theory of seminal disease that retains humoral imbalance and occult (hidden) causes of disease. Van Helmont was familiar with the text, and while he praises Fernel to a limited extent, he nevertheless denigrates him for “not being able to rid himself of the strawy Bonds of putrified Humours.”

Rather than allow the disease seed to instigate systemic imbalance, he proposes a theory in which the disease seed becomes associated with physical locations in the body, from which it produces

17 van Helmont, “Asthma et Tussis,” Ortus, p. 369; Oriatrike, p. 362: Agnoso me larvas, et pallia, tum morbis obtendisse, sanasse neminem, delituisse vero, quotquot se meae ignorantiae confisi sunt. Postquam ergo ab ignorantiae vulgaris procellis, ut inutilis spuma ad littus ejectus starem [...]


19 For a recent translation of this work with an extensive analytical introduction, see: Jean Fernel, Jean Fernel’s on the Hidden Causes of Things: Forms, Souls, and Occult Diseases in Renaissance Medicine, ed. John M. Forrester and John Henry (Leiden; Boston: Brill, 2005).

20 van Helmont, “Febrium Doctrina Inaudita,” Opuscula, p. 17; Oriatrike, p. 948: [...] stramineis nempe vinculis humorum putridorum se ecticare non valens [...]


the manifestations of disease. Returning to his case studies in asthma, it is this common locus among variations of the disease where treatment must be directed.

Working with this theory, van Helmont’s investigation of asthma must rely on its varying symptoms and causes – cough, mucus, tightness in the chest and wheezing, as well as specific circumstances under which patients suffer attacks of asthma – to indicate what part of the body it primarily infects. His conclusion, after evaluating the varying symptoms presented by his patients, implicates a disease with a common and persistent seminal cause expressing itself through transient symptoms, agitated into fits or attacks that are felt in the entire body. The man mentioned above experienced labored breath when walking uphill, a form of asthma accompanied by excessive fatigue. Two of van Helmont’s patients – a hunter and a monk – could anticipate an asthma attack hours beforehand, from a suite of symptoms felt in the teeth, the sides, and the stomach. For the hunter, these attacks came more often in the summer; for the monk, more often with stirring of dust – a markedly different cause that nonetheless produced the same symptoms. In all cases, asthma is wholly debilitating; during a fit or attack (or otherwise, during the moment when breathing is difficult), the entire body is to some extent weakened or entirely seized by the agitation of the asthmatic disease. From this common root, van Helmont places the locus of asthma in the abdomen, at the “mouth of the stomach” (os stomachi) – a part of the body not only implicated by common symptoms and causes reported by his patients, but also by its unrivaled capability to exercise influence over the entire body, as asthma does.

III: Systemic Hierarchy

The abdomen’s claim to systemic influence rests largely on van Helmont’s understanding of the body’s physiological hierarchy, the significance and diversity of various digestions or ferments therein, and the function of the blood. Almost all medicines are ingested, which gives the stomach an immediately recognizable influence over human health; it digests or “ferments” material that is afterwards diffused throughout the body, to beneficial or detrimental effect.

21 van Helmont discusses these case studies in “Asthma et Tussis,” Ortus, p. 366-7; Oriatrike, pp. 359-60.
23 The functions and operations of the stomach (and digestion more generally) are discussed often in van Helmont’s works. See, for example: “Imago Fermenti impregnate massam semine” (Ortus, p. 111; Oriatrike, p. 111); “Calor efficienter non digeri t, sed tantum excitative” (Ortus, p. 201; Oriatrike, p. 198); “Sextuplex digestio alimenti humani” (Ortus, p. 208; Oriatrike, p. 205); “Pylorus rector” (Ortus, p. 225;
For van Helmont, this notion of digestion as a process of separation and purification has an obvious alchemical significance, with an additional explanatory function for the rest of the body’s operations. Even the heart has its own “stomach” contributing to the production of blood, for “there are as many stomachs, as there are members nourishable.”24 Each systemic operation in the body has its own digestion or ferment that serves its role within the greater system, and the digestion that takes place in the stomach has hierarchical authority over these other digestions, providing top-level organization to the rest of the body. This provides an explanation for the apparent influence that the stomach has over the body’s function, as well as providing a likely physical locus for diseases that likewise manage to affect the entire body.

Van Helmont’s explanation is slightly more complex, however, relying in part on the immaterial operations in the body (such as the vital spirit diffused in the blood) that this physiology must also account for. Beside the stomach in location and significance is the spleen, a cluster of blood vessels and arteries that easily acquires import in the production and diffusion of the blood and the vital spirit that it carries.25 Placed between the stomach and the heart, the spleen is given a position of authority, directing the digestions that take place in the neighboring organs. From this the abdomen gains systemic authority as the physical seat of the “duumvirate” – which, as its name implies, forms a twofold government over bodily function, between the spleen and the stomach.

Working with this physiological system, van Helmont’s investigation into asthma becomes more coherent. His patients suffer from a chronic disease that, while manifesting itself primarily in the lungs, debilitates the entire body with periodic fits, often felt beforehand with pain and turmoil in the abdomen. From this, he concludes:

For truly, as well in the Consul, Citizen, and Hunter, as in the Canonist, the Asthma stands in a Poisonous seed, which hath gotten the Spirit of some Bowel for its Root and Inn. But the property of that Seed is, to contract the pores of the Lungs, whereby it gives passage for Breath into the Breast [...]. But the nest of the Asthma is in the Duumvirate (of which I shall treat in a particular Treatise) to wit, from whence the Government of the whole Body dependeth.26

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25 Van Helmont discusses the body’s physiological operations, including various digestions and production of bodily fluids, in “Blas Humanum,” (Ortus, p. 178; Oriatrike, p. 175).

26 van Helmont, “Asthma et Tussis,” *Ortus*, p. 368; *Oriatrike*, pp. 360-1: *Enimmero tam in Consule, Cive et Venatore, quam in Canonico, stat Asthma in semine virulento, quod spiritum alicuius visceris, pro radice atque diversorio, est nastum. Seminis autem illius proprietas est, contrahere poros pulmonis, quibus anbeliitum in thoraeam transmittit. [...] Est autem nidus Asthmatis in Duumviratu, (de quo aequam tractatu singulari) unde videlicet totius moderamen pendent [...]
Asthma is manifested primarily in the lungs (van Helmont says here, in a remarkably accurate interpretation, that it constricts the pores in the lungs), but the seminal disease has its roots in the abdomen, whence it may affect the entire body by degrees. While he allows that treating asthma must involve easing the discomfort that arises from symptoms, he maintains that, as stated, treating the symptoms alone merely obscures the true disease. The treatment, then, must target the abdomen primarily, where the roots of the disease have taken hold.

What is perhaps most significant about van Helmont’s treatment of asthma is not this seemingly prescient description of asthma as constriction of pores in the lungs, but instead the certainty with which he ascribes to asthma the same medicines otherwise used to treat epilepsy. What he notices about the consistent operations of asthma among his many patients is that it affects the entire body by means of the Duumvirate – a state of disease that mirrors the operation of the “falling sickness” (*caducum*), epilepsy. Both diseases are chronic, arise in often unpredictable fits, and affect the entire body while remaining fundamentally localized. Asthma, the “falling sickness of the lungs” (*caducum pulmonis*), demonstrates the extent to which investigation of case studies contributed to van Helmont’s search for the root of disease. The significance for the operation of disease, in this case, is that it takes root in a physical locus. From there, it grows and fruits, often in a place remote from the root of the disease, but in all cases, it is the root that must be removed in order to cure disease. Since epilepsy and asthma take root in the same physical locus, they can be cured with the same medicines (though treating their varied symptoms would, of course, require varied treatments). Van Helmont’s approach to practical medicine becomes largely focused on this distinction between the source and symptoms of a disease; for asthma, the root can be the abdomen, while its fruit – the mucus, the cough, the constriction of pores – appear in the lungs. The source and symptoms often have distinct physical loci and require distinct treatments – with the most significant distinction being that treating the source will cure the illness, whereas treating the symptoms will not.

**IV: The Physician’s Perspective**

Van Helmont’s vested interest in asthma reflects his thorough manner as a physician, but he had personal as well as professional reasons for developing a treatment for this disease. Ultimately, it would be respiratory illness that killed him – initially labored breathing, followed by

bouts of pleurisy.\textsuperscript{29} Asthma and its suite of symptoms were a common occupational hazard for alchemists, who labored over fuming chemicals in “closed chambers.” Van Helmont describes his difficulties among his other case studies: “I am wont to be taken with a stuffing in the head or Pose, because my head is weakned, and doth suffer an unequal strength through the injuries of distillations.”\textsuperscript{30} Part of his comprehensive study of the operation of asthma recognizes a multiplicity of potential causes, including a clear awareness of the vulnerability to certain diseases that can develop from habitual action and circumstance:

> as when a pruner of Trees becomes gowy, a brawler is wounded or slain; so a Gilder miserably trembleth, a digger of Mineralls, and likewise a Chymist perisheth by an Asthma or stoppage of breathing […]\textsuperscript{31}

These diseases, commonly associated with certain professions, indicate the impact of lifestyle on the development of disease and its bodily influence, “dispositively sliding out of the Being of the seed” over time.\textsuperscript{32} Van Helmont’s explanations remain seminal, even when traditional explanations would implicate the heavens in such diseases.

Van Helmont’s claim that occupation may cause disease accompanies a larger polemic against the legitimacy of astrology and its claims, such as the influence of celestial bodies on natural operations and the ability to prognosticate using astronomical observations. Assigning a formerly celestial cause to the habit of occupational activity emphasizes the significance of the semina, with which all formerly celestial action now finds explanation in natural operations. This rejection of astrological influence distinguishes van Helmont’s theory of disease from similar seminal theories in the works of Fernel and Paracelsus, who assign less significance to seminal operation alone. Fernel’s theory of disease had already disappointed van Helmont for explaining seminal operation with Galenic humors, but these other theories also subject diseases to astral influences in their instigation, propagation, and developmental direction.\textsuperscript{33} For Paracelsus, astral

\textsuperscript{29} Franciscus Mercurius van Helmont, “Amico Lectori,” in Ortus, sig. **1r.-**1v; Oriatrike, sig. b1r-b1v.
\textsuperscript{30} van Helmont, “Asthma et Tussis,” Ortus, p. 376; Oriatrike, p. 368: Soleo namque facile corripi gravedine, sive Corizza, quod caput mihi sit distillationum injuriis debilitatum, roburque inaequale patiatur. Note that the use of distillationum here may refer either to chemical distillation or to bodily fluids (mucus, in this context).
\textsuperscript{31} van Helmont, “Astra Necessitant; non inclinant, nec significant de Vita, corpore vel fortunis nati,” Ortus, p. 126; Oriatrike, p. 126: Ut dum putator sit podagricus; rixator vulneratur vel occiditur: Sic deaurator misere tremit; fossor mineralium, itemque Chymicus, asthmate perit.
\textsuperscript{32} van Helmont, “Astra Necessitant; non inclinant, nec significant de Vita, corpore vel fortunis nati,” Ortus, p. 126; Oriatrike, p. 126: ex ente seminis dispositive labentibus […]\textsuperscript{33} Forrester and Henry offer a concise discussion of Fernel’s stance on astrological influence in their introduction to his \textit{De abditis rerum causis}: Fernel, \textit{Jean Fernel’s on the Hidden Causes of Things: Forms, Souls, and Oozult Diseases in Renaissance Medicine.}, pp. 37-43. From Forrester’s translation of \textit{De alditis}, cited in the indicated selection: “People who maintain that the stars introduce nothing by their light and movement into the air but heat or cold, showers or dryness are distressingly stupid. If the stars when well-patterned guard and preserve the life of all, why would they not interfere with life when ill-patterned? From there comes the primary main health and preservation of all things, and death too.”
bodies retain an operative power that can similarly contribute to the spread and development of the seminal disease – with the additional implication that curing disease may require the manipulation of astral influences. In these accounts, the stars have a power over the body that would claim to provoke and spread pestilence, to implant and activate chronic disease, to define temperaments and their physiological vulnerabilities. Van Helmont concedes only that the stars offer some limited indications of natural events and operations, without allowing causation. Within his theory of disease, all celestial action may now be given natural explanations, precluding the need for manipulation of astral influence in medicine. Van Helmont allows his seminal theory to explain disease on its own, without the contribution of Galenic humors or celestial (or otherwise occult) forces.

With his seminal theory of disease, van Helmont changes the relationship between the physician and his patient by redefining the relationship between the disease and the body. He avoids a conflation of the two by attributing disease to an independent agent, rather than allowing disease to be defined as a state of humoral imbalance; but he also makes disease independent of higher influences, so that it retains a fully natural (and terrestrial) operation. This understanding of seminal disease not only increases the accessibility of disease to the intervention of the physician, but also places it within a more comprehensive explanation of natural mechanisms. And now, in this new system, disease that roots and fruits can be understood as operationally equivalent to the botanical processes from which these terms were borrowed.

34 Walter Pagel provides a topical overview of Paracelsus’ astrological explanations for the operation of disease and its relationship with the body, arguing that astral bodies in Paracelsus’ natural philosophy retain less influence over nature than in more traditional accounts, such as Fernel’s: Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance (Basel: S. Karger, 1958), pp. 65-72. For a discussion of Paracelsus’ stance on astrology as a tool for prognostication, see: Charles Webster, Paracelsus: Medicine, Magic and Mission at the End of Time (New Haven, CT: Yale University Press, 2008), pp. 218-34.
DISEASE IN THE GARDEN

I: The Tree of Life

When disease entered nature, God addressed the first man: “The Earth shall bring forth unto thee, Thistles and Thornes.” Disease is in every respect inseparable from humans and their mortality, and its purpose and identity follow from the circumstances of its inception, an account that van Helmont carries back to the very beginning, in Genesis. His interpretation of the Biblical Fall perhaps primarily emphasizes the debasement of human understanding, but he sees also a potential in nature for the correction of this bodily and intellectual imperfection. Humans, through a willful act of disobedience, created disease with their mortality. But disease also presents the means to overcoming these difficulties:

Truly in this were the Schools blinded, because they have proceeded against the Doctrine of the Gospel: For primitive Truth will, that we know the Tree by its Fruits; but the Schools will, that the Fruit ought to be known by the Tree. I will therefore shew by the Fruits, in what manner we must come unto the knowledge of the Tree.

This approach to diagnosis and treatment is demonstrated clearly by van Helmont’s extensive use of case studies, as discussed above. If indeed the nature and operation of disease can be distinguished from the body and understood as continuous with natural mechanisms, then the physician now has an object that he can study to understand and overcome his own mortality. Considering also that disease and its methods of propagation and development possess markedly botanical modes of action, man-made disease now stands as a profane reflection of the Edenic tree that appeared in van Helmont’s dream.

When van Helmont describes the origin of disease as seminal, he assigns a number of biological operations to the disease seed that illuminate its relationship to the body. While there are limits to its influence, disease does possess the ability to produce its own offspring by means of the body’s inherent physiological operations. In this sense, disease can be viewed as something essentially generative, though it produces destructive effects; as with asthma, the

36 Van Helmont discusses man’s creation of death in “Mortis introitus in naturam humanam decus Virginum” (Ortus, p. 644; Oriatrike, p. 648). He also provides a thorough explication of the scriptural Creation account in the following two chapters, “Thesis” (Ortus, p. 647; Oriatrike, p. 652) and “Demonstratur Thesis” (Ortus, p. 656; Oriatrike, p. 661).
disease takes hold in one location and produces symptoms in another. Van Helmont’s use of the term “seed,” with this in mind, indicates all of the familiar operations that this term implies:

[...] Generation bespeaks nothing but a flux of the Seed unto perfection, maturity of properties, an unfolding of things hidden, and a consummating of Orders unto their own ends.  

The relationship between the seminal disease and the body is characterized by this generative action; the seed finds physical ground in the body, where it germinates, grows, and produces fruit in a place often remote from its roots. Another extension of this illustration dictates that the disease seed, like the seed of a tree, is not materially a “tree” until it can find ground in which to germinate – that is, until it can infect a host. The seed carries the potential to produce disease, but the vital action of the body is required in order for this potential to be realized.

With this seminal origin, van Helmont makes disease an autonomous agent, a distinction that also allows its operation to be understood in the familiar terms of botanical propagation. But this language is not merely illustrative; here, van Helmont is discussing herbs rather than disease, yet in nearly identical terms:

For we have known, and believe by Faith, that a power is given to Herbs of propagating their like: But that proprietary faculty is a real Being, actually existing, which is always, and successively manifested in the seed; neither is that faculty a certain accidental power, or naked quality; but it is a seminal virtue, whereby the Plant which is the Parent, decyphers an Idea in his own seed, the container of figure, and properties, according to which it will stir up, delineate the seed it self, and make the Plant its Daughter to grow: For in seeds a manifest Image is known, skilful of things to be acted for a new propagation.

When van Helmont identifies the disease seed with the generative potential of a plant seed, he is indicating that both essentially reproduce by the same means. Like plants, the disease produces an image that defines its development from seed to fruiting maturity. The image of disease in the disease seed, in other words, is precisely the same sort of image as that of a tree in its own seed – and, in fact, these seminal images direct the development and propagation of all things in nature. Even the most mysterious operations of disease find explanation in natural terms:

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40 Van Helmont offers a brief chapter describing seminal generation, largely against the validity of Aristotelian causation: “Causae, et Initia Naturalium” (Ortus, p. 32; Oriatrike, p. 27).
Wherefore in speaking properly, the Seed it self is the Asthma and falling-Sickness of the Lungs, although it may be silent a good while [...] For I esteem a man to be Asthmatical, as well out of the Fit, as within it; because a true Asthma is in him; even as a Pear-Tree is as well a Pear-Tree in Winter, as in Autumn, while it hath Pears. 

Chronic diseases like asthma that seem to exercise an unpredictable influence over the body can be made intelligible by understanding their seminal existence in the same terms as other seeds in nature.

In this sense, van Helmont’s description of seminal generation can be considered incorporeal and metaphysically significant, assigning a universal commensurability to generative operations in nature. This also greatly simplifies a potentially complex theory of disease now distinct from the alluringly parsimonious explanations offered by the four humors. In the universal mechanism of growth and propagation, he finds a level of compatibility between disease and the body, and by virtue of this universal operation, van Helmont’s botanical illustrations provide a far-reaching explanatory tool that frames the epistemological needs of medical diagnosis and treatment.

II: The Dominion of Man

The initial interaction between the disease seed and the body, the subsequent course of its development, and the normal proceedings of the body’s processes are all subject foremost to the physical body’s incorporeal hierarchy. In van Helmont’s natural philosophy, the body’s operations depend entirely on the systemic authority of the “Archeus,” an immaterial medium between the body and the intellect. The term, taken from Paracelsus, is used to describe an agent of orderly transformation in the body, as in digestion and developmental growth. Like Paracelsus’ “Vulcan” – a name evoking the Roman god and the transformative power of his blacksmithing – the Archeus works in the body to separate and perfect. In van Helmont’s work, the function is similar; the Archeus exists as a primary authority presiding over individual archei assigned to organs and organ systems, ensuring the body’s proper functions as an agent of this vital spirit. It is “the Workman, the Vulcan or Smith of generations” that instigates orderly

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42 The Archeus is a fundamental component of van Helmont’s natural philosophy, and so this concept is discussed often and at length throughout the collected works. He does, however, offer a brief chapter introducing the Archeus and its functions: “Archeus Faber” (Ortus, p. 40; Oriatrike, p. 35).
transformation in nature, performing the actions that the alchemist recreates in his laboratory with fermentations, distillations, and other kinds of artisanal manipulations. However, the function of the Archeus is not only transformative but also generative. The development of the disease seed in the body – as well as the plant seed in the soil – depends upon the vitality of the Archeus to translate its incorporeal, seminal idea into a physical form:

But since every corporeal act is limited into a Body, hence it comes to passe, that the Archeus, the Workman and Governour of generation, doth cloath himself presently with a bodily cloathing: For in things soulified, he walketh thorow all the Dens and retiring places of his Seed, and begins to transform the matter, according to the perfect act of his own Image. For here he placeth the heart, but there he appoints the brain, and he every where limiteth an unmoveable chief dweller, out of his whole Monarchy, according to the bounds of requirance, of the parts, and of appointments.

Hence the Archeus, as an entelechy (entelechiam), transforms matter according to the directive of the image in the seed, indicating the hierarchical dominance of these incorporeal images over material form. Van Helmont’s seminal images not only direct propagation and development but also carry metaphysical implications for the form and function of material objects.

Material development and transformation in the body has some obvious (and some less obvious) distinctions in van Helmont’s natural philosophy. The alchemical implications of material transformation are immediate; every physiological change in the body indicates a process of fermentation commensurate with the chemical reactions orchestrated by the alchemist in his laboratory. This was briefly indicated in the above discussion of asthma. The Duumvirate – the stomach and the spleen – holds directional authority over the rest of the body’s processes by directing each organ’s and organ system’s specific digestion or fermentation. While “fermentation” may primarily carry putrefactive connotations, this term also encompasses processes of metabolism and growth, including the production of bodily fluids like blood or sweat. When disease enters this system, the agitation of the governing bodies, now under the direction of the seminal disease, produces aberrant products like thick mucus or pus.

Van Helmont’s portrait of disease changes significantly its relationship to the human body. Though the forms and operations of disease are varied – and van Helmont discusses disease in context of its varying manifestations – it remains essentially tied to invariable qualities

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43 van Helmont, “Archeus Faber,” *Ortus*, p. 40; *Oriatrike*, p. 35: fabrum, generationum Vulcanum

44 van Helmont, “Archeus Faber,” *Ortus*, p. 40; *Oriatrike*, p. 35: At cum omnis actus corporeus, in corpus terminetur, hinc sit, quod Archeus, generationis Faber, ac Rector, seipsum vestiat statim corporali amictu; In animantatis enim, perambulat sui seminis latebras omnes, et recessus, inceptique materiaum transformare, juxta imaginis suae entelechiam. His enim cor locat, ibi vero cerebrum designat, atque ubique immobilem habitatorem praesidem, ex universali sui monarchia determinat, justa ecigeniae, partium, et destinationum fines.

and modes of operation. Disease belongs to the dominion of humans primarily; and it remains, though reliant upon the human body, fully separable from it:

Therefore every foreign matter doth of necessity receive its birth, increase, ascent, state; declining, and death, and at length also, of its own accord, expecteth a restoration by further propagations […] Hence it follows, that a foreign guest ought at length to depart from the fold, whereunto it hath theevishly crept, through a privy error: Because the power of the Word suffers a prescription by no seasons, length of motions, daies, as neither by the wiles of the enemy.  

Seminal disease attains an agency that humoral disease lacks, but it also loses the metaphysical significance of humoral disease, wherein the body becomes essentially diseased. Seminal disease foregoes a capacity to metaphysically change the body in favor of operational influence over it.

Van Helmont’s theory limits the power of disease to the influence that it may attain over the direction of physiological functions and orderly material transformation. It can impose a foreign image that redirects the body’s operations in service to the ultimately destructive development of the disease, but this lack of full authority over the body indicates an influence limited by the body-disease relationship established in scripture. Ultimately subservient to the human body, disease becomes a means by which, through study of natural operations, the fruits of sin can be understood and overcome.

III: The Creation of Disease

Van Helmont’s interpretation of Genesis and man’s role in it is not essentially novel or unique. Like Paracelsus, he interprets creation alchemically, although he does distinguish his interpretations to some extent; he produces an alternate theory of the elements, for example, assigning primacy to water alone. Concerning the relationship between man and nature, however, his account is most unique in reference to his theory of disease. This is largely because he assigns humans an active part to play in the shaping of nature:

Man alone made Death for himself, and hath applied Causes unto himself as a Positive Being; From whence he hath become mortal, and Death hath been made nature: For

46 van Helmont, “Tumulus Pestis,” Opuscula, p. 28; Oriatrike, p. 1095: Idecirco omne peregrinum, sui ortum, augmentum, ascensum, statum, declinationem, ac interitum necessario suscipit, ac tandem etiam sponte, per ulteriores propagationes, restauracionem exspectat. […] Hinc consequens, hujusmodi exercitum tandem cedere debet et stabulno, in quod clanculario errore furtive irripit. Eo quod Verbi potestas, nullis tempestatibus, longitundo motuum, aut dieum, ut nec hostis technis, prescriptioentem patitur.

47 For van Helmont’s alchemical interpretation of scriptural Creation, see: “Elementa” (Ortus, p. 51; Oriatrike, p. 47). For his study of water and its elemental properties, see: “Gas Aquae” (Ortus, p. 73; Oriatrike, p. 70).
what the Devil could not do, man having a possibility but not a necessity of dying, could
do.\textsuperscript{48}

Because disease entered nature as a product of human action, van Helmont presents death as a
human creation. It is beneath the perfection of divinity to create death, and so instead there
 existed only a potential for mortality. This potential was realized with the Fall, when humans
made themselves mortal. In this interpretation, the Fall includes an act of human creation –
though ultimately, perhaps, destructive in its implications.\textsuperscript{49} Nevertheless, this act of creation
characterizes the subsequent relationship between the now mortal body and its offspring,
disease. Man made death himself, and he retains the potential to understand the circumstances
of mortality and thereby preserve the body against it. Disease ultimately exists only relative to
human life, and so it remains to a large degree essentially within the purview of human influence.
In this way, death is the trade of the physician, who studies disease to delay it. And through a
natural, hierarchical domination, the human body remains fundamentally beyond any power of
seemal disease to metaphysically change it.

This potential for dominancy over disease – and the insight that disease offers into
nature as a whole – provides a compelling motivation for medical study, extending the moral and
implications of van Helmont’s profession. It is not only his career that begins and ends with
trees of knowledge, but in fact the prerogative of every man after the Fall to know nature. As
Franciscus Mercurius dutifully relates:

\begin{quote}
In no other thing, besides that Darkness was increased in man, by the touching of the
Fruits, and eating of the forbidden Tree; in so much that Darkness holds the prize
against the Light, and doth now possess it, even as in Adam, the Light in Adam did
possess his Darkness, and did illuminate it before his Fall.\textsuperscript{50}
\end{quote}

The divine prerogative assigned to mankind is to subdue this darkness of mortality, with which
spirit and flesh are separated in humans like light and darkness. By knowing oneself – that is, by
understanding this mortality – it can be subdued. Van Helmont makes disease an accessible
subject for this study of nature; verdant disease is the mortality of human creation that remains

\begin{footnotes}
  649: […] solus homo sibi fecit mortem, causaque sibi applicuit tanquam ens positivum, unde mortalis evasit, et mors
  naturalis facta sibi: Quod namque diabolus non potuit, potuit homo habens moriendi possibilitatem, non autem
  necessitatem.
\item [49] For a discussion of the deficiency of the human body after the Fall and its significance in seventeenth-
  century philosophies, see: Peter Harrison, \textit{The Fall of Man and the Foundations of Science} (Cambridge, UK:
  prae ter quod tenebrae in homine auctae sunt, per attactum fructuum, confectionemque, Arboris prohibita in tantum ut
  Tenebrae primas in hicem tenent, eamque nunc possideant, quemade in Adamo Luc tenebras eius possidebat, et
  ante lapsum eius illuminabant.
\end{footnotes}
distinct from and foreign to human life. Knowing how disease operates – knowing its cause to determine its cure – is the prerogative with which van Helmont sheds light on the “Thorns and Thistles” that mankind initially inflicted upon themselves.

IV: Fall and Redemption

Van Helmont’s illustrative turn to the fall of man is an evocative choice that reflects both a traditional crisis over the position and perfection of man and a rising optimism expressed in the mechanistic philosophies of men like Robert Hooke, whose experiments largely defined the proceedings of the Royal Society in the half-century after van Helmont’s death. Hooke utilized the same Edenic trope in the preface to his Micrographia as a justification for his generally unapologetic (and pointedly comprehensive) study of nature through the microscope:

And as at first, mankind fell by tasting of the forbidden Tree of Knowledge, so we, their Posterity, may be in part restor’d by the same way, not only by beholding and contemplating, but by tasting too those fruits of Natural knowledge, that were never yet forbidden.51

Hooke’s sincerity in emphasizing the divine prerogative behind knowing nature is somewhat debatable, but his sentiments here nevertheless exhibit an understanding of empirical study that should already be familiar in van Helmont’s theory of disease. For both, understanding nature is a matter of experiencing it. In the case of disease, “tasting too those fruits” is an uncomfortably intimate means of becoming acquainted with its products and development, just as van Helmont’s experience of asthma informed his understanding of its operation and his approach to treating it. For any disease, regardless of personal experience, van Helmont relies heavily on his legions of patients and their meticulously detailed reports; if he cannot taste the fruit, he can come as close as possible through the account of someone who has. This is disease as a profane analog to the tree in van Helmont’s dream, producing fruits of knowledge with which mankind can combat his mortal deficiencies; in other words, disease characterizes the mortality of man while also demonstrating, through its natural operation, how the physician might develop a cure.

51 Robert Hooke, Micrographia, or, Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses: With Observations and Inquiries Thereupon (London: Printed for James Allestry ... and are to be sold at his shop, 1667), sig. b2r-b2v. For more on this Edenic trope and the divine prerogative to know nature as Adam did, see: Joanna Picciotto, Labors of Innocence in Early Modern England (Cambridge, Mass: Harvard University Press, 2010).
Disease as the “Thorns and Thistles” of the Fall presents such arboreal parallels not only on ideological and developmental grounds, but also in how disease affects the body. When van Helmont discusses the physical manifestation of pleurisy, he offers this illustration:

Let a Thorn be thrust into any part of the Body, the which, pain instantly succeedeth; from the pain there is presently a Pulse, from the Pulse, an afflux of venal blood, whence ariseth a swelling, a fever, an Aposteme, etc. the Thorn therefore mooves the other things after it.⁵²

Likewise, he says, pleurisy is a sharpness that produces familiar symptoms. But it remains that pleurisy, though it may provoke a physiological reaction equivalent to a splinter, is nevertheless clearly not a splinter. When the lining of the lungs inflame in pleurisy, there is no perceptible thorn present that the physician may implicate as the cause of inflammation; it is less clear, with disease, what actually “mooves the other things after it.” This becomes more problematic when van Helmont suggests that curing pleurisy is a matter of removing this elusive thorn. Likewise, though disease may germinate, grow, produce fruits, and otherwise appropriate botanical operations, it is nevertheless clearly not a plant. Disease seeds cannot be collected and cultivated outside the body, nor does disease submit to the same easy study and manipulation as plants. Disease seeds are not, in fact, material; and the disease itself only acquires a material presence in the products of the diseased body.

Van Helmont’s seminal theory of disease allows parallels to be drawn among various generative operations in nature: disease becomes a tree, the body becomes its garden. Nevertheless, there are certain necessary distinctions between the seed of disease and the seed of an herb. Similarly, there must be distinctions between the body and the disease that it hosts. It grows in the body and commandeers its processes, implanting roots and engorging fruit in a kind of verdant necrosis unmistakably antithetical to the Edenic knowledge offered by the tree of life — and, likewise, unmistakably identifiable with the tree of knowledge that assigned mortal man his impetus to seek redemption. Disease presents a means and motivation to study and understand natural operations, and yet disease possesses qualities that set it apart from the rest of nature — its fundamental independence and concurrent immateriality, its reliance on the material of the human body to germinate, its subversion of the body’s processes as it does so. A thorn does not require the body to materially exist; neither does its existence necessitate the painful effects it produces when it happens to pierce skin. Disease develops, unlike other things in nature, to the destruction of its house and ultimately itself. The course of its existence is

⁵² van Helmont, “Pleura Flurens,” Ortus, p. 392-3; Oriatrike, p. 395: Sīt spina partī alicui infixa. Cui succedit in instanti dolor; a dolore, mox pulsus; a pulsō, curōris affliēus: unde tumōr, febris, apostema, etc. Spina ergo post se movet cætera.
subversive and parasitic, entirely dependent on the body but nonetheless foreign to it. Disease in van Helmont’s natural philosophy operates entirely within the mechanisms of nature, and yet, as something monstrous.

**Horror and Imagination**

*I: The Permeable Body*

When van Helmont describes the operation of asthma, he clarifies the constriction of breath by explaining that the “Lungs is passable with pores or little holes.” He continues with an example from optics; each eye, he says, possesses a pore through which light (lumen) may enter (meaning, of course, the pupil). But this permeable quality of the human body is not restricted to air or light:

This very thing, Hippocrates already knew in his age; and therefore, he declared the whole Body to be perspirable or breathing thorow, and conspirable or breathingly folding together.

This “breathing thorow” allows free agency within the body of its own various operations, as well as an intimate connection to nature through the influx of air and light. However, such permeability also allows free commerce with the seeds of disease, which require the body’s generative potential in order to mature. This creates a difficult ambiguity between the identity of the human body and that of the foreign disease agent, in spite of the scriptural distinction presented by the hierarchy of creator and creation. While disease can be described as subversive, it is nonetheless materially produced by the body, rendering them materially indistinguishable.

In this relationship, the body is a host to the disease seed, that “like a violent guest, making an assault, doth violate the Inne.” What the disease provides is the equivalent of a malevolent directive, usurping the body’s functions to serve its own destruction. In other words, the disease cannot exist without the body’s inherent power over its own health – most importantly, the already native capacity for destructive action. The disease itself is essentially parasitic; it does not exist without human life to realize its potential to become disease. Likewise, though a human cadaver can serve as a vector for a disease seed, it cannot in any case house

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54 van Helmont, “Asthma et Tussis,” *Ortus*, p. 364; *Oriatrike*, p. 357: *Hoc ipsum iam sua aetate noverat Hippocrates: ideoque corpus t uncertain*
active disease. In this sense, van Helmont’s disease theory shares much with the humoral theory of disease; the intimate relation between disease and the body indicates the extent to which the mature disease is dependent upon the body to exist. It is independent in that the seed invades from without and thence causes symptoms of disease to manifest, but the disease does not truly exist independently. Instead of a strictly material distinction, there are qualities of illness that must indicate an ontological origin. The body’s reaction to the presence of disease is indicatively violent, but the primary point of distinction lies in the division of power between seminal disease and the human body.

II: Matter and Identity

The circumstantial cause of disease in the humoral theory presents a force of metaphysical change that acts upon the body to likewise change it. This conception of disease also makes the transition from person to patient a material one, with the body presenting the form and state of disease and its operations. The physiological signs of the disease state, in this case, are themselves collectively identifiable as the disease. Van Helmont’s disease is similar to humoral disease in that it must be defined in relation to the human body – that it does not exist, essentially, unless operating within the body. Nevertheless, disease in this system is never fully identifiable with the body; there is no metaphysical conflation of disease state and bodily state. Disease is an entity of its own ontological standing because it is fundamentally foreign, which van Helmont sees evidenced in the reactions of the body to the development of disease.

In van Helmont’s theory of disease, the disease seed instigates material transformation rather than metaphysical change. In this system, the disease and the process by which a person becomes diseased is entirely more active, but most significantly in the case of the body, the person becomes a much less passive component of the inception and progression of disease. It can be allowed, for example, that there is no “asthma” without abnormal and presumably invasive obstruction of the lungs, but the mucus, hardly invasive, is produced by the body itself. Though still undoubtedly the significant object of disease, the body is no longer matter to be acted upon by an external cause of a disease state. Instead, the body is not only the object of an independent disease but also its means:

Therefore I long agoe thought, whether the biting of a mad Dog might bring down a certain Signall phantasie which might convert ours being as it were its patient or sufferer, into it self, and might form unto it self a proper lightsome property, the effectress of an Hydrophobia or a disease wherein water is exceedingly feared; or whether our Archeus
might frame a poisonsome Image of his own proper accord? But at length, that dispute seemed to me to be onely about a name.\textsuperscript{55}

Whether or not the body is materially transformed by the disease is evidently not of great concern; van Helmont considers this distinction to be merely nominal. After all, the body supplies the matter and mechanisms with which the disease germinates and grows, and its development in the body is only made possible by how well it conforms to the body’s native operations and the process by which the body receives and interprets seminal ideas or images. In the case of disease, there is a foreign directive dominating the body’s normal operations – a foreign archeus pit against the body’s native Archeus.

But the ease with which the operation of disease can be described in terms of war also allows this operation to be oversimplified. Van Helmont has a particular distaste for the academic (ultimately Galenic) understanding of disease in terms of such contraries:

\begin{quote}
[the schools] have determined, that in the whole sublunary frame or stage, nothing is done, or generated, but by a Relation of the Superiority of an Agent unto a Patient; So indeed, that the Patient is with violence compelled, tamed, altered, destroyed, and is wholly translated into the Nature of the Agent, onely by the relation of a stronger on a weaker.\textsuperscript{56}
\end{quote}

Disease in this humoral interpretation is a state of substantial change. Because humors indicate the material composition of the body, a change in humoral balance indicates a material change in bodily composition; and when disease is evident, this change in bodily composition indicates a substantial change more fundamental than what may be almost misleadingly referred to as a mere change in state. The body becomes essentially “diseased,” and does so in being overcome in a reactionary meeting of natural contraries. Assuming this relationship of contraries, the necessary explanation for the eventual abatement of a disease is that the patient has a natural reaction to the violence of the disease that overcomes it.\textsuperscript{57} Van Helmont’s aversion to such inherent, passive contraries in nature reflects his obsession with natural unity and universal operations. For instance, he allows relationships among all objects in nature to be defined by webs of sympathy, but he assigns only to animate objects (creatures with agency and souls) the added ability to

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\textsuperscript{55} van Helmont, “Magnum Oportet,” Ortus, p. 162; Oriatrike, p. 158: Cogitabam ergo pridem, an morsus rabidi deferret in saliva quandam sigillarem fantasiam, quae nostram velut suum patiens in se converteret, formaretque sibi propriam luminarem proprietatem, effectricem Hydrophobiae? An vero noster Archeus sibi fabricaret imaginem virulentam propriam sponte. At tandem ista disputatio, solius nominis est mihi visa.
\textsuperscript{56} van Helmont, “Ignota actio Regiminis,” Ortus, p. 329; Oriatrike, p. 324: Saltem statuerunt, in toto sublunari pegmate, necipiam fieri, aut generari, nisi per relationem superioritatis Agentis, ad patiens. Ia quidem, ut patiens cum violentia cogatur, dometur, alteretur, perdatur, atque in naturam agentis transseratur; penitus, per solam relationem potentioris in delilibus. See also his chapter dedicated to discrediting the notion of contraries in nature: “Natura Contrariorum Nescia” (Ortus, p. 164; Oriatrike, p. 160).
\textsuperscript{57} van Helmont, “Ignota actio Regiminis,” Ortus, p. 329; Oriatrike, p. 324-5.
\end{flushright}
actively create enmity between themselves and foreign bodies.\textsuperscript{58} The same rules of sympathy that

govern passive and active interactions for animate creatures extend to the inanimate as well. In an

expression of this unity of operation in nature, van Helmont explicates the active relationship

between disease and the body through an explanation of physical collision – a passive mechanical

process that, he finds, has been erroneously described in terms of action and reaction. The

crucial distinction is that, while humoral theories insist on explaining causes and symptoms of
disease as proportional reactions, van Helmont describes an active relationship between the body

and the seminal disease, for “a spiritual Being, doth evidently, whether he will or no, always war

under Nature.”\textsuperscript{59}

Van Helmont offers an illustration of a thorn to elucidate the operation of pleurisy – and, crucially, to distinguish the disease itself from the body’s reaction to it – but the two are more equivalent than the thorn metaphor implies. That fever and inflammation often accompany illness and its unpleasant material products is a further expression of the body’s agitated reaction to a foreign presence. The body naturally rails against the presence of disease, just as skin pushes out thorns with a rage of heat and inflammation. In this case, the parallels between pleurisy and the thorn become clearer if we recognize that, while the thorn pierces the skin, the pleurisy pierces the Archeus. Within the violence that characterizes the presence of disease and the body, the two can be operationally distinguished.

Disease redirects the body’s fermentations, but it remains tied to the foreign directive supplied by the disease’s seminal image, without which the body would continue to operate according to its native ideas. The disease can use the body to produce its own offspring – unpleasant things like kidney stones, buboes, tumors, and diseased fluids – but it cannot fundamentally alter the substance of the body. Even in this case, however, it must be noted that the disease seed operates by redirecting the regulatory functions of the body rather than by supplying any sort of destructive power of its own. In this sense, van Helmont’s disease theory seems to avoid the evidently erroneous conflation of disease and body that characterizes the function of disease in humoral medicine. It is likewise possible to claim that his reification of disease presupposes an etiological diagnosis less focused on signs and symptoms, as van Helmont indeed insists. Disease in van Helmont’s natural philosophy is a directive, rather than a name assigned to a suite of symptoms. Though overcome by foreign authority, the body’s


\textsuperscript{59} van Helmont, “Tumulus Pestis,” \textit{Opuscula}, p. 31; \textit{Oriatrike}, p. 1099: […] quippe subter naturam, ens spiritale

evidenter, velit nolit, semper militat.
identity and purpose remain distinct, because it is the native functions of the body that are necessary for the inception and progression of illness.

The inherent violence of disease – pain, fits, fevers, inflammation, etc. – characterizes its fundamental interaction with the body. Commerce between the disease seed and the body’s Archeus is necessarily subversive, combative, and often steeped in mortal terror. This last psychosomatic component reveals the degree to which the inception of disease relies upon the operative power of “phantasie,” – that is, imagination. Disease, in fact, hearkens to the necessity of the imagination.

When the imaginative faculty frames an image of disease, the resulting illness reflects the body’s recognition and reaction to the presence of a foreign agent. The permeability of the body – along with its vulnerability to the violent invasion of seminal disease and the ready corruption of its systemic functions – follows from the function of the human imagination; but it is also largely the imagination that represents generative efficacy and power over material form. One of van Helmont’s primary motivations in rejecting Galenism in favor of alchemical medicine is to claim and utilize a level of control over the material body that traditional approaches disallow – a capacity to transform nature as the Archeus transforms the body.\(^60\) The resulting theory of disease (though it submits the body to the influence of foreign agency) likewise emphasizes not only the body’s accessibility to medicine but also its unique power over nature.

III: The Power and Operation of Imagination

Among his many patients suffering from asthma, van Helmont encountered at least one whose report failed to indicate a physical cause:

A certain Citizen, a wise and prudent man, being by a Peer or great man, openly disgraced and injured; unto whom he might not answer a word, without the fear of his utmost ruine; In silence dissimulates and bears the reproach: but straightway after, an Asthma ariseth, the which did daily more increase on him (otherwise in good health) for two whole years space.\(^61\)

\(^{60}\) For a detailed study of alchemy and historical anxieties over the power it claims, see: William R. Newman, Prometheus Ambitions: Alchemy and the Quest to Perfect Nature (Chicago: The University of Chicago Press, 2004), particularly pp. 97-114.

This man’s disease was very real; for two years, he experienced increasingly difficult fits of asthma, with all the accompanying signs and symptoms. However, the only discernible cause – and the cause van Helmont clearly indicates – is a suite of destructive passions. Asthma is a disease that van Helmont has already described as seminal; the typical symptoms indicate that a foreign agent has entered the body and introduced illness. And yet, here the same disease manifests from an inward cause. This seemingly dualistic origin of asthma indicates the means by which the disease seed can be compatible with the body’s operations. It utilizes mechanisms already present in the body, such that the seminal image of disease merely imitates the ideas that are normally produced and conceived in the body through the power of the imagination.

The Archeus translates the seminal image of disease into material effects, but it remains functionally inseparable from the interpretations of the imagination. In describing this relationship, van Helmont recognizes the explanatory power of the imagination as a generative faculty. In many ways, his utilization of this faculty is reminiscent of the capabilities (and deficiencies) commonly assigned to the imagination since Aristotle’s *De Anima* and the subsequent Augustinian interpretations. A simplified explanation of the imagination’s traditional function places it as intermediary between the senses and the intellect; it allows the senses to produce an intellectual understanding of what material qualities indicate about the nature of the external world. Imagination, in other words, mediates between the physical and the abstract.

Van Helmont’s careful utilization of the imagination in his theory of disease adopts some of these traditional interpretations of the imagination’s function in mediating the senses and the mind. In traditional theories, the imagination necessarily acquires a considerable influence over how humans comprehend the external world. A common anxiety associated with this influence is the potential for misdirection; the imagination is capable of producing fantastic ideas and distorted impressions of reality. To a certain extent, van Helmont agrees; he says that the imagination can only offer “a certain crooked manner of understanding.” But the imagination’s ability to interpret and assign meaning to sensory information – and its potential to do this incorrectly – is only one of the imagination’s creative functions. It can not only produce abstract ideas from physical form but also, in a kind of reversal, instigate the generation of physical effects from seminal ideas. For the practicing physician, the imagination’s potential to receive

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63 van Helmont, “Venatio Scientiarum,” *Ortus*, p. 24; *Oriatrike*, p. 20: *Sed cum imaginatio [...] sit modus quidam intelligendi, obliquus [...]"*
and cultivate the seed of disease presents a more immediate clinical concern than its perceptual ambiguities. Van Helmont’s patient with psychosomatic asthma experienced firsthand the dangerous implications of the imagination’s generative potential; his anxiety and indignation produced ideas that the imagination could conceive and translate into physical manifestations – in this case, fits of asthma. By receiving such ideas, the imagination enables the Archeus to translate the directives of a seminal idea or image into physical reality, effectively allowing a threshold for the disease seed to enter and establish itself in the body through the same mechanisms.

IV: The Accessible Body

Van Helmont’s theory of disease is a considerably versatile explanation of its contraction, development, and manifestation in the body. Disease in this system is also separated to a large degree from the celestial or supernatural forces in Fernel and Paracelsus that often place it beyond the powers of the physician. In addressing the physician’s responsibilities in treating disease, it would be expected that van Helmont, given the degree to which he naturalizes disease, would attempt to maximize the physician’s ability to affect its progression. In fact, he does concede, in the tradition of Hippocrates, that the body is largely capable of weeding out disease without the intervention of a physician; in other words, nature does for the most part heal the body without help. However, the physician retains an ultimate authority over the most virulent of diseases:

But when [nature] hath failed, so that she cannot renew her strength, a Physician chosen by the bounty of the Lord [...] remains no longer a Minister or Servant; but a prevailing Interpreter, Ruler and Master.⁶⁴

Galenic medicine disallows a level of control over the material body that van Helmont claims to utilize. In this sense, the vulnerability of the permeable body also presupposes its accessibility to intervening medicine; the physician can now attain mastery over human health. Disease in this portrait has been made autonomous and fully naturalized. It reflects the mechanisms that govern the generation of plants and the direction of physiological operations, but it remains reliant upon the human body’s unique potential to create – as originally it was created by

humans. Ultimately, it is the body’s power that the disease must utilize, and the body’s uniquely human qualities that allow it to propagate and develop.

However, seminal disease is not the limit of the imagination’s vulnerabilities; the scandal that would earn van Helmont an encounter with the Spanish Inquisition concerned a question of supernatural influence. If the imagination is vulnerable to the perverse control of seminal disease, then considerably more susceptible must it be to the influence of demonic forces – a possibility that evokes compelling questions about the boundaries of nature and the limitations of human influence.
Suppose there is a witch, who, having crafted a waxen image of a particular man, manipulates the wax to torment her victim. This is a clear use of malevolent magic, says van Helmont, but it is unclear to what extent the man’s suffering is caused by the actions of the witch as opposed to the power of Satan. Many of van Helmont’s contemporaries, granting that the witch is cooperative with the devil, would consider this magical act to be nonetheless entirely attributable to the power and will of Satan. Van Helmont, less satisfied with this interpretation, presents this hypothetical scene in order to ask: what distinguishes the operation of demonic magic from more acceptable forms of magic? The necessary conclusion, he says, is that there is fundamentally no such distinction:

And in this sense we have not trembled at the name of Magick, but with the Scripture understood it in the best interpretation: and yet we have allowed it, to be indifferently implored to a good or evil end, namely by the lawful use or abuse of this power.

Van Helmont, always the contrarian, offers an interpretation seemingly offensive to the sensibilities of many contemporaries – dangerous, even, according to the theologians who would report him to the Inquisition. What he suggests is an interpretation of magic that affords the remote operation between the witch and her waxen doll no special distinction from the magical operation of alchemical medicine, “indifferently imployed” to the harm or well-being of its subject. Magic, he says, is a power existing in a constant form that may be utilized for differing purposes, both good and evil depending on its use. This is an interpretation of magical operation that typified definitions of natural magic from the medieval period; the power was

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1 van Helmont, “De Magnetica Vulnerum Curatione,” *Ortus*, p. 756; *Oriatrike*, p. 768: *Putare inquam impossible, quod prorsus est necessarius, densissimae est ignorantiae officium […].*
Figure 2: Jan Baptista van Helmont and his son Franciscus Mercurius, whose portrait appears to the right and behind that of his father. This etching is included in the original 1648 publication of J. B. van Helmont’s collected works, *Ortus Medicinae*. (Image courtesy of Bayerische StaatsBibiothek digital and Münstener DigitalisierungsZentrum Digitale Bibliothek.)
simply inherent in nature, independent of any moral implications. But the capabilities of natural magic would normally be considered distinct from the power employed by supernatural agents. Van Helmont’s claim, which conflates supernatural action with natural magic, is inherently problematic for a number of reasons, not least because it brings the operation of demonic magic uncomfortably close to that of divine works – an apparent impossibility, though van Helmont seems to think it necessary.

This rather conspicuous target for accusations of heresy appears in his earliest published work, *De Magnetica Vulnerum Curatione*. Many ideas fundamental to van Helmont’s later work can be identified in this early treatise, including many radical ones that shaped the development of his professional life thereafter. But *De Magnetica* is not only a singular example of his talent for arriving at uniquely offensive conclusions from otherwise innocuous questions. It reveals his long-standing obsession with the question of power in nature – and how this power can be apprehended and controlled. It reveals a bold restructuring of how nature operates, beginning with a fundamental evaluation of the divine and the diabolical.

**DEMONS**

*I: The Weapon Salve*

Van Helmont’s inquiry into the nature of magic – and, subsequently, his trouble with the Inquisition – began when he entered a debate concerning the operation of the weapon salve, a remedy proposed for weapon-inflicted injuries. This debate concerning the salve was not a dispute over its efficacy, which seemed to be accepted in either case. Rather, it was a debate concerning how the salve worked, hinging on the mercurial distinction between natural magic and demonic magic. This salve entered widespread discussion in academic communities after its introduction from the (apparent) works of Paracelsus. The weapon salve was prepared in a more or less conventional manner, with a less conventional application. The most essential ingredient

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of the salve is the blood of the victim (combined with more esoteric reagents in some cases), which is not on its own of particular interest; more interesting is that, once prepared, this salve is applied not to the wound but to the weapon that inflicted it. There, the salve operates from a distance to heal the wound, having been cleaned and bound and for the most part spared medical attention. Again, the efficacy of this remotely acting medicine seemed evident, but the physicians who promoted its use could find themselves accused of utilizing a demonically apprehended influence over nature. For such practitioners, this was clearly an unacceptable interpretation; they called it natural magic instead.

Van Helmont’s voice entered public discourse on the salve when he became accessory to a minor debate over its operation. Rudolf Goclenius, professor at the University of Marburg in Germany, had merited the censure of a Jesuit theologian when he gave a lecture on the topic in 1608. In his lecture (and subsequent publication) Goclenius maintained that the salve operates through a magnetic force, which he considered to be a form of sympathy; it was, in other words, what he considered to be natural magic. In 1617, the Belgian Jesuit Jean Roberti responded with a damning accusation: the operation of the weapon salve had to be a form of demonic magic, and any who utilized it must concede that they had utilized the aid of the devil. It was shortly after Roberti’s work appeared that van Helmont became involved. Since the salve was thought to be originally from the works of Paracelsus, van Helmont (at the time a self-described follower of the same) was asked to forward his opinion on the matter. One might expect van Helmont to support Goclenius’ case for natural magic, but in fact, he adopted a position opposed to both sides. Both Goclenius and Roberti failed to explain accurately the operation of the salve, says van Helmont, neither did they adequately distinguish between natural and demonic magic. In 1617, in an attempt to address these errors, he wrote the treatise De Magnetica, doubtless intended to be circulated privately among sympathetic peers. In 1621, however, the treatise was stolen and published without van Helmont’s consent, “by his enemies.” Roberti, whom he had specifically attacked in his treatise, took action that resulted in van Helmont being formally indicted by the Inquisition. And doubtless that he would be; it is, perhaps, dangerous enough to

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6 Franciscus Mercurius van Helmont, “Amico Lectori,” in Ortus, sig. ***1r; Oriatrike, sig. c2v: ab inimicis eius.

7 Van Helmont is largely reticent concerning this scandal, but for his son’s brief account, see: Franciscus Mercurius van Helmont, “Amico Lectori,” in Ortus, sig. ***1r; Oriatrike, sig. c2v. There also exist numerous accounts of this controversy in secondary literature, including: Allen G. Debus, Man and Nature in the Renaissance (Cambridge: Cambridge University Press, 1978), pp. 126-7; Walter Pagel, Joan Baptista Van Helmont : Reformer of Science and Medicine, Cambridge Monographs on the History of Medicine (Cambridge; New York: Cambridge University Press, 1982), pp. 8-13; Bruce T. Moran, The
discuss distinctions between natural and demonic magic, but unquestionably dangerous to suggest that there is essentially no distinction between them.

II: The Necessity of Magic

It may be surprising, noting the devoutly Catholic nature of van Helmont’s writing, that he would be willing to overstep theological boundaries on this issue specifically. His understanding of natural operations is largely predicated on Biblical accounts of Creation, and his work generally lacks bold religious departures. Van Helmont’s understanding of nature begins with what is allowable by scripture, and his works are peppered throughout by supplication to the divine. He was fundamentally Catholic, but this did not help him avoid a long-standing struggle with the Inquisition that began with this earliest publication and ended officially only after his death. Van Helmont’s indictment was probably not incited by any possible association of his with Protestantism as a chemical physician, but it may have been motivated in part by his extremely vocal aversion to the Jesuits and their form of scholastic education. The most obvious target for accusations of heresy, however, is undoubtedly what he has to say about the distinctions between natural and demonic magic, and the implications that his conclusions carry for the operation of divine wonders.

This novel idea about magic could, for many reasons, be attributed to the unchecked enthusiasm of a younger van Helmont. However, his opinions about demonic magic appear in a number of his later works, and the argument that he presents in De Magnetica mirrors closely a later, more developed treatment of demonic magic included in the collected works published posthumously by his son Franciscus Mercurius. In this later treatise, Recepta Injecta, van Helmont couches his discussion of demonic magic in a justification for medical interest in magical forces. Medicine, he says, must rely on knowledge of a disease’s cause, and there is an extent to which (informed undoubtedly by his own experiences) religious censure can quell a physician’s impetus to inquire into the cause of a disease seemingly related to witchcraft or demonic magic:

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8 Some scholars argue that van Helmont’s indictment was primarily due to Jesuit opposition. See, for example: Mark A. Waddell, "The Perversion of Nature: Johannes Baptista Van Helmont, the Society of Jesus, and the Magnetic Cure of Wounds," Canadian Journal of History 38, no. 2 (2003).
Physitians in the mean time, being greatly afraid least they should be accounted guilty of a Magical Crime, while they should by a strong fortune, be reckoned to have conferred a help (which they know not) on their Neighbour, under so great straits of miseries. 9

Van Helmont hardly speaks of his own “magical crime” or the surrounding scandal, 10 but his son says that he continued to write on these topics to demonstrate that he was not intimidated by the accusations of men like Roberti, “a most covetous old Man, as also very aged.” 11 He did confess and recant, however, and was eventually released into house arrest. Although van Helmont says little about the controversy surrounding De Magnetica, it is clear from later writings that, in spite of many aspects of this early work indicating a less developed (and less independent) natural philosophy, his most controversial ideas were ones that he was unwilling to abandon. These ideas concerning the distinction between natural and demonic magic were fundamental to defining the boundaries of man’s power over nature and, by extension, the abilities and limitations of the physician.

III: Empowering the Witch

When van Helmont addresses the operation of the weapon salve, he reduces the debate to this distinction between natural and demonic magic, and this distinction, he reduces to the dynamic of command and power between the demon and the witch. The kind of magic that one performs, in his interpretation, is not characterized essentially by what the magic accomplishes, nor by the practices that the magician undergoes in order to accomplish it. Rather, the magical practice is characterized by the source of the power that accomplishes the desired task. In the case of the weapon salve, one would say that in Goclenius’ interpretation, the efficacy of the

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10 Van Helmont understood his legal troubles to be a fulfillment of one of St. Hildegard’s prophecies. He offers, charitably: “Good God, what have not I felt, and how much could not I witness? But the whole revenge, have I referred to thee alone, and I intreat thee out of Charity, that thou wouldst spare them, or that thou wouldst not damn them for my sake: Because I receive all things from thy hand, and they know not what they do.” From: “Potestas Medicaminum,” Ortus, p. 470-1; Oriatrike, p. 470: Bone Deus, quid non sensi, et quantum testari non possem? Sed vindictam totam tibi soli obtuli: et rogo ex charitate, quod illis parvis, nee illos damnes mea de causa. Quia a manu tua omnia suscipio: et nesciunt quid faciant.

11 Franciscus Mercurius van Helmont, “Amico Leortor,” Ortus, sig. **3v; Oriatrike, sig. c1r: […] Senex erat avarissimus, utque aetate maximus […]
salve is dependent upon a magical quality inherent in natural objects (magnetism) as well as the natural connections and interactions among them (sympathy and antipathy). In Roberti’s interpretation, on the other hand, there is a demon that provides mediation between the weapon and the wound that it heals. This demonic power supersedes the normal operation of nature; in other words, demonic power is a kind of supernatural magic.

Roberti’s source for understanding magical operation – and for identifying the presence of demonic action in the weapon salve – is debatable, but a likely possibility is the considerable six-volume work on magic published shortly beforehand by fellow Jesuit Martin del Rio. While del Rio allows certain kinds of benign natural magic, he recognizes the influence of the demon in the advent and development of diseases when supernatural signs are present – signs which would include the kind of remote action that, in this case, describes the curative efficacy of the weapon salve. Del Rio’s work typifies traditional interpretations of demonic influence over the body, in which the physician’s ability to address disease is limited where supernatural influences are implicated – a limitation that extends to potentially supernatural operation in treatments. Van Helmont, who studied with del Rio at Louvain, was unimpressed by his interpretation of magic; nevertheless, the potential for demonic influence in theological accounts such as del Rio’s placed a clear boundary between the natural and the supernatural that required physicians such as Goclenius to clearly establish a position within natural operations, claiming neither influence over potentially demonic disease nor potentially supernatural influence over the body.

In order to demonstrate that the operation of the weapon salve is natural, van Helmont does not endeavor to show, as Goclenius had done, that the salve is natural because it operates through the natural force of magnetism. Instead, he focuses on what can be defined as demonic magic. He establishes immediately that Roberti, as a theologian, is not qualified to determine such a thing for himself: “Let the Divine enquire concerning God, but the Naturalist concerning


Then, in order to demonstrate that the weapon salve bears no indication of diabolical activity or superstition in general, he provides numerous examples of magnetism operating in nature (the sunflower, for instance, which tracks the progress of the sun). And then he moves to the heart of his argument:

[..] it behoves us first to shew, what Satan can of his own power contribute to, and after what manner he can co-operate in the meerly wicked and impious actions of Witches: for from thence it will appear, unto what cause every effect may come to be attributed.

Van Helmont, as stated, has determined that the crucial distinction lies in the attribution of power. Let’s return to the witch and her waxen doll. This witch may use curses or enchantments on the doll or she may physically manipulate it to harm her victim. Crucially, in all cases, she can cause suffering to her victim from some distance by performing actions on the doll locally. Working from this example, van Helmont evaluates the dynamic of power between the demon and the witch, beginning with the capabilities of the supernatural agent.

In De Magnetica van Helmont presents two postulates concerning Satan and his actions and limitations: the first, that Satan is entirely opposed to the wellness of mankind and would, given the opportunity, seek to harm him; the second, that Satan would not expose his witches to the judgment of the magistrates, had he the power to prevent it. This second postulate is supported by three assumptions: the first, that Satan, being very prideful, would not want to seem lacking in authority by having his servants discovered; the second, that those witnessing the trials of a witch would be disinclined to follow him; and the third, that any witch undergoing torture may have the opportunity and inclination to repent and save herself. In all cases, van Helmont seeks to render Satan powerless by presenting examples of Satan’s will failing to express itself in reality. It is the first statement, however, that plays the pivotal part in van Helmont’s argument – that if Satan had the ability to harm man, he undoubtedly would.

It follows from this that, contrary to what Roberti may claim, Satan hardly seems capable of subjecting mankind to this destructive will. After all, mankind does enjoy relative comfort and success, in spite of Satan’s unflagging malevolence. Men possess a definite capacity to harm and kill themselves and one another that Satan lacks; as van Helmont says elsewhere, “Man is a

Wolfe to Man.” For witches, this capacity to harm surpasses corporeal action in a manner that the demon is incapable of performing independently, either materially or immaterially. So it seems that, in a capacity both corporeal and incorporeal, the demon requires the compliance of the witch, rather than the witch requiring the acquiescence of the demon. Although there seems to be a profusion of magical powers among witches especially, this spiritual power is not special to the witch among mankind. It is, in fact, a quality of being human:

This power therefore, was to be seated in that part wherein we most nearly resemble the Image of God: And although, all things do also after some sort, represent that venerable Image; Yet because Man doth most elegantly, properly, and nearly do that; therefore the Image of God in Man doth far outshine, bear rule over, and command the Images of God in all other Creatures.

This power predates the Fall and the creation of disease, assigning a divine quality to mankind that van Helmont identifies with the knowledge and spiritual power that Adam possessed in perfection. However, he claims, this power was not lost with the Fall; instead, this divine quality has been obscured by a sensory experience of nature. This power is more natural to human beings than the disease that mankind created and, in the seemingly supernatural actions of the witch, certainly not attributable to the power of Satan. “Grant therefore,” he says,

that a Witch kills a Horse in an absent Stable; there is a certain natural virtue derived from the Spirit of the Witch, and not from Satan, which can oppress or strangle the vital Spirit of the Horse.

The natural, incorporeal power innate in all humans is what allows the witch to harm her victim from a distance – an action no less natural, says van Helmont, than the corporeal act of slaying a man with a sword that, while placed in a witch’s hands by Satan, was unknowingly the witch’s all along. The demon, through his sole skill of deception, convinces the witch that the sword is his.

Van Helmont discusses this inherent spiritual power more thoroughly in his later treatise Recepta Injecta. He presents an argument built on the same assumptions: should Satan have the capacity to kill, he would do so, seeing he has the malevolent will in abundance. And man,

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21 van Helmont, “De Magnetica,” Ortus, p. 769; Oriatrike, p. 782: Esto etsi saga, in stabulo absente, occidit equum: virtus quaedam naturalis, a spiritu sagae, et non a satana, derivatur, quae opprimat vel strangulet spiritum vitalem equi […]
having the clear capacity to kill, provides the means, in a sense both corporeal and incorporeal. In Recepta Injecta, van Helmont describes the incorporeal power that humans possess in greater detail, if not vaguely, as a form of vital light (lumen vitale) – a light that exists incorporeally in all living creatures to some extent, if only as a local director of bodily operation.23 In fact, this vitality is continuous with that generative power, discussed previously, that governs the inception and growth of seminal disease:

Indeed that Spiritual participation of Light is Magical, and a wealthy communication by Virtue of that Word: Let Animals and Herbs bring forth Seed; and one Seed produceth ten times ten thousand of Seeds of equal Valour or Virtue, and as many entire seminal Spirits, as Light is kindled or inflamed by Light.24

Del Rio described the demon’s capacity to influence the human body through disease, either by causing a natural disease or afflicting the body in an entirely supernatural manner. Allowing for this supernatural influence over disease demonizes its operation, empowering the demon to exercise an influence over the human body that, with the same stroke, severely limits the degree to which the physician can heal illness or even confidently identify an illness as being natural and thus fully within his capacity to treat. Van Helmont makes a similar connection between the operation of disease and demonic influence; now, the seemingly demonic power exercised by the witch is identified with the same power that governs the inception and development of disease. However, in van Helmont’s account the demon instead becomes naturalized by this relation to disease. Both are now subject to and reliant upon power inherent to human beings.

The generative power of the body’s Archeus and its essential role in the development of disease demonstrates the effects that this vital light is capable of producing within the body and, evidently, without as well. In a manner reminiscent of Roger Bacon’s species, these lights have the ability to “shine forth,” penetrating and affecting other creatures and objects.25 The human light, being most divine, is likewise the most dominant, capable of exercising influence over everything else in nature. As van Helmont describes it, this is also the spiritual efficacy that the soul gives to human beings. Crucially, this natural dominance of human power is what the demon must utilize:

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Seeing that the Devil hath not an Ideal, Seminal, and Sealing power, as Man hath from the dignity of the divine Image, whereby the Bruits, etc. are put under his feet. Therefore the Devil borrows these mental, and operative Idea’s of Witches, the which he can seal in Filths and Poysons. He therefore being cursed, and wholly most miserable, and forsaken by the Grace of God, is by himself no effecter of the same Works, unless he be holpen by the Soul of his bond-slave.26

In this interpretation, the incorporeal power behind magical action is not only capable of being utilized by humans; it is natural to and accessible to humans exclusively. Van Helmont makes the potential for magical action part of what differentiates humans in nature, so that the demon requires the cooperation of a human being in order to realize his malevolent designs.

All in all, the demon contributes very little to the practice of witchcraft and effectively offers nothing to the magical actions of the witch. He is reduced to nothing more than an inoperative, maleficient will with the capacity to deceive: “But the Devil himself, the most miserable of Creatures, can do nothing of himself but will Evil.”27 This characterizing will for evil is what the demon uses to influence the actions of the witch, and likewise, this is the only distinction that van Helmont maintains between demonic magic and other forms of magic. With his singular capacity to deceive, the demon allies the witch and the power that she possesses to his diabolical intentions, just as disease manipulates the generative power of the imagination and usurps the command of the Archeus.

Van Helmont finds evidence of this relationship between the demon and the witch in all the typical aspects of witchcraft practices; for instance, part of his defense of the weapon salve is his insistence that the preparation of the salve involves no superstitious ceremonies. In Recepta Injecta, it becomes clear in what way ceremony may be considered characteristic of demonic magic, as well as an instrumental part of the witch’s conversion:

In this respect therefore, he miserably circumvents his bond-slaves by deceit, and binds them in a Covenant, at least-wise that so they may the rather depart from God; as if for a reward of the stricken covenant, he were perfectly to teach them secrets, whereby under certain and set Forms, feigned Words, wicked Invocations, Excracions, Conjurations, and Wishes or Vows; in the next place, by Lines, Figures, Marks, Seals, Characters, Numbers, Hours, Moments, Vegetables, yea and the most filthy things, and the Striffes, Consecrations, Refinements, Defilements of all of these, and such his vain and void

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26 van Helmont, “Recepta Injecta,” Ortus, p. 570; Oriatrike, p. 570: Quandoquidem diabolus non habet vim idealem, seminalum, et sigillarem, qualem habet homo ex dignitate imaginis divinae, qua ipsius pedibus substituta sunt bruta, etc. Ergo diabolus has mutuat Ideas mentales, et operativas Sagarum, quas potest sigillare in sordibus, et venenis. Ille ergo maledictus, totusque miserrimus, et a gratia Dei derelictus, per se est inefficax eorumdem operum, nisi adiutus per animam sui mancipii.

27 van Helmont, “Recepta Injecta,” Ortus, p. 571; Oriatrike, p. 571: Ipse autem creaturarum miserrimus diabolus, ex se nil potest, nisi male velle.
trifles, they were to effect things incredible: And indeed all evils, to the despite of God, and the destruction of Men.\textsuperscript{28}

“Invocations, excreations, conjurations”: these are not forms of magic by themselves, since they are devoid of power. Rather, they are all forms of ceremonial rites that the demon directs in order to fool the witch into lending her power to him. This capacity to deceive is the only power that van Helmont will allow Satan, “because from the beginning he was always a lying imposter.”\textsuperscript{29} Traditionally, deception has always been well within the domain of demonic power. Descartes had a demon of his own, characterized by his malevolent intent to deceive; and in intellectual debate on topics of witchcraft in the late medieval period and early Renaissance, the demon’s deceptive prowess was often cited as the cause of the witch’s hallucinatory participation in potentially nonexistent supernatural rites.\textsuperscript{30} But in van Helmont’s explanation, the demon’s greatest deceit, and the only true mark of demonic magic, is the belief that the spiritual power natural to human beings belongs to the domain of Satan.

Van Helmont does not limit this deception to witches, who directly serve the demon, but in fact includes the theologians who, by interpreting natural magic as demonic magic, disenfranchise themselves to the benefit of Satan. It is with this assertion that van Helmont is moved to say, with some frustration:

Open the eyes of your reason: for Satan hath hitherto proudly triumphed in your so great and so dangerous ignorance, with so high content, as if you had made his altars smoke with the grateful incense of glory and dignity, and devested your self of your own native prerogative, pulled out your own eyes, and offered them in sacrifice to him.\textsuperscript{31}

The weapon salve does not operate through demonic magic, says van Helmont, and furthermore, no medicine truly can. There is only one kind of magic, a practice now rendered

\textsuperscript{28} van Helmont, “Recepta Injecta,” Ortus, p. 570; Oriatrike, p. 570: \textit{Hactenus itaque dolo, sua misere circumvenit mancipia, pactoque obstringit, saltem ut sic magis a Deo recedant. Quasi in pretium icti foederis, sit edocturus Arcana, per quae, sub certis statisque formulis, fictis verbis, invocationibus impis, exsecrationibus, conjurationibus, votisque, lineis demum, figuris, notis, sigillis, characteribus, numeris, boris, momentis, vegetabilibus, ino et rebus sparcissimis, horumque omnium litationibus, consecrationibus, depuramentis, inquinamentis, vanisque et irritis eiusmodi suis nugamentis, sint effecturi incredibilia. Et quidem mala omnia, in Dei despectum, atque hominum pernicem.}

\textsuperscript{29} van Helmont, “Recepta Injecta,” Ortus, p. 570; Oriatrike, p. 570: \textit{Quia ab initio semper mendax impositor.}


entirely natural; the only distinction in this now homogenous power is the will or intention that directs it. Because demonic magic is only differentiated from natural magic by the malevolent will of the demon, any beneficial action, such as the curative power of the weapon salve, must be ipso facto free from demonic influence. These limitations that van Helmont places on demonic power mirrors the limitations he places on the influence of disease, both ultimately dependent upon power unique to human beings. And in the case of demonic magic in particular, to call natural magic the work of a demon – as Roberti and many others do – is to fall victim to the same deceit that makes the witch a follower of Satan. Attributing the divinely imparted power in man to the dominion of the devil is a renunciation of mankind’s birthright, by allowing demons a special influence over nature that should be recognized as native to human beings. In other words, van Helmont effectively accuses Roberti and his allies of burning incense to Satan.

IV: Confining the Divine

In describing the efficacy of reagents used in the preparation of the weapon salve, van Helmont provides the following by way of example: in the Ardennes, there is kept the shroud of St. Hubert, which heals those bitten by mad dogs and furthermore protects them against future infection. But (one might say) this is a miraculous cure, certainly not a magnetic one. Van Helmont answers that God, in working miracles, does “for the most part walk side by side with nature.” In other words, most miracles utilize natural operations. However provocative this interpretation of magic, it does carry further ramifications for the operation of divine magic as well, when van Helmont suggests that relics, which effect medical benefits through divine means, operate through the same incorporeal mechanisms as the magnetism that governs the weapon salve. In this temporal world, divine, natural, and demonic magic utilize the same mechanisms to affect nature – meaning distinctions among the three, which should be quite clear, become significantly less so. In the case of the divine, God may choose to operate outside of nature through miracles, but he most often chooses to work through nature, utilizing the same mechanisms that govern the operation of magnetic cures:

33 van Helmont, “De Magnetica,” Ortus, p. 757; Oriatrike, p. 769: Deum tamen in miraculis, ut plurimum ad latus naturae ire […]
For in both [sacred relics and the weapon salve], truly, there is the same reason, and the same manner of the causes operation; the difference lies only in this, that in the material world, the effect succeeds upon a requisite conjunction and co-efficiency of corporal means, the blood and the Unguent; but in the supernatural, by a holy magnetism, arising from the sacred reliques of the Friends of God, which in this relation, undoubtedly deserve our venerable esteem.\(^{34}\)

It follows that even miraculous cures arising from sacred relics are not beyond the comprehension of the physician. The magnetic virtue in relics follows from a supernatural association – in the case of St. Hubert’s shroud, persisting in the relics of dead saints from their nearness to God in life – but the way in which the curative power of relics operates is no different from that of the magnetism that governs the weapon salve. Though van Helmont attempts to emphasize that relics retain a heightened efficacy from their supernatural origin, the suggestion that the actual mechanism is a natural one diminishes the privileged status of holy relics and the divine power that they offer.

Nevertheless, making demonic, divine, and natural magic equivalent in operation is a more significant choice than may be implied by van Helmont’s gesture to the venerability of sacred relics. This equivalence is a necessity for the kind of natural philosophy that van Helmont would use to develop his theory of disease – one capable of influencing the body to effect cures where traditional medicine has otherwise failed. The homogenization of magical operation is a result of assigning all kinds of magic a single source of power, which van Helmont has done in order to place it within the human soul: “for therein indeed is placed the whole Foundation of natural Magick.”\(^{35}\) And if the word “magic” itself is offensive, van Helmont insists that it may as well be called a “spiritual strength” (spirituale robur).\(^{36}\) Van Helmont reduces all magic and magical efficacies to power – and then makes this power exclusive in nature to human beings.

The primary benefit of placing the source of all magical power within human beings is, of course, to make it natural and accessible. However, this power is something that has been largely inaccessible since the Fall. When the saint heals, it is God that activates this dormant potential. And for the witch, it is the demon that, somehow, “stir” (excitare) this power into activity.\(^{37}\) Otherwise, the spiritual power inherent in all humans only manifests with strong currents of the

\(^{34}\) van Helmont, “De Magnetica,” Ortus, p. 757; Oriatrike, p. 769: […] par est sicut utrobiqual ratio, et par modus; nisi quod in mundo materiali, sanguine et unguento, seu medii corporalibus contingat: in supernaturali vero, per amicorum Dei reliquias, nullo saltem hoc nomine venerandas […]

\(^{35}\) van Helmont, “De Magnetica,” Ortus, p. 771; Oriatrike, p. 784: […] in eo nemo sitam esse totam basim magiae naturalis […]

\(^{36}\) van Helmont, “De Magnetica,” Ortus, p. 767; Oriatrike, p. 780.

\(^{37}\) van Helmont, “De Magnetica,” Ortus, p. 768; Oriatrike, p. 781. Exitare may also be translated as “to awaken,” and in fact, in this passage the witch’s power is referred to as sleeping (dormientem).
passions. This presents a problem: how can this spiritual power be seized and controlled in order to make it useful? In *De Magnetica*, van Helmont’s initial suggestion is that the meditative practices of Cabala may restore control over natural magic. In his later works, however, he denies the linguistic power upon which Cabala is predicated and must explore other means – to which we will return later.

Van Helmont’s fixation on the source of power in magic is not simply the linchpin of his argument concerning the operation of demonic magic. The question of control – over magical phenomena and over nature in general – is one that characterizes his approach to understanding and utilizing nature. However, before approaching how this need for control manifests itself in his natural philosophy, it may be better to evaluate how control becomes a central issue for van Helmont – for which we must turn to his years as a student.

**Parallels**

*I: Academia and Esotericism*

Van Helmont’s life, as he describes it, is marked by discontentment. He fashions himself as a contrarian, pit against the academic and professional communities that would, by the force of their inadequacies, shape his decisions and characterize the development of his life and career from the time he was a student. His disdain for contemporary medicine is an attitude that he readily traces to his earliest years as a physician and beforehand, and his few autobiographical chapters are framed entirely in opposition to the “schools.”

Though born into lesser nobility, van Helmont was the youngest son of many children, and, with his father then deceased, he chose to pursue professional studies – something he pointedly describes as beneath his distinction. From the time he finished his master’s course, he claims, he had already begun to evaluate with incredulity the worth of everything he had learned as a student. Astronomy, dialectic, philosophy, mathematics, metaphysics – in all of these things, he says:

I drew myself into an account or reasoning, that at leastwise I might know by my own judgement, how much I was a Phylosopher, I examined whether I had gotten truth or knowledge. I found for certainty, that I was blown up with the Letter, and (as it were
the forbidden Apple being eaten) to be plainly naked, save, that I had learned artificially to wrangle. Then first I came to know within myself, that I knew nothing, and that I knew that which was of no worth.  

Van Helmont finished his course for the Master of Arts at the University of Louvain in 1594 and subsequently accepted an appointment as lecturer of chirurgy (surgery). In 1599, he was conferred a doctorate of medicine by the same university. But this turn to medicine was accompanied by familiar doubts; van Helmont describes a growing interest in medicine as well as anxiety about the failings of contemporary practice that began during this time at university and persisted afterwards:

Surely miserable are Mortals, and most exceeding miserable are the Sick, who have hitherto hired Physicians at a great and dear price, who know not what a Disease may be, from whence it may arise, and in what it may consist, and subsist.

Van Helmont justifies his own medical practice as his obligation to provide effective medicine in an era when it was, in his view, effectively nonexistent. In response to institutional ineptitude, he turned to the sort of esoteric knowledge evident in his advocacy of the weapon salve. However, many of the advantages of this approach also carry inherent difficulties. By framing his work in opposition to the structure and teachings of institutional knowledge, he produces an approach to medicine that is in many ways ill-suited to replacing it.

Van Helmont documents his chronic discontentment as a critique of university education that is entire in its uncompromising disdain. Although his own account is chronologically confused, it is clear that he has nothing complementary or constructive to say about academia, neither is he inspired to suggest improvements for this seemingly hopeless institution. For him, the decision to dissociate himself completely from established learning is a necessary consequence of self-inquiry:

Therefore having finished my Course, when as I knew nothing that was found, nothing that was true, I refused the Title of Master of Arts: being unwilling that Professors should play the fool with me, that they should declare me Master of the seven Arts, who

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was not yet a Scholar. Therefore I seeking truth, and knowledge, but not their appearance, withdrew myself from the Schools.\(^{40}\)

Accepting this title should have been an opportunity for van Helmont to be initiated into a learned community. Instead, this fundamental disillusionment with academia became a point of separation that characterizes van Helmont’s life and career afterwards as one conducted at the fringes of academic and public life.

Described thus far, van Helmont’s autobiography does not greatly distinguish him from his contemporaries. In fact it echoes (and in some cases, precedes) the self-portraiture of many contemporary natural philosophers. Of these, perhaps the most striking resemblance exists between van Helmont and René Descartes.\(^{41}\) In his *Meditations*, Descartes writes in tone that would be markedly familiar to anyone who has read van Helmont:

\[
\text{It is some years now since I realized how many false opinions I had accepted as true from childhood onwards, and that, whatever I had since built on such shaky foundations, could only be highly doubtful. Hence I saw that at some stage in my life the whole structure would have to be utterly demolished, and that I should have to begin again from the bottom up if I wished to construct something lasting and unshakeable in the sciences.} \quad \text{\cite{42}}
\]

The certainty with which Descartes rejects tradition and resolves to develop an entirely new natural philosophy is entirely continuous with van Helmont’s reaction to his own intellectual context. Both were born into lesser nobility, and both were educated (with some resentment) in Jesuit universities. They are almost exact contemporaries of one another, and the parallels in the vicissitudes of their lives are matched by the striking similarity of the gestures and postures by which they frame themselves in print.

In van Helmont’s parallel account, he describes his intellectual crisis at seventeen as a catalyst for his pursuit of spiritual contemplation. If echoes of the Stoics’ universal vitality can be detected in his natural philosophy, as in Descartes’, then these remnants can be considered a

\(^{40}\) van Helmont, “Studia Authoris,” *Ortas*, p. 16; *Oriatrike*, p. 12: *Peracto ergo cursu, cum nil solidi, nil veri scirem, titulum Magistri artium recusavi; nolens, ut mecum morionem professores agerent, Magistrum septem artium declararent, qui nondum essem discipulus. Quaerens itaque veritatem, et scientiam, non autem apparentiam, me scholis subdiçai.*

\(^{41}\) This brief discussion of Descartes’ self-portraiture has been limited to its immediate relevance to van Helmont’s autobiography. For a sophisticated analysis of the early Descartes’ intellectual identity, particularly his self-making as a mathematical natural philosopher and the way it was weaved into his work in mechanics and optics, see John Schuster’s focused study: *Descartes-Agonistes: Physico-Mathematics, Method \& Corpuscular-Mechanism 1618-33*, Studies in History and Philosophy of Science (Dordrecht; New York: Springer, 2013.), especially sections 1.1, 3.4, 3.7, 5.1, and 6.3.

\(^{42}\) Taken from the English translation: Descartes, *Meditations on First Philosophy: With Selections from the Objections and Replies.*, p. 13.
souvenir of young van Helmont’s diverse intellectual and philosophical exploration. He read Seneca and Epictetus with some fervor but was soon awakened to the folly of Stoicism, partly by the realization that the austere life is, after all, quite difficult.\footnote{van Helmont, “Studia Authoris,” Ortus, p. 17; Oriatrike, p. 12.} He emphasizes that his primary ambition was to find some godly enterprise to which he might dedicate himself, remote from the superficial truths offered by academia. He made a hobby of growing and working with medicinal herbs – another endeavor that, largely limited textually to the works of Matthiolus and Dioscorides, failed to live up to his expectations:

\begin{quote}
I inquired I say, whether there were not another, who had described the Endowments, Properties, Applications, and proportions of Vegetables, from the Hyssop, even to the Cedar of Libanus? A certain Professor of Medicine answered me, none of these things might be looked for in Galen or Avicen. But since I was not apt to believe, neither did I finde, among Writers, the certainty sought for, I suspected it according to truth, that the giver of Medicine would remain the continual dispenser of the same.\footnote{van Helmont, “Studia Authoris,” Ortus, p. 18; Oriatrike, p. 13: \textit{Inquisivi inquam, an noster alter, qui descripsisset vegetabilium dona, proprietates, applicationes, et convenientias, ab hyssopo usque ad Cedrum Libani? Respondit mihi professor quidam Medicinae, nil horum in Galeno, vel Avicenna desiderari posse. At cum non essum credulus, nec apud scriptores reperirem certitudinem quaestam, illam suspicatus sum inucta veritatem, quod dator Medicinae, maneret continuus eiusdem dispensator.}}
\end{quote}

This realization seems to have ignited a growing fixation. Van Helmont familiarized himself with local plants and bought “simples” from a traveling merchant to study the effects of herbal tinctures. He accompanied a physician to observe his practice, noting gradually and with some anxiety the limitations of contemporary medicine. He read extensively on medicine: by his account, an almost comically expansive collection of works including Leonhart Fuchs, Jean Fernel, Galen (twice), Hippocrates, Avicenna: “happily six hundred, I seriously, and attentively read thorow.”\footnote{van Helmont, “Studia Authoris,” Ortus, p. 19; Oriatrike, p. 14: \textit{Actutum ergo, ac deinceps per triginta solidos annus, subsequentesque; ordine noctes laboravi, meis impensis, ac vitae detrimentis, ut vegetabilium et mineralium naturas, atque proprietatum cognitiones, adipsiferer [...].}} But like Descartes, he eventually reached the conclusion that all of it amounted to nothing. Rather than follow the institutional models for medical practice, he would labor and discover for himself, as an alchemist in a laboratory, to produce independently a medical theory that could meet the height of its claims.

In 1609, after his divine dream and a period spent traveling and practicing medicine, van Helmont moved with his wife into isolation, where he pursued private studies:

\begin{quote}
Forthwith therefore, and for thirty whole years after, and their nights following in order, I laboured, to my cost, and damage of my life, that I might obtain the Natures of Vegetables and Minerals, and the knowings of their properties.\footnote{van Helmont, “Studia Authoris,” Ortus, p. 18; Oriatrike, p. 13: \textit{forte secentos scrio, et attente perlegi [...]}}
\end{quote}
Van Helmont’s personal isolation was a necessary part of separating himself from the community of academic physicians who were at best ignorant and inadequate and at worst, dangerously negligent and self-serving. But the price of this isolation was steep; by fundamentally rejecting established medicine and the academic community associated with it, he was likewise rejecting the legitimacy of the knowledge and practices that this medical community had to offer:

I therefore grieved that I had learned that Art; and being angry with myself, grieved, who was Noble, that against the will of my Mother, and my Kindred on the Father’s side being ignorant thereof, I as the first in our Family, had dedicated myself to medicine: I long bewailed the sin of disobedience, and it grieved me of the years and pains bestowed in a choice profession [...] 47

When van Helmont resolved to become a physician, he saw it as a burden of responsibly – not, like Paracelsus, to claim the privilege of divine appointment, but through discontentment with the present enterprise, to acknowledge that an alternative must be proffered should the present system be rejected:

Therefore the free gifts and knowledge given me, I will discover to my Neighbour, without envy, deceit, hope of gain, or the vain glory of ambition, and will willingly shew as much as my experiences have made sufficient: hoping that the truth being once shewn, those that are endowed with a richer Talent, will be hereafter more profitable to the Common-wealth than my selfe: for so it becometh, that Disciplines by proceeding by ambitions, should be daily enriched: and therefore thus far shall those that come after, be obliged to those that have gone before. 48

Van Helmont fashions himself as a noble revolutionary, determined to provide a more powerful and effective medicine to the benefit of his neighbor. However, it is in his social and professional isolation that he turns to magic. Van Helmont’s radical ideas about medicine – including the notion that physicians can utilize magical efficacy – are partly an attempt to answer the difficulties presented by his isolated position, but they also serve to further alienate him from professional communities and to attract indignation. As a result of the scandal involving his treatise on the weapon salve, van Helmont spent a majority of his professional career


unpublished and under house arrest. He wrote extensively, corresponding and perhaps circulating some of his works among friends, but the development of his natural philosophy was largely a private experience.

II: Communication and Control

Van Helmont’s dreams of a new medical discipline required the uncompromising power over nature afforded by magical efficacy, but this appropriation of magical tradition is accompanied by endemic problems. Van Helmont’s career was not only largely private but also divorced from the academic communities and resources that made possible the organization and dissemination of knowledge, and his rejection of the scholastic approach to medicine was comprehensive:

For then I knew in good earnest, that I knew nothing, who had learned my principles from such as knew nothing. I therefore disdaining the long since blinde ignorance of my presumption, cast away Books, and bestowed perhaps two hundred Crownes in Books, as a Gift upon studious persons (I wish I had burned them) being altogether resolved with myself, to forsake a Profession that was so ignorant, if not also, full of deceit.49

As a result, his own knowledge of medicine would need to be something communicated to him by his experiences, through alchemical experimentation informed by that divine knowledge accessible in the soul. However, occult knowledge – even when claimed by practice – is nonetheless occult, and while it provides a useful beginning for van Helmont’s private inquiry into nature, it less easily accommodates the needs of widespread practice. But whether van Helmont’s isolation is a deliberate quality of his research or a necessary aspect of the secrecy normally associated with occult traditions can only be illuminated by how he approaches the process of accessing this knowledge, now that the witch’s power has proven to be native to all human beings.

In van Helmont’s theory of magic, as we have seen, both witches and saints can exercise an immaterial influence over nature; the only substantial difference between their practices is the means by which this influence is made possible. But the alchemist, unless he wishes to surrender control to the direction of a supernatural intelligence, would find neither of these means suitable

49 van Helmont, “De Lithiasi,” Ortus, p. 19; Oriatrike, p. 837: Tum enim serio cognovi, me nil scire, qui ex nil scientibus, mea didiceram. Fastiditus itaque casa praesumptionis pridem meae ignorantiae, libros abjeci, ac ducentos forte aureos in libris, dono transtuli in studiosos (utinam combussisset) omnino mecum resolutus, professionem tam ignorant desertur, si non doli quoque plenam.
to carefully directed manipulation of natural processes. Cabala was one possible solution, capable of inciting the spiritual awakening necessary for utilizing the powerful potential in the human soul. More specifically:

For hitherto have contemplations, continued prayers, watchings, fastings, and acts of mortifications regard, to wit, that the drowsiness of the flesh being vanquished, men may obtain that nimble, active, heavenly, and ready power toward God, and may sweetly confer with him in his presence, who importunately desires, not to be worshipped but in the Spirit, that is, in the profundity or bottom of the more inward man. 50

Recall from earlier the distinction between demonic magic and divine magic: for the saint, God awakens this power; for the witch, the demon must “stir up” this power into activity. What they share is not simply an awakening of a dormant spiritual power, but also an instigator who directs this process. Here, through ascetic practices such as fasting and spiritual contemplation, van Helmont allows a level of control that these other instances lack. And while he is less willing to speculate on the relationship between God and his saints, van Helmont does offer a clear distinction of what exactly the demon requires from the witch. Through an explication of this relationship, he reveals how the awakening of this power normally occurs: through the imagination, which gives fertile ground to the power stirred from the soul by the passions.

Demons have a history of association with the human imagination, which is implicated in both disease and diabolical activity. In the latter, the imagination’s ability to fool human perception combined with the demon’s deceitfulness presents a number of questions concerning the authenticity of the witch’s experiences – but whether diabolical actions are real or hallucinatory, they are mediated by the witch’s imagination. 51 This is similar to the mediation that makes the imagination the conduit of seminal images of disease, and the case of the man whose agitated passions lead to the development of asthma demonstrates that the imagination

50 van Helmont, “De Magnetica,” Ortus, p. 769; Oriatrike, p. 781: Huc nempe spectant contemplationes, continuatae orationes, vigiliae, jejunia, et mortificationis actus, ut devicta nempe carnis somnolentia, potestatem illam agilem, oelestem et expediat in Deum nasci ciscantur, eumque coram alloquantur suaviter, qui non nisi in spiritu, id est, interioris hominis fundo, adorari offlagitat.

mediates sensory knowledge as well as the physiological influence of the passions.⁵² These diverse operations are accompanied by diverse vulnerabilities; already susceptible to the seminal images of disease, the imagination’s perception of sensory information can also be manipulated and deceived by the influence of demons. A divergence in theories of witchcraft suggests that, on the one hand, the demon is also capable of manipulating the passions to disrupt the humors, thereby causing natural diseases in addition to possible supernatural afflictions. In a different interpretation, the diabolical actions attributed to witchcraft are considered to be nothing more than hallucinations and fantasies incited in the imagination by the demon. In such accounts, involving the imagination limits the extent to which the demon is capable of exercising influence over nature, rendering the other effects of witchcraft – including remote action – delusory. The demon is only capable of directly influencing the witch, who, even compared to the impotent posturing of the demon, remains significantly powerless.

The imagination’s capabilities have been explicated to some extent by van Helmont’s theory of disease. Demonic influence, much like infection, is a highly visual process, very much like a seal being impressed into wax.⁵³ This power involves the conception of an idea that, within the medium of the imagination, is allowed to effect changes in nature. Should the demon operate on his own without this human process, he would require:

a free faculty, not bound, and enflamed or provoked by desire; because that desire, as it is a passion of the Imaginer, so also it creates an Idea, not indeed a vain one, but an executive and motive Idea of the enchantment.⁵⁴

Demonic deception remains, but the idea instilled by the demon is more than a “vain” fantasy. Like the seed producing disease, the ideas instilled by the demon are capable of effecting changes in reality – in this case, through desire, an agent of the passions. For the witch, whose will is entangled with the malevolent will of the demon, this desire is provoked by a “co-touching” with

⁵² Jean Fernel, who has been mentioned as an early advocate of the seminal theory of disease, believed that demons could cause and direct natural disease as well as produce their own supernatural effects in the body through disruption of the humors. See: Beecher, "Witches, the Possessed, and the Diseases of the Imagination.", pp.112-3; and Closson, "The Devil's Curses: The Demonic Origin of Disease in the Sixteenth and Seventeenth Centuries.", pp. 64-6.

⁵³ Van Helmont’s use of the “seal” illustration bears an interesting resemblance to Aristotle’s description of form and matter in De Anima. Although he often vilifies scholastics for relying on Aristotle’s pagan works, he often describes the framing of ideas in such terms. See, for example: “Imago Mentis,” Ortus, p. 270; Oriatrike, p. 268: Ergo praeceedit aliquid in massa, quod immateriale plane, reale tamen, et effectivum initium esset, cuinus figurandi inisset per impressionem sigillarem.

the demon, who directs her power to malevolent ends. In such processes, reliant upon interaction with the imagination, the passions are vital:

[ ] as oft as Idea's are formed, or conceptions expressible by words, they retain a motherly frailty of the sensitive soul, a brickleness of unconstancy, an uncertainty, and disturbances subject to passions.\textsuperscript{55}

Without the passions, there can be no power in ritual magic – whether beneficia (sacred rites) or maleficia, which are evil deeds directed by the demon but effected by the witch’s freely operating (“not bound”) imagination. In fact, the magical action incited by the passions in such rituals requires no demon to pervert the application of this power, nor any divine agent to properly direct it. Van Helmont provides examples of this undirected magic as well: a situation in which a pregnant mother, upon viewing a beheading or encountering a beggar with no right arm, may produce a child likewise missing a head or a right arm.\textsuperscript{56} The passion in these cases is horror, felt so strongly that it stirs that spiritual power and manifests the image of what the mother has witnessed – just as the imagination, by framing such strong passions, can produce disease. The passion need not be a destructive one like horror, but the same practical difficulties exist in all cases. There is no demon to strike the child headless but instead a power provoked by fits of passion. In this manner, the passions have power in their ability to provoke the “free faculty” of the imagination to any operation, but they cannot be consciously directed. For an aspiring adept, this undirected action also becomes quite problematic. Outside of divine or demonic direction, only the passions are seemingly capable of bringing this dormant power into action, but passions lack deference to human control.

Van Helmont’s ascetic methods are framed in opposition to this common feature of magical practices. This is why his approach distinctly lacks passio – the emotional upheaval that awakens an operative spiritual power in response to it. His “contemplations, continued prayers, watchings, fasting, and acts of mortifications” are intended precisely to establish control over

\textsuperscript{55} van Helmont, “Mentis Complementum,” \textit{Ortus}, p. 319; \textit{Oriatrike}, p. 314: \textit{Alioqui quoties formantur Ideae, aut conceptus verbis exprimibles, retinent maternam Sensitivae caducitatem, incostantiae fragilitatem, incertitudinem, ac perturbationes, passionibus subjectas.}

\textsuperscript{56} van Helmont, “Nexus Sensitivae et Mentis,” \textit{Ortus}, p. 362; \textit{Oriatrike}, p. 354. Discussed elsewhere in: “De Ideis Morbosis,” \textit{Ortus}, pp. 538-9; \textit{Oriatrike}, pp. 539-40; “Vis Magnetica,” \textit{Ortus}, p. 613; \textit{Oriatrike}, p. 615; and “Archeus Faber,” \textit{Ortus}, pp. 40-1; \textit{Oriatrike}, pp. 35-6. The power of the imagination at work between a pregnant woman’s ideas and the physical form of her child has a scriptural foundation in Genesis 30:37-8(43), wherein Jacob’s knowledge of sheep breeding included the ability to control the color of the lamb’s wool, presumably by manipulating such influences of the imagination. This topic was debated well into the late 17\textsuperscript{th} century, as evidenced in the works of Leibniz: Justin E. H. Smith, \textit{Divine Machines: Leibniz and the Sciences of Life} (Woodstock; Princeton, N.J: Princeton University Press, 2011), pp. 200-18.
this operative spiritual power. With this in mind, van Helmont’s dilemma in applying magical practice to medical practice becomes clear. His demonstrations in this early work (and the reiteration of his theories in later works) present the operation of demonic and divine magic in order to identify it as actually natural – a conclusion intended to vindicate his professional shift to alchemical medicine. But mixing magnetically active blood into an unguent fails to mimic the diverse circumstances under which a saint’s robe becomes a supernatural prophylaxis – or a witch’s touch just the opposite. The work of an alchemical physician, largely based within his laboratory, lacks the emotional potency of lurid, demonic trysts and divine ecstasies. Granted, it is true that the magnetic operation of the weapon salve requires little more than the residual power of the vital spirit, present in the blood of the victim or the remains of murdered men (another esoteric ingredient of the salve), but an alchemical physician like van Helmont, willing to recommend access to this remote, incorporeal power through Cabala, would not settle for the limited medical efficacy offered by the blood to specific circumstances. Nevertheless, even the pregnant woman who unintentionally maims her child through horror exercises this powerful influence only by means of uncontrollable passions. This presents a seemingly unsurpassable blockade: how can magic be useful in medicine when it relies fundamentally upon the taciturn influence of the passions?

Van Helmont attempts to avoid this complication by allowing a further distinction in the kind of power that the spirit may exercise – and in part this distinction between kinds of spiritual power depends upon his own desire for knowledge of magical operations. It may be telling to emphasize that when van Helmont discusses witches, he avoids the most common term malefica (or maleficus), “evil-doer,” in favor of saga, “prophetess.”57 While his discussion of demonic magic hinges upon operation over distance, this choice of term implies that his perception of witchcraft characterizes the witch not by the evil actions that she performs but by the knowledge that she has obtained. Whether cognizant or not of where this power has come from, the witch is nonetheless aware of its action and, unlike the mother horrified by a public decapitation, capable of directing its use to some extent – but only to certain evil ends as ultimately dictated by the demon. Although she remains the primary agent, with ready access to power that she does not recognize as her own, her will has been usurped and directed by the touch of the demon. This is

57 Walter Stephens identifies maleficium as the most common name assigned to witchcraft, implicating its significance in relation to the name for sacrament, beneficium. But he also forwards, as more “precise” names assigned to witches: “witch, wizard, sorier / sorcière, strega, strix, Hexe” specifically. The term saga is not mentioned – perhaps because, as Stephens suggests, the significance of using the term maleficium lay largely in its emphasis on evil action. See: Demon Lovers: Witchcraft, Sex, and the Crisis of Belief (Chicago: The University of Chicago Press, 2002), p. 198.
also where the important distinction lies between the magic of miracles and *maleficia* (which as we noted are of the same sort) and the magic of van Helmont’s alchemical medicine: while there is power in the former, there is no control. In spite of the power they exercise, these other servants of supernatural influences – the witch and, potentially, even the saint – have no awareness of magic as an inherently human power. This unacceptable compromise lacks the utility that van Helmont needs. He requires fundamental knowledge of this power so that it can be understood and manipulated in a predictable manner just as the weapon salve is used, but to more powerful and more diverse ends. What his new medicine requires from the spiritual dominance of humanity is not merely a subconscious influence over nature but fundamental knowledge of what it is and how it operates. He is interested in knowledge with powerful applications, rather than the power of remote action.

Van Helmont’s unique purpose allows him an opportunity to distinguish his own practices from the actions of the witch, while maintaining that both utilize the same natural magic. Van Helmont’s choice of the term *saga* allows him to establish distance from the magical stigma of *maleficia*, the term also, more significantly, reveals his preoccupation with knowledge over action. But van Helmont’s use of *saga* does not indicate that the witch has obtained the comprehensive knowledge of nature that he places in the soul. What *saga* indicates is specifically foreknowledge – divination which van Helmont has no interest in utilizing, either generally or as medical prognosis specifically:

> I have hated also the prognostication, prediction and fore knowledge which was familiar to divinations: I have rather rejoiced to heal the sick party, than by speaking doubtfully, to have foretold many things.  

Van Helmont is careful to distinguish the witch’s divination from the knowledge that he seeks. Indeed, the witch’s source of foreknowledge, though still dependent upon the Image of God in the soul, is nevertheless subordinate to the perfect knowledge of nature that accessing this innermost soul would provide. This is because the witch gains foreknowledge from communication with the spirits of the dead, with her power and knowledge limited to the efficacy of the sensitive soul in the same way that the weapon salve is limited to the efficacy of the same power that lingers in human blood. Describing the spiritual hierarchy of the body in this manner allows van Helmont to establish distance between his own magical practice and that


of the witch by differentiating between the sensitive soul and the immortal soul, the latter of which indicates the Image of God. The magical efficacy of the immortal soul manifests itself to a lesser extent in the operations of the sensitive soul, which regulates the body according to the direction of the immortal soul:

But I have taken notice, that the former majesty, or greatness of the minde, being fallen, another birth did arise: wherein the sensitive Soul, did exercise the Vicarship of the minde: the which, seeing it wanted (through a confused knowledge) the stirring up of conclusions and Disciplines, it now supplies the place of true understanding, and proudly attributes to it self, all selfishness.60

This lesser sensitive soul may be considered a sort of carnal vitality, mortal and associated significantly with the corporeal body. This vitality is what gives bodily substance the operative magnetism utilized by the weapon salve, both in the blood of the victim and in the moss harvested from a skull for the preparation of the salve. These subtle distinctions allow van Helmont to elevate his use of magic while maintaining its homogenous identity.

Still, unless the immortal soul can be stirred from its Biblical dormancy, the magical power inherent within humans must be limited to the lesser capabilities of this sensitive soul. The spiritual power of the sensitive soul is limited to the body, and the vital spirit is only able to extend at the behest of the passions. It also lacks the perfect understanding of nature that the immortal soul offers to those who can access it. Witchcraft demonstrates a manifestation of this inferior spiritual power, but witches lack the understanding that accompanies access to the true source. This leap from the remote power of the sensitive soul to the divine knowledge of the immortal soul is a considerable one, though van Helmont seems to take it lightly:

With a great courage therefore, I again disdaining all the Books of Writers, cast them away, and expelled them far from me. Neither determined I to expect the aid of my Calling from any other way than from the Father of Lights, the one only Master of Truth.61

The knowledge that van Helmont makes accessible in the immortal soul is no less than formal knowledge of nature – a divine knowledge pre-existing locally in all human beings. This is a kind of knowledge that allows control over nature in a way that the witch’s subconscious spiritual influence cannot provide.

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In ritual magic, “contemplations, continued prayers, watchings, fastings, and acts of mortifications” are common ascetic practices that, through purification, increase receptiveness to divine encounters. When van Helmont adopts such practices, he utilizes them in an entirely different way. They provide an opportunity to explore and become acquainted with the spiritually privileged nature of the human soul without submitting to the influence and distortions of the passions; and indeed, this knowledge is only made accessible because these passions are circumvented. Action over distance – the signature manifestation of spiritual power – requires, in all the provided examples, an emotional provocation that reveals a particular spiritual connection between the human soul and an object or individual in nature. To use this power requires only the impression of the passions; however, to understand it requires an approach that offers more control over this access. Rather than requiring control over particular processes, van Helmont requires the knowledge of how to discern the operation of these processes in nature, and from this knowledge the potential to fully exploit anything that he may require. The magical efficacy of witchcraft and weapon salves is a natural one, but inadequate because it lacks this perfection of knowledge offered by the immortal soul. And just like the perfecting of this magical efficacy within, nature presents itself as a subject to be manipulated and perfected materially by the practices of the alchemical physician, now capable of striking a balance between the powerful knowledge of magical practice and the safe predictability of medical practice.

THE BODY AND THE WORLD

I: The Necessity of Clarity

Says van Helmont: “Idiots are not capable of Medicine, seeing neither am I their School-master.” In a practice such as alchemy, wherein information is deliberately obscured by either economical or ideological (or epistemological or ethical) exclusivity, the burden of legitimization...
is made to rest on the theories and ideas that can be communicated without revealing privileged information. A hierarchical relationship in nature, a physiological system in the human body, the signs and operations of a given disease – these can be described and explained without deigning to inform the reader of unnecessary details relating to mastery or manipulation of the dangerous power that this occult knowledge purports to endow. Those who need to know will doubtless have the capacity to do so unaided by the writer; it is not the responsibility of the alchemist to explicate. Nevertheless, the knowledge that van Helmont pursues is not its own end; his primary (professed) purpose is to do everything in his power to improve medicine.

What van Helmont predominantly offers physicians are expansive theories and, at times, vague instructions for the preparation of medicines. The latter is arguably the most immediate interest of a practicing physician – the knowledge of the cure. There are tracts in van Helmont’s collected works, such as his work on asthma, that discuss specific diseases of particular interest. Nevertheless, van Helmont wrote only one tract specifically addressing the medicinal applications of plants, “Pharmacopolium ac Dispensatorium Modernorum” (“A Modern Pharmacopoeia and Dispensary”), in which he provides neither pharmacopoeia nor dispensary. Instead, he describes how one may approach understanding the properties and uses of a given plant without himself providing any specific information on them, and he says enough about the irrelevance of the work practiced by artisans like apothecaries and herbalists to imply a general distaste for the unguided processing and combining of medicinal plants. Van Helmont thinks that such artisans, if perhaps not as dangerously negligent as scholarly physicians, also miss the point; endlessly combining plants without being able to identify and extract operational essence could never produce effective medicine. And it is perhaps much more useful to describe how one may determine the uses of a plant as opposed to providing meticulous descriptions of a limited selection, though in either case van Helmont prefers the seemingly more effective properties of mineral and metallic medicines (“Metals do exceed Plants and Minerals in healing, by long stades or distances,” he says). For this reason, rather than writing a pharmacopoeia, van Helmont focuses on medical theories that trace diseases to their causes, from which the appropriate treatment can be determined. This is where the work of the physician begins.

Van Helmont’s preoccupation with disease etiology reflects the same motivations that produced his tract on the weapon salve – focusing not on details of practice but on methods of knowing that promise operational control. In the case of magical practice, this allows him to

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preclude the danger of communicating with any intelligences that may be demonic and, by extension, preclude any associated danger of heresy. More importantly, an internal source of knowledge allows the most control over epistemic practices. Magic that depends on the will of higher powers or the passions of the magician cannot be reliably utilized, much less communicated clearly for others to follow.

The magical texts of Paracelsus, who van Helmont is most often identified with, exemplify the communicative difficulties that he struggles with. Masked as they are by convoluted explanations and ambiguous terms, Paracelsus’ works reflect a tradition of knowledge that is privileged, hidden, occult. These works were difficult for contemporaries, perhaps also because, if his primary disciple can be believed, Paracelsus often dictated when thoroughly drunk – so much so that D. P. Walker questioned “whether Paracelsus’ philosophical writings are actually intelligible, that is, whether they contain any coherent patterns of thought.”

Paracelsus presents a difficult natural philosophy, owing as much to his eccentric personality as to his esoteric subjects. And when van Helmont places magical efficacy at the heart of his own natural philosophy, he invariably positions himself within this occult tradition – a tradition defined, even with its name, by lack of clarity.

If van Helmont’s readers are to assume the same epistemological approach that he adopts, then they must rely on largely non-textual modes of learning. Van Helmont says that when he rejected academic medicine in his youth, he gave away all his books, though really he wished he had burned them. He claims that words – whether boasting operational power or emphasizing terminological precision – are never of great concern to him. Though he touted Cabala in his early work on the weapon salve, van Helmont later denies vehemently this excessive emphasis on the import of words. However, when he rejects the power that traditional magic assigns to language, he exacerbates the ineffability already endemic to all forms of occult knowledge. He makes magical practice a fundamentally personal experience, dependent upon knowledge of the self and resistant to easy description. Van Helmont may have a frank disregard

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65 Any form of magic that purports to gain knowledge from spirits carries the danger of being demonic magic. This is an anxiety that accompanied magical practice from the medieval ages into the Renaissance; e.g., Frank Klaassen describes an account left by a medieval author who unwittingly practiced demonic magic using a book seemingly divine: Klaassen, The Transformations of Magic: Illicit Learned Magic in the Later Middle Ages and Renaissance, pp. 81-8; and "Unstable Texts and Modal Approaches to the Written Word in Medieval European Ritual Magic.", pp. 224-5.

for “idiots,” but it remains that his primary purpose – to build a new medical discipline – assumes widespread dissemination of his ideas. In order to be beneficial in any significant measure, this medicine needs clarity.

II: Metaphor and Heresy

This problem of communicability ensures that the reverberating controversy of van Helmont’s ideas extends also to how he expresses them. In spite of denying any inherent power in language, van Helmont nevertheless attracted negative attention for using language in similar ways – particularly, for his problematic use of metaphor. There is a strange discrepancy in many contemporary works between condemnation and utilization of metaphor that belies some considerable dissent over what metaphor does and how it should be used in natural philosophy. In van Helmont’s works, metaphorical language abounds even as he condemns it throughout, and the medical community that eventually formed around his works was likewise marked by an abundance of novel terms and novel use of existing terms. To many of his subsequent readers, van Helmont seemed too liberal with his words, inadequately defined and often imprecisely utilized; his linguistic novelty seemed to be nothing more than a mask for a natural philosophy that in reality had nothing new to offer.

Among these critics was Henry Stubbe, a Galenic physician and advocate of the London College of Physicians (exactly the kind of medical institution that van Helmont and his followers fully opposed). From the 1660s and through the 70s, Stubbe published a number of works casting aspersions on Helmontian chemical medicine, the Royal Society, and Francis Bacon’s experimental philosophy. He says of van Helmont’s works specifically:

Some men think they make a great improvement in Science, if they illustrate it by a new Metaphor, or introduce a novel term, the import whereof is no more emphatical or perspicuous than the former; yet this must be deemed a new discovery, and by the imputation of ignorance, Students are deterred from reading the best Authors.67

67 Henry Stubbe, The Lord Bacons Relation to the Sweating-Sickness Examined, in a Reply to George Thomson, Pretender to Physick and Chymistry: Together with a Defence of Phlebotomy in General, and Also Particularly in the Plague, Small-Pox, Scurvy, and Pleurisie, in Opposition to the Same Author, and the Author of Medela Medicinæ, Doctor Whitaker, and Doctor Sydenham : Also, a Relation Concerning the Strange Symptomes Happening Upon the Bite of an Adder, and, a Reply by Way of Preface to the Calumnies of Eccebolius Glanvile (London: Printed for Phil. Brigs, 1671), p. 63.
Stubbe’s juxtaposed critique of Helmontian physicians and the Royal Society is odd, given the latter’s determination to use language “as near the Mathematical plainness, as they can.”68 Yet his grief with the Helmontians’ use of metaphor is, perhaps, a fair one. After all, it is possible to describe a system in novel terms without in effect providing any new ideas. Assuming, however, that this novel language actually indicates some novel idea or thing, there remains a difficulty concerning how to define such a term. New ideas present enough terminological difficulties without including the confusion of inherently imprecise metaphorical imagery. And indeed, Stubbe’s critique of metaphorical language echoes the works of many other physicians. Among them is Daniel Sennert, who published a textbook on chemistry about a decade before Stubbe spoke against the Helmontians. Sennert’s critique, aimed from within communities of chemical physicians, is leveled at Paracelsus:

Hence we may gather that the Analogie of the great and little World, is extended too large by the Chymists, because they make not an Analogie, but an identity, or the same thing. For Paracelsus requires in a true Physician, that he say this is a Saphire in man, this is Quicksilver, this Cypress, this a Walflower, but no Paracelsian ever shewed this.69

What Sennert opposes in Paracelsian natural philosophy is the reification of metaphor – that a metaphor may indicate a relationship in reality rather than simply a relationship in concept. The inability to demonstrate that such a relationship exists in reality defeats the instructive potential that this metaphor is intended to have; rather than explicate a true relationship in nature, metaphor disguises a lack of substance. Sennert’s comments, though similar to Stubbe’s superficially, condemn the use of metaphor for different reasons. Stubbe opposes the use of linguistic metaphor altogether, whereas Sennert allows it heuristically, opposing the extension of simply illustrative metaphor to relationships in reality. Though problems with its use seem to be ubiquitous, what can be considered acceptable in the usage of metaphor differs depending on the writer.

Van Helmont, whom Stubbe (among others) targets for use of metaphor, levels considerable invective against its use as well. There are few pictorial illustrations in his works and, according to him, no purely poetical analogies. Furthermore, he adopts a similar attitude to that of Stubbe and Sennert when he discusses the use of metaphor in Paracelsus’ works:

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I have hated Metaphors, or figurative Translations of words from their proper signification to another, in the History of nature, and Family of essential things: because they are those things, which have introduced the errors of the Schooles, brawls of disputing, and religious Worship given to Aristotle.\textsuperscript{70}

The definition (“figurative translations of words from their proper signification to another”) belongs to the translator John Chandler rather than to van Helmont, though it clarifies to a certain degree how the perceived purpose of metaphor may differ for van Helmont and his followers compared to Paracelsus. For van Helmont, magical tradition places entirely too much emphasis on the importance of words in general – a complaint more exhaustive than the specific criticisms issued by Stubbe and Sennert. Stubbe criticizes the linguistic metaphor with no mention of its claims to substantive significance; Chandler’s provided definition of metaphor likewise focuses on a purely linguistic interpretation that implies no further significance for relationships in reality. In this way, most of the above examples condemn the use of metaphor on a purely cognitive level, wherein the illustrations indicate linguistic relationships without assigning metaphysical significance to such relations. The exception is Sennert, who specifically condemns the use of metaphor on a substantive level, wherein this cognitive relationship signifies a relationship also existing in reality. This is a relationship exemplified in the works of Paracelsus, who adopted and extensively expanded upon the idea of man’s connection to the cosmos through the metaphorical images of the microcosm-macrocosm analogy. Curiously, though he is the target of much of this criticism, Paracelsus also expresses a similar distaste for the metaphorical use of words:

And this I declare, because it is a lack of skill to use *metaphora* in medicine and nothing but an error to give names metaphorically.\textsuperscript{71}

Paracelsus, who intends for metaphorical language to be taken very seriously, effectively reverses Sennert’s critique. The use of metaphor is unforgivably misleading unless it claims to indicate a real relationship between objects in nature. For Paracelsus, such metaphorical relationships illuminate a natural hierarchy that the physician must understand in order to practice medicine. Metaphorical language in this model focuses specifically on the microcosm of the body and its


relation to the macrocosm of the greater world – the illustration that Sennert refers to when he says “little World.” This long-standing analogy in magical tradition is unsurprisingly prevalent in the works of Paracelsus but also, perhaps surprisingly, present in van Helmont’s works as well.

Yet van Helmont’s use of metaphor – and his use of the microcosm-macrocosm analogy specifically – serves a much different purpose than it does in the works of Paracelsus, as it must if he is to maintain that words lack inherent power over nature. By using illustrative language, van Helmont is not in fact adopting the significance it holds in magical practices but instead responding to the problems of communicability presented by his own epistemology, which itself borrows heavily from magical tradition. The use of metaphor as a linguistic tool allows him to express in a uniquely relevant way the kind of uncommunicable knowledge in which he places so much import, precisely because the metaphor exists between vocabulary and understanding. Rather than assign greater import to words and their definitions, he assigns less – and in doing so, attempts to describe knowledge originally obtained outside of linguistic expression.

III: The Famous Microcosm-Macrocosm Analogy

Just as van Helmont distances himself from the dangers of ritual magic through the internalization of divine knowledge, he shows similar distaste for much of natural magic, which he still finds markedly numinous in spite of practices that avoid communication with spirits in favor of manipulating innate forces in nature. The microcosm-macrocosm analogy is a mark of such innate forces, typically utilized to identify and describe this latent web of sympathies in nature. In spite of rejecting most contemporary magical practices, the manner in which van Helmont communicates his esoteric knowledge utilizes familiar aspects of this analogy. All of his most fundamental ideas are presented with these linguistic illustrations, in spite of his often vehement opposition to the use of metaphor and the microcosm-macrocosm analogy in particular. His rejection of this analogy accompanies a comprehensive rejection of Paracelsus’ works, in which it features prominently:

I searched into the Books of Paracelsus, filled in all parts with a mocking obscurity or difficulty, and I admired that man, and too much honoured him: till at length, understanding was given, of his Works, and Errours.72

This later rejection of Paracelsus stems in part from his obtuse writing (symptomatic of traditional magic) and partly from some fundamental incompatibilities between their ideas about nature. Recall that van Helmont denies, for instance, any sort of astral influence over the operation of nature – a relationship that exemplifies the forces that natural magic claims to utilize. Generally, traditional notions of what the microcosm-macrocosm claims to communicate about the natural world – and the language it uses to do this – are clearly incompatible with van Helmont’s natural philosophy. Nevertheless, van Helmont often utilizes the same language and imagery of this analogy, in different ways and for different purposes. Rather than rely on sympathetic relations, he exploits the flexibility of the same metaphorical language and its inherent ambiguities to address the communicative difficulties arising from his rejection of epistemology inherent in ritual and natural magic.

Van Helmont’s explanation of the body’s immaterial hierarchy exemplifies this novel use of metaphor. In van Helmont’s seminal theory of disease, the Archeus is a faculty responsible for producing the physical manifestations of disease. This faculty (along with the imagination) is also part of the sensitive soul – that lesser, mortal viceroy of the immortal soul. The sensitive soul is the active component of the immaterial hierarchy in the human body; the immortal soul, largely inaccessible, exists at the most fundamental level. This soul is encased as though in a shell by the sensitive soul, which obscures and interprets its knowledge and directives. As part of the sensitive soul, the Archeus is partly tied to the body and capable of effecting physiological changes within it – as well as, in the case of the imagination, effecting changes outside the body as well. When the body is invaded by disease, it is the Archeus that has failed to maintain its office:

For while the Archeus doth with-draw and abstract himself as I have said; yet he cannot but be in a Body, as in a Place: Therefore I call him abstracted, not indeed from the Body, but from his Court, or ordinary Throne […]

Van Helmont has already discussed his seminal theory of disease in such metaphorical terms: a hidden guest that wreaks havoc by deposing the innkeeper. Here, he describes the misdirected Archeus as a prince neglecting his office; when he is abstracted from his court, systemic order

73 Van Helmont argues against celestial influence but does not deny that the stars may provide indications of events without otherwise causing or in any way affecting them. He discusses this topic in various chapters of his collected works; see, for example: “In Verbis, Herbis, et Lapidibus est Magna Virtus,” Ortus, p. 579; Oriatrike, p. 579: […] Stellas nobis non esse in causas: sed dumtaceat in Signa, Tempora, dies et Annus. See also the related discussion in Part I.

74 van Helmont, “De Morbis Archealibus,” Ortus, p. 550; Oriatrike, p. 550: Etenim dum Archeus se subtrabit, abstrahitique, ut dixi: attamen non putes non esse in corpore, tantum loco. Abstractum ideo voco, non quidem a corpore; sed ab aula, sive trono ordinario.
descends into chaos. This monarchical illustration is immediately identifiable with terms commonly employed in the microcosm-macrocosm analogy to describe hierarchical relationships in nature. However, van Helmont’s use of this language is entirely severed from its traditional usage in natural magic, undermining all of the epistemological significance that it would normally be assigned to carry.

Within the system defined by the microcosm-macrocosm analogy, the human body is not merely the center of the universe but also the universe itself. This multi-level organization of the body draws lines of correspondence among the arrangement of the planets, the hierarchy of government, and the function of human physiology, extending to all levels of nature. The implications carried by this world-view stretch beyond a connection between the sun and the heart to form a far-reaching epistemological approach to understanding the structure and operation of the human body through its relationship to analogous hierarchies external to the body. The macrocosm of nature in this system holds the key to understanding the microcosm of the human body. This is the foundation of Paracelsus’ epistemology, as well as a fundamental point of discord for van Helmont: “I have laughed at Paracelsus,” he says. This contrived epistemology does not offer the perfect knowledge that he seeks.

Van Helmont’s theory of disease necessitates that the function of the body, while subject to an internal hierarchy, be capable of superseding the body’s potential for material action through effects of the imagination – and likewise to be affected by such actions. Recall the rays of “light” that allow people and objects to interact incorporeally. This action of the imagination as an interaction of extending rays also describes the remote action of the witch. Within such a world-view, the body acquires a freedom of influence that supersedes the correlations of the microcosm-macrocosm analogy. Van Helmont describes the body as continuous with nature rather than reflective of it, in the same manner that he denies the reactive explanations utilized by Galenic physicians to describe the relationship between the body and disease. By freeing the functions of the body from a cosmic network of influences, van Helmont provides an environment more conducive to tracing disease to an outside cause, from which the physician may develop a treatment. As discussed, this makes intervention a more vital part of medicine, allowing the alchemical physician to justify a more active role in treatment. Nevertheless, this interpretation of systemic function carries no interpretive power into higher levels of organization, effectively sacrificing a holistic understanding of nature and the body within it.

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Still, to say that van Helmont simply foregoes the epistemological benefits of the microcosm-macrocosm analogy would understate its fundamental incompatibility with his natural philosophy. The very suggestion that man mirrors nature immediately offends van Helmont’s interpretation of Creation and the relationship between mankind and divinity:

I cannot tie up man unto the sporting Rules of a Microcosme: For I had infinitely rather to be the Image of God, than the Image of the corruptible and torturing World.\(^76\)

Paracelsus’ use of this metaphor assumes a level of cosmic grandeur that, for van Helmont, the world does not reflect. In van Helmont’s natural philosophy, wherein astral influence over nature is denied, the correlation between the body and this “corruptible and torturing World” evokes fallibility rather than majesty. Where Paracelsus uses this metaphor to elevate the body to macrocosmic significance, van Helmont uses it to lower the body to the mundane. Clearly, van Helmont’s use of this metaphorical language lacks any continuity with the epistemological significance of its original context. Rather, his use of metaphor repurposes this linguistic tool to address the unique communicative difficulties of his own epistemology. Both Paracelsus and van Helmont use metaphor as they simultaneously condemn its usage, but there is a distinction between how each perceived the appropriate role of metaphor in natural philosophy. For the former, describing metaphorical relationships is part of identifying significantly analogous relationships in nature; for the latter, the flexibility of metaphorical language provides a means to address the difficulties of communicating occult knowledge.

**IV: Metaphorical Clarity**

When the prominent intellectual socialite Margaret Cavendish (Duchess of Newcastle) read van Helmont’s collected works, she took particular offense to his irreverent use of language.\(^77\) The Archeus, which van Helmont describes using a number of varying titles and illustrations, earns particular ignominy for this excess of metaphorical language. She compiled a list of van Helmont’s offenses on this subject, gathering together names and titles that he applied

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\(^77\) The critiques of Margaret Cavendish were brought to my attention by Ian Lawson, who has written on her critique of experimental philosophy.
to the Archeus in the course of his works. “First his Archeus he calls the Spirit of Life,” she says,

a vital Gas or Light; the Balsam preserving from Corruption; the Vulcan or Smith of Generation; the stirrer up, and inward director of Generation; an Air; a skiey or airy Spirit; cloathing himself presently with a bodily cloathing, in things soullified, walking through all the dens and retiring places of the seed, and transforming the matter according to the perfect act of its own Image, remaining the president and overseer or inward ruler of his bounds even till death; the Principle of Life: the Inn of Life, the onely immediate Witness, Executor, and Instrument of Life; the Prince and Center of Life; the Ruler of the Stern; the Keeper of Life, and promoter of Transmutations; the Porter of the Soul; a Fountainous being; a Flint.78

This is, in fact, only a selection of the terms with which van Helmont describes the Archeus, but the breadth of description only serves to demonstrate, in Cavendish’s mind, the hopelessly nonsensical quality of his linguistic expression. “These, and many more names your Author attributes to his Archeus,” she claims, “but what properly it is, and what its Nature and its peculiar office, I am not able to conceive.”79 The question is fair: where in “principality” is the physiological function “Archeus”? How can its nature or office be discerned from the common understanding of “inn”? Certainly, a great deal can be said about whether or not metaphor is capable of carrying inherent meaning, but in van Helmont’s works, metaphorical language can at least heuristically address the ineffability of occult knowledge.80

Van Helmont’s use of macrocosm-microcosm imagery may superficially conflate his own conception of natural magic with that of Paracelsus, but a closer consideration of how this analogy serves them both reveals two conceptions of nature diametrically opposed: Paracelsus, with his view focused away from the body, and van Helmont, focused within. Paracelsus’ outward focus has clear epistemological implications, from the grandeur of macrocosmic significance to the divine inspiration that he seeks from God, likewise sought externally. This outward focus also recalls some dangerous characteristics of ritual magic. Any physician who claims divine knowledge from an outside intelligence places himself in a dangerous position – one that many, Sennert included, would interpret as too close to demonic magic:

78 Margaret Cavendish, Duchess of Newcastle, Philosophical Letters, or, Modest Reflections Upon Some Opinions in Natural Philosophy: Maintained by Several Famous and Learned Authors of This Age, Expressed by Way of Letters (London, 1664), pp. 239-40.
79 Ibid., p. 240.
80 This reference to meaning in metaphor (a topic which must be limited here) largely refers to the historic dialogue between Rorty and Hesse concerning the epistemic potential of metaphor, along with subsequent scholarship. See: Richard Rorty and Mary Hesse, “Unfamiliar Noises,” Proceedings of the Aristotelian Society, Supplementary Volumes 61 (1987).
This Magick is old (nor is it better for that) because it came from Plato, and the Egyptians given to Idolatry; the foundation of this was laid by Marcus Ficinus, when he writes, that by the application of our spirit, to the spirit of the world, by the Art of Physick and affection that deeds are cast upon the soul, and heavenly good upon our affection. But this union of the soul of man with the Angels and Spirits which is by imagination, and the calling upon Spirits to do man service, is the work and invention of Conjurers.\footnote{Sennert, \textit{Chymistry Made Easie and Useful}, p. 92.}

The linguistic rituals necessary for demonic magic render any comparable communication with supernatural entities dangerously close to heresy. This includes all forms of ritual magic, in which magical texts are utilized to communicate with spirits.\footnote{For a discussion of ritual magic and the distinction between angelic and demonic forms of this magical practice, see: Klaassen, \textit{The Transformations of Magic: Illicit Learned Magic in the Later Middle Ages and Renaissance}, pp. 115-27.} These practices most often involved an intention to invoke angels, although what the magician calls an angel may always, after all, really be a demon. This common anxiety is demonstrated well by the life of Cabalist John Dee, who complained of being labelled a "Conjurer of wicked and damned Spirites."\footnote{John Dee, "Preface," in \textit{The Elements of Geometrie of the Most Auncient Philosopher Euclide of Megara} (London: 1570), cuts Aj and Aij: “…a Companion of the Hellhoundses, a Caller, and Conjurer of wicked and damned Spirites.” Quoted in: Patricia Fara, \textit{Science: A Four Thousand Year History} (Oxford: Oxford University Press, 2009)., p. 105.} In one (potentially apocryphal) story, his expansive library was burned by a mob that feared him to be such a conjurer.\footnote{G. J. R. Parry, \textit{The Arch-Conjuror of England: John Dee} (New Haven: Yale University Press, 2011)., pp. 171-2.} Van Helmont's solution to such difficulties, as we have seen, was to alienate divine knowledge and spiritual power from external agency. He looks within himself to confirm and understand empirical knowledge of the human body and potential medicines in order to discern how to treat disease, and his use of the microcosm-macrocosm analogy reflects this internal, cognitive relationship without indicating a substantive relationship in nature. His epistemological approach indicates that humans only understand the world in terms relative to human experience, such that the cognitive relation is sufficient to reach an understanding of nature.

When van Helmont speaks of the Image of God as being within human beings, he indicates a potential to know nature fundamentally. His explanation of the spiritual hierarchy in man allows an epistemological connection between human beings and the natural world that reflects the status of mankind before the Fall. This epistemic relationship between the spiritual and the material does seem to resemble Paracelsus' approach to knowledge, wherein the relationship between man and the world reflects a web of sympathetic relationships that offer
both spiritual and material knowledge of nature. However, the substantive linguistic claims of this epistemology form a fundamental point of departure for van Helmont. Whereas the metaphorical relation is substantive for Paracelsus, this relation is cognitive for van Helmont. He does not allow a substantive relationship to exist at all:

The name therefore of Microcosm or little World is Poetical, heathenish, and metaphorical, but not natural, or true. It is likewise a phantastical, hypochondriacal, and mad thing, to have brought all the properties, and species of the Universe into man, and the art of healing: But the life of man is too serious, and also the medicine thereof, that they should play their own part of a Parable or Similitude, and metaphor with us.\(^85\)

For van Helmont, the substantive claims of the microcosm-macrocosm analogy are simply false, and metaphor is purely linguistic. The microcosm metaphor in particular fails to respect the gravity of its subject; medicine, he says, is not a topic for poetic language.

For van Helmont’s purposes, rejecting a metaphysical relationship between language and nature does not trivialize the influence that mankind retains over the world. The spiritual power that he possesses is simply divorced from names and assigned instead to an intimate, unutterable knowledge obtained from nature’s divine image contained within the image of God. From this perspective, it isn’t inherently problematic that this essentially cognitive relationship is more difficult to articulate than the substantive relationship assumed by the traditional microcosm-macrocosm analogy; the greater cost is that this unutterable knowledge does not support the magical practices that claim to seize and manipulate this relation through language. The original experience of internal illumination may allow comprehension, but it defies description. Van Helmont’s use of metaphorical language allows him flexibility in discussing topics that resist comprehensible explanations:

But I cannot meetly explain the means whereby the Archeus doth make his own voluntary eccentricities, nor decipher the Idea’s of these by a proper Etymologie, if they are invisible, unpercieveable, and made in the withdrawing of the Archeus from corporeal Offices: For I have not known the manner or mean whereby seminal Beginnings do express their natural endowments, the which is plainly unknown unto me from a former thing or cause: For I counterfeit it by conjectures only attained from a similitude or like thing.\(^86\)

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Van Helmont questions the degree to which such abstract operations can be realistically described, but he also contends that this level of precise description is ultimately unnecessary. The value of his “counterfeit” language – and the ultimate purpose of this text – lies in its ability to render the function of the Archeus intelligible. Metaphor here is a linguistic tool that lacks metaphysical significance.

Van Helmont neither fashions himself as a magician nor vilifies those who do; instead, he attempts to repurpose, often ineffectually, the aspects of magical tradition that he finds useful. Recall from earlier that the word “magic” for van Helmont has no special significance. He knows that the word has unsavoury connotations, and so he suggests that magical effects can be thought of as a kind spiritual power instead. He denies both the metaphysical significance of language in ritual magic and the epistemological significance of language in natural magic. To van Helmont, words not only fail to grasp reality but manage to so fail in a number of distinct languages. At most, there is a special cognitive significance that he allows for a person’s native language, which one can comprehend most easily and most directly. But the soul – the Image of God and its spiritual power – has no language: “[...] the first conception of the Soul consisteth out of Words, and so is without a proper tongue.”

There is no divine, Adamic language that holds influence over nature – a crucial assumption of many esoteric philosophies that likewise claims a strong Biblical foundation. And, as a result, neither are there words that capture the essence of an object in nature as this Adamic language claimed to do. Van Helmont makes words powerless – a key feature, in fact, of his treatment of demonic magic. Traditionally, any proposed relationship between the witch and the demon disempowers the witch to the dominant influence of the demon, either through the weakness of the imagination or the will with which she invokes the demon’s supernatural aid. In van Helmont’s interpretation, the witch’s power does not stem from her useless incantations, which serve only to convince her that her power is

87 van Helmont, “Verbo Ineffabili, Holocaustum vernaculum litat Author,” Ortus, sig. *2v; Oriatrike, sig. A¶2v: Quamvis enim primus animae conceptus extra verba consistat, atque sic absque propria lingua […]. This chapter has been translated by F. M. van Helmont from the original Flemish into Latin and by John Chandler from Latin into English.

88 The operative power of language is evidenced in scripture by various aspects of the Creation story in Genesis. However, perhaps the most profound evidence for the divine significance of language is found in John 1:1: “In the beginning was the Word: and the Word was with God: and the Word was God” (English quoted from the Douay-Rheims translation). This idea is tied closely to the reverence of ancient wisdom in Cabala; see: Wouter J. Hanegraaff, Esotericism and the Academy: Rejected Knowledge in Western Culture (Cambridge: Cambridge University Press, 2012), pp. 53-68. Cornelius Agrippa can be viewed as a contemporary exemplar of this belief in the magical utility of divine language in Cabala; see: Christopher I. Lehrich, The Language of Demons and Angels: Cornelius Agrippa’s Occult Philosophy (Leiden; Boston, Mass.: Brill, 2003).
derived from the demonic ritual. Rituals in witchcraft are not powerless due to the impotency of the deceived imagination; rather, the imagination carries the power that words and demons lack. This rejection of linguistic power is repeated throughout van Helmont’s work: “For truly, we are nothing solicitous about Names, I always as immediately as I can, cast an eye upon the thing itself.”

John Chandler, the man who first “Englished” van Helmont’s Latin works, echoes these sentiments:

It is not Words but Things, not Names but Natures, not Resemblances but Realities, not Sublimities but Simplicities, that the Sons of Truth do seek after.

Words, names, and resemblances opposed to things, natures, and realities. This may seem like the alchemical physician defending his empirical work from the censure of men like Henry Stubbe, but this statement also rails against a tradition of magic and occult knowledge that is characterized by linguistic power, celestial influence, and privileged secrecy. It is this numinous, uncommunicable aspect of the occult tradition that van Helmont deliberately establishes distance from with his novel interpretation of magic, denying the arcane practices espoused by Paracelsus, “Monarch of Secrets.”

Nevertheless, van Helmont cannot with complete freedom choose to utilize only his favorite aspects of the magical tradition while rejecting others. Because of the esoteric, internal source to which he assigns knowledge and power, his works never fully depart from the occult aspect of magical epistemology. This is why metaphor features extensively in his works – because it best serves the difficulties of this uncommunicable knowledge. Literal writing lacks the dynamic potential of metaphorical language. Although metaphor was unforgivably imprecise for many of his contemporaries, van Helmont noted its potential to supersede the rigors of definition in favour of conceptual clarity. Metaphorical language is “nothing solicitous about names,” seeing that it misapplies them; rather, metaphorical language connects ideas without assigning names. Metaphors “cast an eye upon the thing itself.” This is how van Helmont describes the systemic operations of the Archeus, whose name he never strictly defines. The metaphor is a necessary adaptation of language to the demands of knowledge that has no vocabulary.

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89 van Helmont, “De Magnetica,” Ortus, p. 767; Oriatrike, p. 780: [...] de nominibus siquidem nil solicitii sumus, rem ipsum, quam procime possum, semper aspicio [...]  
90 John Chandler, “The Translators Premonition to the Candid Reader,” in Oriatrike, sig. a2.  
91 van Helmont, “De Magnetica,” Ortus, p. 759; Oriatrike, p. 771: Monarchae arcanorum. This is van Helmont’s first use of this epithet; it appears occasionally in later works as well, including “Tumulus Pestis,” a tract published in his 1644 Opuscula Medica Inaudita.
LIGHT IN THE DUNGEON

I: Into Seclusion

There are men who claim to be sages (says van Helmont) whose acolytes are deceived by spectacles of group contemplation. But these charlatans have erred from the outset; any legitimate approach to spiritual contemplation is easily distinguished by its solitary nature, performed with the “Chamber-door being shut after them.” Van Helmont’s predilection for solitary work is also evidence in his short autobiographical chapters, where he presents his younger self as someone disgusted with the inadequacy of contemporary medicine and (although, of course, adept) largely isolated academically as a result. After ten years of travel and medical practice following the conferral of his medical degree, he recounts,

At length, in the year 1609, being now married, I withdrew myself from the common people, to Vilvord, that, being the lesse troubled, I might proceed diligently to view the Kingdoms of Vegetables, Animalls, and Minerals; by a curious Analysis, or unfolding, by opening Bodies, and by separating all things, I went about to search for full seven years.

We have discussed van Helmont’s isolation from both institutional knowledge and social engagement. As mentioned above, he had already removed himself from any major public presence before his indictment and imprisonment, and the subsequent controversy over the weapon salve ensured his absence from the press until 1644, the year before his death. Most of his professional life was characterized by this social isolation and, ultimately, the private alchemical endeavor necessarily marked by isolation in the laboratory. His alchemical practice, in this sense, systematized his tendency for isolation by presenting medical research in which mental and bodily isolation were integral to the proper understanding of his alchemical subjects.

Van Helmont’s incident with the coal brazier, when he was almost suffocated in an ill-executed attempt to warm his office, belies the state in which he worked: shut in and completely alone, though not inaccessible. The desire to work alone, however, was not itself unusual. Members of the Royal Society – among them, the for-a-time Helmontian Robert Boyle –

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92 van Helmont, “Mentis Complementum,” Ortus, p. 320; Oriatrike, pp. 314-5: clauso post se cubiculi ostio
93 van Helmont, “Promissa Authoris,” Ortus, p. 12; Oriatrike, p. 7: [...] tandem Anno 1609, iam conjugatus, me Gilvordiam subduxi et vulgo, ut minus districus, pegerem perlastrando regna vegetabilium, animailium, ac mineralium, curiosa analysi, corpora aperiendo, separandoque universa, per solidum septennium indagaturus.
possessed their private work spaces, where they could work in intellectual isolation. They all had assistants, of course, and in his case, van Helmont was evidently readily available to his family. But the idea of isolation – reflected largely by the isolated conditions of the workplace – is most importantly reflected by isolation of thought. Van Helmont would work attended by only a few assistants (who, being assistants, hardly counted as present). The rest of his epistemological process – the part requiring divine knowledge from the immortal soul – demanded isolation of mental and spiritual states.

There are many reasons that justify this choice to work alone. Some of them are economic; for a practicing physician, developing an exclusive treatment for a problematic disease would promise fame and money. Some of this isolation echoes traditional ideas of the sacred; and it is true that van Helmont’s writing carries a heavily wrought air of piety. He tries to distinguish himself from the connotations of the “magician,” whose practices rely on the legacy of ancient, occult texts to lend the gravity of sacred knowledge. Instead, van Helmont’s experiences evoke the divine:

For the knowledge of Diseases [...] also necessarily contains the knowledge of simples, their powers or virtues, their actions, changes, defects, alterations, interexchangeable courses, and connexions or dependances, as well amongst each other, as in respect of the vital powers. But every one of these do require the gift of God in a peculiar thing, to wit, understanding, and experience of selection or chusing out, of Sequestration or separation, of preparation, and graduation or subliming; of which I will shew, it hath not as yet been treated of by the Schooles.

The characterizing virtue of alchemical practice is in laboratory practice (with an added alchemical correlation between separation and purification). But much of van Helmont’s epistemology involves a divine “understanding” – a practice of spiritual contemplation that resists the profanity of public witness. Alchemy is not a practice for witnesses – and in many ways, it requires the practical removal of unnecessary distraction. It is an interesting quality of this epistemic process that it shares so much with the concerns of artistic production. One of the benefits of alchemy as a practice is that it creates, and van Helmont has after all tasked

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95 Shapin uses Boyle to explicate this relationship between the natural philosopher and his assistants: "The Invisible Technician," *American Scientist* 77, no. 6 (1989).

himself with a considerable creative responsibility: creation of medicine, of theories, of practices and explanations. He isolates himself to create, like a painter in his studio, and there he seeks the inspiration that he needs to direct his work. 

Artifice for van Helmont is nature under the influence of human control, uncovered and directed to the ends of the practitioner. Although inspiration may not recommend itself as a pressing problem for a physician, the alchemical laboratory is really useless without the inspiration that brings some fundamental understanding of the objects under study. Alchemical physicians must be artists to some extent, and part of their practice requires the inclusion of esoteric knowledge that, according to van Helmont’s evaluation of magical operation, can usually only be accessed under unpredictable circumstances. For van Helmont, inspiration is part of accessing this source of magical power, or spiritual efficacy, that he places within the soul of human beings. Knowledge of the world, though for an alchemist partly tangible and empirical, is useless until this perception can be perfected by the power of the soul – the same power that allows humans to exercise an incorporeal influence over nature that may be translated into corporeal manifestations. These manifestations must be understood in order to understand the capabilities and vulnerabilities of the human body – but intellectual perfection is the aspect that serves van Helmont in a creative and operative capacity:

For truly, Chymistry, hath its principles not gotten by discourses, but those which are known by nature, and evident by the fire: and it prepares the understanding to pierce the secrets of nature, and causeth a further searching out in nature, than all other Sciences being put together: and it pierceth even unto the utmost depths of real truth. 

This perfection of knowledge is a true understanding of nature and its operations. In other words, as we have said, he is concerned not primarily with material power but with understanding the essential nature of its operation. This is the intellectual advantage that van Helmont seeks for its practical advantages: the inspiration that precedes creative production.

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99 van Helmont, “Pharmacopolium ac Dispensatorium Modernorum,” Ortus, p. 462; Oriatrike, p. 463: Siquidem Chymia principia habet non logismis parta: sed quae per naturam sunt cognita, et per ignem conspicua: praeparatique Intellectum ad penetrandum occulta natura, ponitique; investigationem in natura ulteriorem, quam aliae scientiae omnes simul; et penetrat usque ad ultimas profunditates veritatis realis.
With this purpose in mind, the laboratory offers particular advantages. In the enclosed (and controlled) alchemical space, nature becomes a closed system. Van Helmont introduced a number of epistemological difficulties by rejecting the substantive significance of the microcosm-macrocosm analogy, but in the laboratory, nature becomes a microcosm of sorts by being constrained within its walls. When he isolates himself, he isolates a piece of the world within the laboratory to "vex." With an intent unmistakably meditative, the alchemist isolates himself to achieve higher understanding – and likewise, it is not only nature materialistically that becomes microcosm in the alchemical instruments. By isolating himself, van Helmont also isolates that other vital component of his epistemological process – that is, the inner, immaterial component of divine understanding. This practice of contemplation is meditative and altogether personal.

Van Helmont’s meditative isolation is not an oddity among the practices of his peers. Again, Descartes offers a parallel in the first of his *Meditations*:

> I have withdrawn into seclusion and shall at last be able to devote myself seriously and without encumbrance to the task of destroying all my former opinions.

Van Helmont’s evidently meditative practice could also be compared to the similarly reclusive work of later scientists who are placed by historians generally beyond suspicion of magic. In addition to the isolated practices of men already mentioned, one could consider William Harvey. Although he found fame in the anatomical theater, his work at home included reclusive meditation; he would enclose himself in a specially-constructed, subterranean chamber, enclosed from the light outside to pursue solitary contemplation. Harvey’s work on blood circulation begins here, framed not by the compiling of experimental data but by the meditative formulation of an idea, from which his inquiry followed. Certainly, it isn’t necessary to assume that Harvey would isolate himself in such a manner in order to pursue divine knowledge rather than simply creative inspiration. And there are plenty of safely practical justifications for such an eccentric habit, mostly regarding the need to avoid distractions in order to concentrate. But van Helmont’s meditative isolation claims more epistemological significance than this need for focus. When van Helmont meditates, it is significantly magical, because, isolated in darkened chambers, he is chasing illumination.

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100 By “vex” I refer to the famous passage in Francis Bacon: "Novum Organum Scientiarum," in *Francisci De Verulamio, Summi Angliae Cancellarij, Instauratio Magna* (London: Apud Joannem Billium Typographum Regium, 1620), Aphorism XCVIII.


II: Seeing as Knowing

Van Helmont’s discussion of the visual is not an explicitly addressed topic so much as it is an implicit obsession that manifests in terms, illustrations, and epistemological focus. When he addresses his inadequate descriptions of laboratory practices, he offers instead: “I will shew to our Sons, as the Lyon by his paw.” He gives a number of familiar reasons for his secrecy (among them the ubiquitous “pearls before swine”), but ultimately he offers this praise of experience. Vision is immediate and powerful in a way that language is not, and when van Helmont writes, he includes as much of the visual as possible. The remote effects of magical operations become beams of light; a metallic remedy, used to correct physiological operations, becomes a reflective glass. When van Helmont offers a systemic hierarchy in the body, he assigns its commanding orders to a radiating knowledge originating in the immortal soul and filtered through the sensitive soul to imperfectly direct the functions of the body. These beams, reflected in his medicinal looking-glass, reorient the Archeus to correct the body’s functions, just as disease disorients with compatible operations (“they [the Archeus and the disease seed] do pierce each other after the manner of lights”). Light governs the human body. When van Helmont describes his meditative pursuit of spiritual knowledge, he evokes this same systemic light to describe the illumination of the mind by the divine knowledge in the immortal soul. Between the recognizably reflective quality of metals and the illustrative idea of knowledge and illumination, van Helmont has intentionally conflated a corporeally visible quality of nature with a poetically expressed quality of cognitive experience – a relation reminiscent of light’s long-standing double-character. Light is both how humans see and how they understand what they see; in this sense it directs the mind and, through the same operations, directs the functions of the body.

But the visual is never so clearly significant to van Helmont and his natural philosophy as when he discusses the inspirational aspect of his medical practices. Harvey meditated in the dark

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106 van Helmont, “Magnum Oportet,” Ortus, p. 162; Oriatrike, p. 158: [...] eo quod per modum luminum se penetrant [...]
to remove the distraction of corporeal vision. Van Helmont does something similar; if perfect knowledge can truly be accessed from one’s soul, then its rays of light – and our ability to perceive them – are in many ways as or more significant than the rays of sunlight that illuminate the alchemical apparatus. At this point, van Helmont’s stance on the operation of magic underlies not only his understanding of interactions between medicine and disease in the body, but also the spiritual hierarchy of the body – a hierarchy that he structures in a manner sensitive to the importance of the soul not only for magical practices and the operation of disease but, most significantly, the process of intellectual comprehension. Van Helmont's unusual term for the witch – *saga* – focuses on knowing rather than doing. And knowing, to van Helmont, is a very visual process; knowledge “is to be begged only of God, that he may vouchsafe to open the eyes of the mind, who to Adam, and who to Salomon, demonstrated the properties of things at the first sight.”

When the most perfect image of the world exists within, sight must be directed within as well, in a necessarily occult solution to the epistemological problems generated by his unwillingness to compromise on mastery of magical operations. Though van Helmont does attempt to distance himself from the most limiting aspects of occult tradition, the inherently personal nature of spiritual knowledge offers little recourse; his adaptive response necessitates the pursuit of illumination. For van Helmont, the most significant light in his medical practice is not the alchemical furnace but an inner, divine light:

> Solomon calls the spirit of man, the Lamp or Candle of God. But not that God is in darkness, or that he has need of the splendor of the spirit of man. But altogether, because the hidden knowledges of things, are infused by the Father of Lights into us, by means of this Candle.

The pursuit of this illumination, of “hidden knowledges,” is what finds van Helmont chasing divinity in dreams.

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PART III:  
THE SEPULCHER

“I began therefore afterwards to contemplate, that my intellect might more profit by figures, images, and visions of the fantasy in dreams, than by the discourses of reason.”

In a small treatise on the plague, van Helmont opens, before discussing the disease itself, with a compelling story. He recalls a long night, doubtless spent laboring for some time in his laboratory. He finds himself anxious and unable to sleep, until: “A dream befell me….”

The story that follows illustrates van Helmont’s struggle with the obscurity of nature. In his dream, he finds himself proceeding by candlelight through a labyrinthine grotto. The air is thick and poisonous, rendering the candle nearly useless. Meanwhile, he is harried by ill-tempered bats, provoked by this dimly lit exploration. His goal, hidden at the center of this hardly navigable crypt, is a sepulcher:

I have therefore deemed the truth of medicine, and knowledge of a Physitian, to have hid itself in the stable Foundation of Nature, and the more hidden Sepulchre, from the unworthy and defiled beholding of Mortals, and to have forsaken our commerces, and to have overwhelmed itself in many labyrinths and perplexities; so that, by reason of the smallness of light which is social unto us by nature, truth remains covered over with darkness, and hedged about with difficulties.

The images in this dream are not ambiguous. The darkness is the obscurity of nature, combining with a poisonous air to overcome the efforts of human exploration – this is the candlelight, the limitation of human understanding. The bats nesting in the vaults are blind academics, comfortable in the darkness of their ignorance. However, more telling than these images of bats and candles is the sepulcher at the grotto’s center. This sepulcher, which men as great as Avicenna and Paracelsus have failed to access, entombs true knowledge of nature. It may seem strange to think that van Helmont has evidently pronounced knowledge of medicine dead, when it is ultimately the focus of his own research (as well as that of many others). This death of knowledge may be one of many manifestations of van Helmont’s chronic disappointment in contemporary academic physicians, whose gross inadequacies continuously plague him in visions like this one. However, in the case of epistemology, irresponsible academic practice merely

1 van Helmont, “Venatio Scientiarum,” Orus, 26; Oriatrike, 21: Coepi ergo deinceps contueri, quod meus intellectus plus proficeret per figuras, imagines, et visiones phantasiae sonnialae, quam per Rationis discursus.
2 van Helmont, “Tumulus Pestis,” Opuscula, 5; Oriatrike, 1073: Obvenit mihi somnium […]
3 van Helmont, “Tumulus Pestis,” Opuscula, 5; Oriatrike, 1074: Existimavi itaque Medicinae veritatem, ac Medici scientiam, in naturae fundamento stabili, absitioque sepulcro, se occultasse, ab indigno contaminatoque mortalium contuatu, nostrumque regiisque commercium, multis se labyrintibus et anexitudinis obruisse. Ia ut pro luminis exiguitate, quod nobis ex natura sociale est, maneat veritas tenebris obducta, et obscura diffinitibus.
FIGURE 3: An illustration of van Helmont's dream of the sepulcher, included in the 1683 German translation of his works, Aufgang der Artzney-Kunst. The plaque on the tomb reads: "Grab der Wahren Artzney-Kunst," or, "The grave of the true medicinal art." (Image courtesy of Bayerische StaatsBibliothek digital and Münchener Digitalisierungszentrum Digitale Bibliothek.)
presents an unnecessary complication for an already daunting endeavor. The bats are not the primary obstacle in this dream. Nature itself has here “forsaken the commerce of mortals.” This search for truth in nature is more than a struggle – it is seemingly impossible. The “smallness of light” that humans have with their candles – that light of understanding – is not especially effective in diffusing the darkness surrounding the sepulcher. Knowledge is already hidden in nature, but the inadequacy of human experience carries scientific certainty into seeming impossibility.

In this sense it is clear that this metaphor illustrates epistemological difficulties on both sides of scientific inquiry: obstacles inherent in nature and obstacles inherent in humans. There is a quality of nature that renders it inscrutable, and the inadequacy of human experience heaps misunderstanding onto an already unclear picture. However, the difficulties that van Helmont faces in his dream reveal the fundamental problems that his natural philosophy is intended to supersede. Because of nature’s inherent obscurity, van Helmont finds himself obligated to provide an explanation of how one may approach the problem of knowing. Likewise, when his progression into the cave becomes untenable, he resolves that he must cast light into the obscurity of nature:

I decreed to withdraw myself from the vulgar sort, and under light, thoroughly to knock the Vaults of Nature full of holes […]. I endeavoured by the unwearted pains and charges of forty years, to break the rocky stones asunder with the Axe, Crook, Fire, and sharp liquor, that light may flow in from heaven, and that the Night-birds which presume to keep the Keys of Science, and the narrow passage of Truth, may vanish away […]

Van Helmont’s assault on the “Vaults of Nature” depicts an epistemological process in which he struggles with the necessity of the divine and the boundaries of natural operations. It is a process ultimately focused on what humans can reliably accomplish, resting partly on a delineation of how human understanding takes place and partly on how this understanding can be triggered through procedures. This is the light and the axe: the moment of clarity and the means that must be devised to attain it. This involves not only the magical efficacy that allows human dominance over nature, but also the development of a structured approach to knowing nature that must address the same philosophical difficulties faced by many of his contemporaries. Van Helmont’s is a system that, like others, begins with a critique of reason – and that, perhaps unlike

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4 van Helmont, “Tumulus Pestis,” Opuscula, 6; Oriatrike, 1074: [...] decrevi me vulgo subducere, et fornices naturae, frequenti foramine, subter lucem pertundere. [...] Securi, unco, igni, et liquore acri, saxa differgere, quadrarginta annorum indefixis laboribus, et impensis, studui, ut lumen coelitis influat, utque nocturnae volucres, quae se claves scientiarum et Veritatis angitortum custodire praesumunt, evanescant [...].
anything else, culminates in a system of controlled hallucination. Here, in dreams, he seeks to expand the limitations of human understanding.

VISION AND PRACTICE

I: The Problem of Sight

Recall the importance of the visual in van Helmont’s natural philosophy. Experiencing nature is a vital part of understanding it, and the ability to understand nature is an endeavor reliant upon perception – and perception, reliant upon the senses. The problem that van Helmont faces is two-fold; before he can even attempt to dispel the inherent obscurity of nature, he must devise a reliable way to experience it. He was not, of course, the first to recognize the epistemological difficulties of human experience. The senses present familiar difficulties that became more complex in the seventeenth century, and while van Helmont primarily questioned the integrity of human perception, many of his contemporaries reevaluated the integrity of sensory experience. With this in mind, van Helmont’s particular problems with human experience – and how the senses and understanding are mediated – can be illuminated by considering some of the comparable problems with sensory experience faced by his contemporaries.

For Johannes Kepler, the primary significance of light, rather than being largely “illuminating” in a metaphorical sense, is its physical contribution to sight. The process by which we see, according to him, can be reduced almost entirely to the motion of light. This proposition, much like van Helmont’s theory of disease, is one both full of possibilities and plagued by disillusionment. When Kepler brought light into the light, as it were, he made apparent its operation as the foundation of vision – no less splendid and no more perfect:

I firmly established by irrefutable experiments, that […] from the Sun, and from the colors illuminated by the Sun, species exactly alike are flowing […] until for whatever reason, they fall on an opaque medium, here they paint their source: and vision is produced, when the opaque screen of the eye is painted this way […] and it is confused when the pictures of the different colors are confused, and distinct when they are not confused.5

This doubt concerning the visual experience distanced the natural philosopher from his subject matter, not merely calling into question the validity of all evidence gathered by the senses (which of course mediate all experiences of the physical world), but also, for Kepler, presenting an understanding of vision that is now less meaningful, divorced as it is from an intimate cognitive relation.

The works of van Helmont reveal similar anxieties; however, he is more concerned with the integrity of perception rather than with the senses. His disillusionment with human perception is complete and devastating, informed by a more fundamental, philosophical rejection of knowledge that can be considered mortal, or distanced from divinity. Recall that the imagination directs physiological function and, through the same mechanisms, also frames disease. A similar duality appears when van Helmont assigns the imagination responsibility over receiving and interpreting sensory experience. Although the imagination allows us to understand the world by receiving and framing information from the senses, it can also introduce a misleading interpretation of these experiences. The inevitable conclusion is that, at best, only an incomplete understanding of the world can follow from human perception. Humans have no access to a true understanding of nature – unless one can somehow supersede a mortal perception of the world in order to escape the flaws of human experience.

This is a daunting necessity and one more perilous for the ease with which perceptual alteration can either clarify or more severely confuse, as thoroughly demonstrated by fears of demonic influence. Still, the potential deceits of false images presented to the imagination are only secondary to the egregious misinterpretations introduced, in fact, by human reason, whose deficiencies cannot be overstated:

But I long since learned, that our mind doth understand nothing by imagination, nor at length by Figures or Images, unless the wretched and miserable Discourse of staggering reason shall have access to it.6

And therefore, my minde suspected, that Reason did not onely feign perswasions, for the deceiving and flattery of it self, as oft as the minde did design it for a Judge and Assistant: but also, that Reason did plainly yield it self for a Parasite, and to the servitude

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6 van Helmont, “Imago mentis,” Orius, p. 268; Oriatrike, p. 263: Jamdudum autem didici, quod mens nostra neiquam intelligat per imaginationem, nec demum per figuras, aut imaginis, nisi mister aliquo aerumnosus vacillantis rationis discursus accesserit.
of the desires, even of those that are most Religious: and did bring with it, more of
thinking, rashness, and blockishness, than of Knowledge and Truth.\(^7\)

In van Helmont’s description of human perception, the traditional difficulties are reversed; it is
the inseparable influence of reason and its inherent inadequacies that render the imagination’s
interpretation of sensory experience unreliable, rather than the senses themselves introducing
error. This sentiment may seem extreme; however, van Helmont’s unwillingness to overlook the
flaws of human reason is not an attitude unique to him. In fact, Francis Bacon found himself
troubled by similar ideas:

> [...] the entire fabric of human reason which we employ in the inquisition of nature is
badly put together and built up, and like some magnificent structure without any
foundation.\(^8\)

Given this complete disenchantment with every tool native to human inquiry, a natural
philosopher like Bacon, who is still not as prone to radical departures as van Helmont is, might
present the guidance of reason as the necessary counterbalance for moments when sensory
evidence is questionable. This is the solution that he proposes in a famous metaphor from The
Great Instauration, in which he insists – through the representative roles of the ant, the spider, and
the bee – that the scientific enterprise should be one characterized by a balance between sensory
information and reason’s interpretation of it.\(^9\) This is a compromise that van Helmont cannot
accept. Sensory knowledge that has been subject to the mediation of reason, is, by his reckoning,
no better than “Apple Knowledge” – an inherently flawed understanding of nature inherited
from the Fall. A natural philosopher content to compromise for Apple Knowledge would find
himself in the company of the bats:

> And I learned more and more, that Reason was far off from, and moreover also, out of
the light of truth, because like Bats, it only cannot endure or bear the light, being content
with its own borrowed Glow-worm light.\(^10\)

Indeed, reason is worse than a broken crutch for blind academics; its “feigned persuasions” lie at
the Biblical foundation of human inadequacy:

> Therefore the minde seised on frail Reasons Coat, she being also a fugitive from the
Soul, and hath spoiled her of every Garment, even unto nakedness: But then it was

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\(^7\) van Helmont, “Venatio Scientiarum,” *Ortus*, p. 21; *Oriatrike*, p. 16: *Suspicataque est ergo mens, quod Ratio, nedum in fallaciam, et suis quási obsequium, fingeret suadelas, quoties mens, cam in Judicem, sive Assessorem, deliceret: verum etiam, quod ratio plane se in parasitam, et in servitutem daret desideriis, etiam sume religiosorum: plusque putationis, temeritatis, et stoliditatis, quam scientiae, ac veritatis, secum adduceret.


\(^10\) van Helmont, “Venatio Scientiarum,” *Ortus*, p. 23; *Oriatrike*, p. 18: *Magis, magisque didici, quod Ratio, procul dein et extra lumen veritatis; eo quod tantum lumen, instar vespertilionum, tolerare nequeat, suo nitidulae splendore, mutuato, contenta.*
confirmed to the minde, that Reason being left with us, came to us, as it were, a brand from a tormentor, for a remembrance of Calamities, and of our fall. And that the knowledge of good and evil, attained by eating of the Apple, was Reason its very self, which is so greatly adored by mortal men.\textsuperscript{11}

Reason is the raiment of mortality: like death, introduced into the world by man at the Fall. Its very purpose since has been to separate humans from perfection of knowledge. The only solution left for reliably understanding sensory experience is to surpass these limitations and benefit directly from the clarity of divine understanding. This dream of divine knowledge is one that van Helmont shares with his magician predecessors; but the unique challenge he faces is to make it both practical and reliable in a way that is, traditionally, impossible.

Paracelsus offers one such traditional model for attaining divine knowledge. His markedly spiritual approach to alchemical medicine embodies an epistemological solution that circumvents the untrustworthy senses as well as the potential deceit of memory and imagination by appealing directly to an immaterial virtue in natural things. Therein, perfect knowledge of the world may be obtained through a kind of spiritual communion. This system is characterized by the necessity of divine illumination:

\begin{quote}
In Him who has created all things lies also wisdom, and only He knows the primal cause of all things […] Although the remedy is given by nature, it must be revealed to us by the all-highest book [\textit{Sapientia}, or, “God himself”], so that we may learn what is in it, how it is made, how it is obtained from the earth, and how and to what patients it should be administered.\textsuperscript{12}
\end{quote}

This is Paracelsus’ “Light of Nature,” a metaphorical light indicating spiritual illumination. This is an apparent solution to the failures of human knowledge but, nonetheless, an inherently problematic one. The Paracelsian physician has no control over this illumination. Only God as creator knows nature perfectly, and so the only way to understand it is to appeal to him directly. And, of course, the decision to respond to such an appeal depends entirely on divine will. This supernatural illumination originates outside of nature and has little to do with any specific procedures described by Paracelsus. The intellectual state that one must reach is passive and unpredictable, and in this sense, it does avoid the active misdirection of reason. One must simply be a \textit{magus} to understand how alchemical processes really work:

\begin{itemize}
\item \textsuperscript{11} van Helmont, “Venatio Scientiarum,” \textit{Ortus,} p. 21; \textit{Oriatrike,} p. 17: \textit{Rationem ergo caducam, etiam ab anima fugitivam, mens apprehendit chlamyde, illumque omni veste, in meditatem usque, spoliavit: Atqui tunc menti confirmatum est, quod Ratis, nobis relita, adventisset, tanguam stigma a tortore, in calamitatum, casusque nostris memoriam. Et quod scientia bona et mali, eum ponti acquisita, esset ipsissima Ratio, tantumque a mortalibus adorata.}
\end{itemize}
Should something become revealed, it must be given by Him who has hidden it and to him who is called upon, able and gifted to interpret it. Just as the book of Revelations – which nobody will ever interpret unless he be a Magus, born or adopted […]

However, the practicability of such processes is limited by the divine hand that bestows this knowledge and the unknowable criteria according to which it does so. In van Helmont’s work, the process of illumination is also present, though altered in order to address some fundamental difficulties with this solution.

It remains that this spiritual process of understanding cannot be a very useful one if understanding can only come about unpredictably, as God wills it. There must be some extent to which the practitioner can circumvent reason while maintaining an active role in his research, even if the most crucial knowledge is withheld temporarily by the divine. In the works of both Paracelsus and van Helmont, at least half of the process of knowing must be instigated by the work of the alchemist. Understanding is not a passive process, and the alchemical experiments that van Helmont commits himself to, seemingly tirelessly, are performed in an effort to produce some sort of knowledge (though not itself perfected) that may prompt a clear understanding of the purpose of a thing and its manner of operation. This is, after all, one virtue that the practicing physician holds over the scholar: that medicine “leaves a work behind it.”

This is the only way that medicinal remedies can be paired with the diseases they are intended to cure – through an exploration of the various effects of the given plant (or mineral, etc.), both through experiment and through divine understanding:

For truly, Chymistry, hath its principles not gotten by discourses, but those which are known by nature, and evident by the fire: and it prepares the understanding to pierce the secrets of nature, and causeth a further searching out in nature, than all other Sciences being put together: and it penetrat usque ad ultimas profunditates veritatis realis.

Though limited by mortal understanding, alchemy is still a powerful epistemological tool, a means by which the alchemist may separate nature into fundamental forms and rebuild it to serve diverse ends. The alchemist’s potential to move beyond this utility in order to reach the “utmost depths of real truth” depends on accessing divine knowledge – that is, illumination – in order to circumvent the faulty interpretations offered by reason.

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14 van Helmont, “Respondet Author,” Ortus, p. 526; Oriatrike, p. 526: […] post se namque opus relinquuit.
15 van Helmont, “Pharmacopolium ac Dispensatorium Modernorum,” Ortus, p. 463; Oriatrike, p. 462: Siquidem Chymia principia habet non logismis parta: sed quae per naturam sunt cognita, et per iguernum conspicua: praeparatque Intellectum ad penetrandum occulta natura, ponitque; investigationem in natura ulteriorum, quam aliae scientiae omnes simul; et penetrat usque ad ultimas profunditates veritatis reals.
For the man who isolated himself in darkened chambers, there is only one answer to the “the wretched and miserable Discourse of staggering reason” – a solution made possible by the “senseless” state of sleep:

Under which I once afterwards ere long, beholding that in my imagination and as it were, talking to the same, I being at length notably wearied with study, fell asleep, that at least I might stir up a dreaming vision, whereby I might draw out that desirable thing to be known. According to that saying, "Night unto night sheweth knowledge," and surely it is a wonder, how much light, those kind of visions unfolded to me, especially, my Body being not well fed for a good while before.16

Van Helmont must dream – and he must control the dreaming.

II: In Dreams

There were many other natural philosophers dreaming in the seventeenth century; some treated the dream as a dangerous diversion, others used it as a literary tool.17 In 1608, Kepler recorded a dream of his own in the novel Somnium.18 Kepler, however, leaves little ambiguity that his dream is not one that he actually experienced. To begin with, the primary story of the Somnium is buried within multiple levels of literary distance: a story within a story within a book within a dream (itself within a book). At this distance, Kepler takes his reader to the moon, conveyed in the arms of a demon. The story is an interesting method by which the reader’s perspective may be placed outside the Earth and from there directed to the heavenly motions, which suddenly look quite different. In reality, of course, it is light that brings the moon to Kepler, rather than the demon that must move him there – the light itself providing knowledge of heavenly motions that otherwise the demon’s supernatural agency must provide. For van Helmont, however, neither physical light nor supernatural agency can be adequate sources of knowledge; rather, he would insist that the dream itself illuminates the heavenly motions.

This understanding of dreams as epistemologically significant allows van Helmont to construct a practice capable of controlling the divine illumination offered by them. His

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18 This work is available in English translation: Johannes Kepler, Kepler's Somnium: The Dream, or Posthumous Work on Lunar Astronomy, trans. Edward Rosen (Madison: University of Wisconsin Press, 1967).
sepulcher dream is not presented as a literary construction, but instead as both an illustration of and demonstration of his epistemological process. The dream is not merely a metaphor but actually a vision, made possible by his “Body being not well fed for a good while before.” What the sleeping state offers is a chance to draw closer to divine knowledge – to let go of “frail Reason’s Coat” and receive a vision. And because sleep provides the unique circumstances under which dreaming is possible, it follows that recreating these circumstances may allow the natural philosopher some level of control over when he receives visions.

The idea that visions may be induced is a significant one, because it reveals so much about the unique relationship between divine knowledge and human influence. In the Paracelsian tradition, within which van Helmont is generally placed, the ability to apprehend the hidden potential in nature is contingent upon, not only divine will, but active divine intervention. There is a practical facet of Paracelsus’ natural philosophy that can be potentially accessed by anyone with enough diligence and intelligence (and, of course, access to alchemical arcanum), but still, only a magus can fully understand how to direct this enterprise and obtain the appropriate results. In this system the process of knowing nature becomes a very private one, in which an individual must have a divinely imparted prerogative to take part in this epistemic process. Although particular emphasis is placed upon the work of an alchemist-physician, his success is ultimately dependent upon selectively imparted divine knowledge in an experience that cannot be shared with or extended to others. In van Helmont’s system, this moment of perfect understanding may instead be apprehended and placed under his control by controlling the circumstances of the dream.

Even when the appearance of visions can be somehow invoked, however, apprehending them remains problematic, especially when one considers the level of human intervention that this process demands. The metaphorical images in visions carry entirely different significance than the metaphorical illustrations composed by van Helmont himself. Visions allow nature to be understood perfectly rather than merely heuristically, the only manner in which such experiences can be communicated to others. Visions cannot normally be sourced in human enterprise, because the metaphors in a vision are a true, divine representation – not an illustration like artificial, linguistic ones. This is what distinguishes the potency of dreaming in van Helmont’s work from the illustrative use of dreams in texts such as Kepler’s Somnium. Van Helmont localizes the knowledge that dreams offer in a way that allows a procedural approach to obtaining it, in precisely the same manner that he, in his theory of magic, places magical efficacy uniquely within human beings. His solution to the problematic necessity of divine understanding utilizes such occult practices, but in service to new procedures.
III: The Utility of Visions

Van Helmont’s ability to place visions under human control is made possible by how he defines the systemic hierarchy of the human body, allowing and even encouraging a level of human influence that simply could not be allowed if the source were God himself. However, this source must nonetheless retain the divine knowledge that affords visions such import. Van Helmont accomplishes this by displacing the source of this knowledge from God into the human soul:

I say, therefore, that the glorious Image of God is not only in the Soul; but the very Mind itself is essentially the glorious Image of God: And therefore the Image of God is as intimate to the Soul, as the Soul itself is to itself.19

Therefore also, our Soul understanding itself, does after a sort, understand all other things, because all other things are in an intellectual manner in the Soul, as in the Image of God.20

Here the hand of God does not directly interfere with illumination. Rather, the hand of God persists as something like a set of fingerprints, with which the natural philosopher my access everything that is hidden in nature. This divine knowledge was imparted fully at Creation – not, as in Paracelsus, selectively according to the efforts of the magus. In this way, it is no longer necessary for humans to await visions, because the knowledge is already present.

With this idea of inherent knowledge, van Helmont can explain why a true understanding of nature must be derived from the esoteric tradition that he appropriates rather than from formal education. The bats in van Helmont’s sepulcher dream reveal a certain bitterness surviving from his days as a student – as well as his rivalry with the academics that he despised as a practicing physician. However, this system of inherent knowledge provides a philosophical justification for rejecting the schools as inherently inadequate. Understanding cannot originate in formal education, because the part of human experience that produces true understanding is the soul. Van Helmont’s anti-authoritarian vendetta against academia mirrors that of Paraclesus (if, perhaps, with less public drunkenness). Paracelsus’ epistemology presents two metaphorical Books – the Book of Truth and the Book of Nature – neither of which includes the curricula of

19 van Helmont, “Imago Dei,” Ortus, p. 712; Oriatrike, p. 718: Dico ergo, quod gloria imago nedum est in anima: sed ipsamet mens est essentialiter gloria Dei imago. Ideoque tam intima animae est Dei imago, quam ipsamet anima sibi […]

the academies. For van Helmont, this Book of Truth would refer to that divine knowledge in human beings; and in this case, knowing the world follows from knowing oneself. In his system, the light of illumination is not Kepler’s physical light or Paracelsus’ “Light of Nature,” which might otherwise come from a divine source outside of nature. Instead, illumination comes from the soul, which constantly radiates like beams of light into the rest of the body. From here, the imperfect knowledge derived from chemical experiments can be perfected by its image in the soul – a sort of meeting between the mortal mind and the immortal mind. This knowledge is already localized, though there exist between the mind and the soul certain obstacles that must be removed in order to cast light into the obscurity of nature and allow these visions to take place.

Placing divine knowledge within the human soul already solves one of van Helmont’s obstacles by making this knowledge much easier to access. Now, obtaining a complete understanding of something in nature is possible, provided one can suppress human reason, which normally confuses a true understanding of nature. Sleep provides a state in which reason’s authority can be supplanted:

because in sleep, the whole knowledge of the Apple doth sometimes sleep: Hence also it is, that our dreams are sometimes Prophetical, and God himself is therefore the nearer unto Man in Dreams, through that effect: To wit, when as the more inward Magick of the Soul not being now interrupted by the knowledge of the Apple, doth even on every side diffuse it self in Understanding […]21

Usually, these necessary aspects of human understanding (Apple Knowledge) confound the ability to receive knowledge from the soul – knowledge which itself is neither sensual nor rational. Van Helmont’s access to visions is frequent, as it must be, if visions alone present true understanding. These visions are generally vaguely described, but he does reveal that he often adheres to ascetic practices: deprivation of food or sleep. His dream of the sepulcher, for instance, was preceded by a sleepless night. However, substances that are capable of inducing visions present a more controllable solution that requires less investment. If visions can be chemically induced, then illumination can be made part of a carefully directed practice that allows unmediated exploration of nature.

Chemical control over personal illumination could be a perfect solution to van Helmont’s epistemological problems, but the advantages offered by ingesting potentially perception-altering substances are countered by unique problems. Under these circumstances,

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there must be some method of ensuring that such influences clarify perception rather than further confuse the senses with false impressions. But in fact, the influences that incite madness are, says van Helmont, only equivalent to the parasitic influences of reason, and “madnesses, and the alienations of reason are not proper to the minde.” Any method that can properly remove the influence of reason should repel madness as well. This relationship also, in fact, presents a unique solution. Under proper direction, a substance in nature that normally carries the power to corrupt the proper function of the mind and thus drive an individual into waking dreams – that is, certain kinds of poison – must also hold the potential to suppress the human faculties and enable the soul to be intelligible through the same processes by which dreaming in sleep may present illumination. In this way, a substance normally considered poisonous could potentially be altered alchemically to produce a substance capable of inducing the state that brings perfection of knowledge. In fact, there is no need to continue speculating about potentialities; van Helmont tried it himself:

And therefore I did promise to my self, that that poysone after the manner of a Keeper, and a huske, did cover some notable and Virgin-Power, created for great uses, and the which might by Art, and Sweats alay poysons, and cause them to vanish. Wherefore I began divers wayes to stir or work upon Wolfs-bane: And once, when I had rudely prepared the Root thereof, I tasted it in the top of my tongue: For although I had swallowed down nothing, and had spit out much spit, yet I presently after, felt my skull to be as it were tied without side with a girdle.

Wolfsbane – the most deadly poison then known – possesses the greatest power over the body and likewise, in theory, the greatest potential benefit. One can imagine the gravity of this moment: the insetting results of a (hopefully) flawlessly executed theory, doubtless paired with no small amount of anxiety. The timing could be not worse, however, for van Helmont is no sooner reaching this altered state of consciousness when he his accosted by his family. There is some household business to attend to – something he perhaps should have completed before poisoning himself. In the process of performing these mundane activities, however, he notices something unusual:


24 van Helmont, “Demens Idea,” *Ortus*, p. 279; *Oriatrike*, p. 274: *Ideoque; pollicebar mihi, toxicum istud, per modum custodes et siliquae, insignem aliquam et virginem potestatem, in magnos usus creatum tegere, quodque; per artem et sudores toxicam misserent et evaneserent. Quapropter coepi diversi modo Napellum agi. As semel, cum eius radicum rudier praeparassim, deugastari in apice linguae. Etenim quamquam nil deglutiveram, multumque; salivae spativeram, sensi tamen mox abinde, cranuem velut zona foriciscus stringi.*
At length this befell me (which never at another time) that I felt that I did understand, conceive, savour, or imagine nothing in the head, according to my accustomed manner at other times; but I perceived (with admiration) manifestly, clearly, discursively, and constantly [...].

Here he has, it seems, successfully withdrawn himself from the deceitful influences of reason’s flawed interpretations into a state of perfected understanding (lasting some two hours). This is not an experience that he manages to recreate, but he claims to have achieved some level of permanent clarity from his experience, along with no insignificant amount of specific knowledge concerning the placement and nature of the soul in the body. This moment, though unique, is one in which the natural philosopher has seized through his own devices that moment of illumination traditionally considered solely within the power of the divine to impart.

But how can this knowledge be trusted? Van Helmont acknowledges the affinity between visions and madness. Both involve a change in perception, and both affect the usual functions of the mind (reason, largely). This connection also extends to the dreaming state: “madness is nothing but a watching or waking dream.” There is, however, an important distinction between the ultimate effects of visions and madness: one clarifies, the other confuses. In fact, van Helmont is able to contrast his wolfsbane experiment with several undisclosed “ecstasies” that he claims to have experienced before; there is a clarity of mind in this instance that his former experiences lacked. Ultimately, however, the burden of proof lies on the alchemical process that he uses to transform this poison into something useful:

In the meantime, I somtimes in that joy, being in doubt, feared least the unwonted chance should lead to madnesse; because it had begun from poysyon: but the preparing of...
Van Helmont seems adequately convinced that wolfsbane has been rendered beneficial, but he does not disclose his methods. In fact, he cannot even recreate what he experienced; he attempts it more than once, without success. Perhaps because he has the most misgivings concerning the legitimacy of this particular method, wolfsbane is not, in fact, the only method he uses to induce visions, although it is the most thoroughly discussed. Nevertheless, the theory that bore the experiment does provide an interesting foundation within van Helmont’s natural philosophy for the validity of his experience. In order to truly differentiate instigating visions from inducing madness, the processing of poisons to render them beneficial must be considered a process of reversion. Van Helmont anchors this discussion in Genesis. Recall that the advent of disease was not an act of God, but instead an actualization by humans of a potential placed in nature:

Man alone made Death for himself, and hath applyed Causes unto himself as a Positive Being: From whence he hath become mortal, and Death hath been made nature: For what the Devil could not do, man having a possibility but not a necessity of dying, could do.

The implication, of course, is that man retains some level of power over what he has created. Against death, medicine may be utilized. There are also aspects of nature that, formerly beneficial, were corrupted by the Fall – namely, poisons. It follows that these poisons in their original states must have existed to benefit humans, and that subsequently humans retain the capacity to alter nature to make them beneficial again – and in doing so, to likewise suppress some aspect of human imperfection. This chemical solution to van Helmont’s epistemological problems reveals a remarkable level of continuity within his natural philosophy, from the operation and treatment of disease to the placement and operation of magical efficacy, extending to the flaws of human perception and the control of personal illumination.

Here is the fire that breaks the vaults of nature: the potential to control visionary knowledge. When van Helmont processes wolfsbane, he is creating a substance that can remove the boundaries between the mortal mind and the soul, from which the “light of heaven” can then illuminate the obscurity of nature. The process itself, in spite of its supernatural

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implications, requires only the utilization of nature to instigate and direct the process by which the vision is induced. Even the target of the wolfsbane remains focused on what is mutable and purely human: freeing the senses from its “parasite,” reason. The soul is a passive participant; it never ceases to offer the illumination that we are normally incapable of apprehending. The task of the natural philosopher is merely to weaken the souvenirs of the Fall that have made the body such a “strange inn” for the soul. In this way, visionary experiences also become a kind of reversion, or restoration. The ingestion of processed poisons may be dissociated from the possibility that this practice induces a confused, unnatural state of consciousness, because van Helmont describes the action as a return to a former state – a sort of readjustment to make the body a more familiar inn for the soul.

This familiarity is what makes processed poison such a useful epistemological tool. Van Helmont’s approach to knowing nature is, ultimately, entirely concerned with familiarity. This is an idea echoed in his theory of disease, wherein the disease seed enters the body as an unknown guest. Likewise, a natural discord exists between the eternal and the mortal in humans that limits the extent to which nature can be properly perceived and understood. In this metaphor, the soul is a guest in the body – though not, of course, a violent guest like disease. Rather, it is the inn that he considers to be unfamiliar, and likewise it is the inn that must be rendered familiar. The process by which the body is made a more familiar inn for the soul is one intended to create an environment in which the soul may know itself. When the proper state is reached (whether or not through the aid of wolfsbane), the natural philosopher may look inward and know his soul – and by extension, know the world.

The inherently personal nature of this epistemological practice presents some communicative difficulties that we have seen van Helmont recognize and attempt to rectify. Here, the vision itself and the process of inducing it have been made apparent in operation, if not rich in procedural detail. Van Helmont neglects to describe precisely how he prepared wolfsbane, but there is no indication that the knowledge of this process is arcane and privileged as it would be in the Paracelsian tradition. The important distinction is that there is no longer a magus; instead, there are practitioners protecting the economical and philosophical value of their practice:

Therefore let them pardon me, as many as do write unto me these words: I pray thee explain thy self, speak more manifestly of the Preparation of Secrets: Because that is a new method

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31 van Helmont, “Demens Idea,” *Ortus*, p. 281; *Oriatrike*, p. 276: *alienum hospitium*
of learning Philosophy, the which they must learn in the same manner that I have learned it.\textsuperscript{32}

What van Helmont fails to provide in detail must be accounted for by the adequacy of his explanations. In this manner, the methods that van Helmont employs, while largely incorporating resources from the occult tradition, have been reduced in application to the functions of an instrument – one that, like Galileo’s telescope, operates in a manner distant from the experiences and technical knowledge of most who read about it.\textsuperscript{33} This instrument of hallucination is one that van Helmont has constructed to satisfy the epistemological problems that plagued his natural philosophy. It has been designed to operate in a predictable manner according to the will of the person who operates it. It has clear applications, utilized to overcome specific boundaries and achieve a certain end.

The telescope is designed to bring the eye’s perception of physical light somewhat closer to perfection by extending vision beyond natural human capabilities. Van Helmont’s instrumental visions – that is, his dreaming visions – have a comparable purpose: to illuminate the secrets of nature by extending human perception to spiritual light. Unlike the telescope, this instrument does not target the faculties of perception in order to correct or improve one’s ability to properly sense nature. For van Helmont, sensory experience is necessary, but alone it will always be limited. In answer to these limitations, he instead utilizes instrumental vision to correct the distortion of sensory perception that takes place under the influence of reason. Faculties of the sensitive soul, such as reason, are also what render the body such a strange inn for the immortal soul – not simply as parts of the human body, but as mediators between the soul and nature. The barrier that must be removed between sense and understanding is therefore not necessarily the faculties themselves, but the distractions that they present. The autonomy of reason over understanding must be disrupted by an appropriate agent – be it fasting or the imbibing of processed poison. Van Helmont’s use of instrumental vision is not intended to remove the imperfections of the senses, but primarily to obviate the deceit of reason. In this way, van Helmont provides a reliable source for a true understanding of nature and, likewise, a controllable ritual for apprehending the circumstances under which this source is made available. Van Helmont has provided a solution to both the inadequacy of human

\textsuperscript{32} van Helmont, “Puerilis Humoristarum Vindicta,” Ortus, p. 523; Oriatrike, p. 523: Ignoscant ergo mihi, quotquot ad me feribunt haec verba: Sodes explica te, loquere apertius, de Arcanorum praeparatione. Quia ista est nova addiscendae Philosophiae methodus, quam addiscere aperet, modo quo eam didici.

\textsuperscript{33} Mario Biagoli discusses the balance of authority and ambiguity in Galileo’s Sidereus nuncius in chapter two of his work: Galileo’s Instruments of Credit: Telescopes, Images, Secrecy (Chicago: The University of Chicago Press, 2006), particularly pp. 77-86.
experience as well as the elusiveness of divine knowledge, using practices derived from occult tradition: dreams and visions.

THE GRAVE OF THE PLAGUE

I: Historical Precedents

To say that dreams can break the Vaults of Nature is poetic, but another matter entirely is the practical execution of such an idea. Ultimately, this epistemology must be capable of producing medicines, which means the knowledge provided through visions must be applicable to specific practical circumstances. Van Helmont’s primary motivations are, after all, those of a physician. However, the execution of perfectly formed plans is not always so simple.

Van Helmont is very aware of the challenge, and the way he frames his dream of the sepulcher demonstrates how he intends to develop vision within a practical framework, as an epistemological model. He demonstrates this application of theory to practice in *Tumulus Pestis* or *The Grave of the Plague*, the work that his sepulcher dream prefaches. In this treatise, van Helmont presents a particular disease that exemplifies all of the problems presented by nature’s obscurity. Everything about the plague – its origin, its operation, and its cure – was simply unknown to contemporary medicine. While the title implies with morbid brevity the destruction that the plague carries with it, the phrase also indicates the particular problem for physicians that van Helmont claims to surmount: that everything we can know about the plague is buried in that sepulcher, hidden in nature, and lost since antiquity. This is his opportunity to demonstrate what his natural philosophy is capable of producing.

In his introduction concerning the sepulcher, van Helmont vehemently defends the novelty of his ideas; surprisingly, his tract on the plague turns afterwards to antiquity – and the only source from his medical education at Louvain that he considers potentially useful. The unlikely foundation for his demonstration of the plague’s cure is the work of Hippocrates – a physician that, while pagan, was at least superior to the Galenic tradition that followed him: “Hippocrates had less of prattle, but more of candour, science, and heavenly light.”  

After presenting a series of missives for the readers’ scrutiny, van Helmont concludes that Hippocrates

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34 van Helmont, “Tumulus Pestis,” *Opuscula*, p. 15; *Oriatrike*, p.1083: *Hippocrates minus garrulitatis, plus candoris autem, scientiae, ac coelestis luminis habebat* [...]

had access to a miraculous cure for the plague. However, he does not hope to derive specific knowledge from Hippocrates; there is actually no remedy for plague provided in the Hippocratic corpus, as available to van Helmont or today. Rather, the certainty that this remedy at one time existed provides equal certainty that such a cure is to be found in nature. True to his word, van Helmont is not relying on the authority of Hippocrates’ text but instead endeavoring to “cast an eye upon the thing itself” – on the precedent of what the text reports. Van Helmont endeavors to exhume this knowledge buried with Hippocrates, not by reviving this medical tradition, but by accessing knowledge of the same cure from the divine:

I promised therefore unto my self, before I attempted to write these things, that the Plague that was curable, even unto that face of times, and a true remedy thereof, was to be fetched out of the Grave of Hippocrates, or rather from above, from the Father of Lights.35

The sepulcher is here presented as an illustration, not exclusively of the position of the soul as a vault of divine knowledge, but also of knowledge that has been revealed before, now lost and capable of being recovered. Hippocrates' legacy provides a direction for divine inquiry, such that the efficacy of this mythic cure can be known from a more perfect source than pagan medicine. Furthermore, van Helmont claims confidently that his contemporary alchemical resources (unavailable to Hippocrates in antiquity) allow him to create a more perfect permutation of this cure.

II: Discerning the Cure

The nature and administration of van Helmont’s cure for the plague reveal a remarkable derivation of practical medicine from magical epistemology. Through illumination, he claims to gain knowledge of Hippocrates’ formula: sulfur, salt, and pitch.36 Each of these components has a justified use in van Helmont’s cure that demonstrates both the explanatory power of his theories and his professional knowledge as a physician. From each (for example) there is a particular virtue, but sulfur is of special interest due to its fiery, incorruptible nature. Because of its unique resistance to corruption (the plague’s primary mode of operation), sulfur is capable of destroying the plague even after it has already manifested itself in an infected patient. Salt (which seasoned wine grapes in Greece) offers comparable preservative benefits, and pitch was used to

35 van Helmont, “Tumulus Pestis,” Opuscula, p. 16; Oriatrike, p. 1084: Pollicebar ergo mihi, prinsquam bae scribere attentarem, Pestem sanabiliem usque ad illam temporum faciem, verumque remedium illius, ex Hippocratis sepulcrum, seu potius a Patre luminum, desursum petendum esse.
seal wine-skins in regions that were also less often stricken by plague. Van Helmont’s preferred use, which he attributes to Hippocrates as well, uses sulfur-infused candles to sublimate the mineral into a vapor (more readily capable, he says, of influencing the Archeus). In this manner, sulfur can be used to fumigate houses in an attempt to cleanse pestilential air. Of greater interest to van Helmont is an infusion of sulfur into wine, by burning a sulfur-infused candle into an inverted bottle which, subsequently containing the precipitated sulfur, can then be filled with wine and shaken to mix. Van Helmont’s cure calls for this wine infusion cominged with ginger and black berries of ivy. The former destroys the active plague; the latter are diaphoretics, which drive out the material poison of the plague through sweating. Van Helmont claims a divine source without neglecting to consider the cure that nature indicates.

However, this offers no explanation for his invocation of Hippocrates. While this remedy that van Helmont attributes to Hippocrates is nowhere evidenced in the Hippocratic corpus, he nevertheless fabricates one for Hippocrates and claims to use a remedy almost identical to it. Furthermore, he makes a significant attempt, in fact, to dissociate himself from the Hippocratic tradition. The important distinction is that, while the cure is ostensibly the same, van Helmont does not promote its efficacy by claiming a Hippocratic source, but rather, by claiming to have obtained knowledge of it from a more reliable source:

A Certain man being familiar with a happy Angel his keeper, intreated him, that he would beg of God, the remedy whereby Hippocrates cured the popular plague of the Grecians; hoping that it would not be denyed unto the miserable Christians, the which the Almighty in times past granted to the Heathens.

If a pagan physician such as Hippocrates can stumble upon an effective remedy, then how much greater must be van Helmont’s potential to understand this remedy, in the light of true Christian understanding. Citing Hippocrates provides a historical precedent – an indication that such a cure already at one time existed. He does not discuss the cure within a Hippocratic context; it is sufficient to affirm that he can now aim to obtain the same knowledge for himself, with an added potential to know it more perfectly. The subsequent discussion that explains why this cure is effective depends entirely on van Helmont’s conception of hierarchy in the human body, rather than on the authority of antiquity.

For van Helmont, as his discussion of asthma demonstrated, knowing how to cure a disease is dependent upon knowledge of the disease’s operation. Having presented this necessity himself, van Helmont does not fail to provide an explanation, retaining an important connection

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38 van Helmont, “Tumulus Pestis,” Opuscula, p. 80; Oriatrike, p. 1154: Homo quidam, custodi angelo eudaemoni familiaris, oravit, ut a Deo impetraret remedium, per quod Hippocrates Graecorum Pestem popularem curavit. Sperans miseria Christianis non denegatum iri, quod Gentilium olim concessit Omnipotens.
to the incorporeal hierarchy upon which he builds his general epistemology. Like the inception and development of asthma, the plague is dependent upon the mechanism by which an idea is received and interpreted by the imagination and subsequently translated into physical manifestations by the Archeus. Both the imagination and the Archeus are subordinate to the direction of the sensitive soul, and it is the sensitive soul that embodies all of the human faculties that disrupt and distort the influence of the immortal mind—namely, reason. This extensive network of immaterial operations in the body presents a necessary interface for the immaterial disease seed, as well as a means of translating this seed into physical manifestations:

Nothing corporeal acts immediately on the life or vital powers, because they are of the nature of celestial lights. Rather, it is received, and made as it were, domestic. When some poison is now made a citizen of our inn (that is, it being swallowed or attracted), it cannot as yet enter, or be admitted unto, the hidden seminaries of the vital powers, because it is in its whole essence external. First, the poisonous quality, by acting on the life, stirs up the Archeus (otherwise the author and workman of all other things to be done under his own government) into its own defense. For otherwise, a pestilent poison acts not like a sword, which equally wounds all that it touches, in the same moment; the pestilent poison is not able to strike at all.\(^\text{39}\)

The plague, like asthma, is communicated as an immaterial seed of a disease, and it gains power over the body by impressing this image into the imagination and usurping the command of the Archeus, its “instrument.”\(^\text{40}\) In order for disease to be capable of exploiting the body’s capacity to mediate between the material and the immaterial, it must be capable of imitating the ideas that this bodily mechanism normally processes. Van Helmont continues:

Therefore the Archeus, since it has from its own disposition animal perturbations, passions, confusions, and interchangeable courses, suddenly brings forth the image of his own alteration conceived and deciphers that Idea in the particle or small portion of his own proper substance wherein it is conceived—which the image of death being thus furnished, is the pest or plague itself.\(^\text{41}\)

\(^{39}\) van Helmont, “Tumulus Pestis,” Opuscula, p. 35; Oriatrike, p. 1102: Non enim quicquam corporum, agit immediate in vitam aut potestates vitales (utpote quae sunt de natura luminum coelestium) quin prius sit receptum, redditumque velut domesticum. Cumque venenum aliquod iam sit factum civis nostri diversorii, deglutitum nempe, vel attractum: nondum tamen adhuc potest ad occultum vitalium seminaria ingredi, vel admitti (quia est toti sui esse, externum) quin prius venenosa qualitas, agendo in vitam, susciet Archeum (omnia alioquin agendorum sub suo imperio, author atque opific) in sui defensionem. Etenim alioqui non agit Pestilens venenum, instar ensis, qui omnes in eodem attactus, sui momento, vulnerat acqualiter: Pestilens autem virus quosdam ferire non valet.

\(^{40}\) van Helmont, “Progreditur ad Morborum Cognitionem,” Ortus, p. 538; Oriatrike, p. 537: […] immediatio Archeo organ […]

\(^{41}\) van Helmont, “Tumulus Pestis,” Opuscula, p. 35; Oriatrike, p. 1102: Archeus itaque, cum ex sui indole balvat animales perturbationes, passiones, confusiones, atque alteritates, subito de se profert imaginem suae alterationis conceptae illamque Ideam, in particula propriae suae substantiae, in qua conceptur, depingit. Quae sic instructa mortis image, est ipsamet Pestis.
The passions can direct the Archeus to various ends, and through similitude with such products of the sensitive soul, the disease is capable of being conceived in the imagination and subsequently usurping the command of the Archeus as the actualized plague:

For as the images of motions to be made, do end into motions; so also the images of the Senses are carried, first inwards, for further deliberations of counsels, and they soon there degenerate into the images or likenesses of apprehensions, passions, or disturbances, and from thence they are carried to do something in the body, or out of it, and they slide and grow according to the directions and inclinations of passions.  

Like images natively conceived in the Archeus, the plague is capable of influencing the functions of the body by imitating its natural operation. In this way, it acts as an “image undoubtedly forged from the imagination.” The disease seed has a level of spiritual virulence that allows it to attach itself to any occasional matter by which it may be communicated to humans; however, the imagination is required to develop the actual disease.

Granting the imagination such a pivotal role in the operation of the plague is not only conveniently cohesive with van Helmont’s natural philosophy; this explanation can also account for a number of practical etiological difficulties. With this approach, van Helmont can explain the plague’s indiscriminate nature of infection, its high communicability, and the diversity of its manifestations. Any person can be infected because everyone possesses the incorporeal hierarchy that is vulnerable to the seminal disease. The disease is not retribution; whether or not a person is generally sinful or innocent is irrelevant. The influence of the stars – an etiology of the plague appearing in both Paracelsian and Galenic medicine – is likewise irrelevant (and, in fact, celestial influence is entirely disregarded). Van Helmont reduces the virulence of the plague to an interaction of spiritual forces in nature, which through the universal quality of imagination render infection indiscriminate. The high communicability of the disease and the diversity of its manifestations both rest on its manner of reception by the body and its operation therein – a seamless application of theory to practice.

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43 van Helmont, “Tumulus Pesteis,” Opuscula, p. 86; Oriatrike, p. 1159: imago scilicet ab imaginatione fabricate  
44 van Helmont, “Tumulus Pesteis,” Opuscula, p. 35; Oriatrike, p. 1097. Refer also to Part I.
III: Conquering Terror

Van Helmont’s theory of disease has clear utility in directing his medical practice, but its explanatory power is more extensive yet. As stated, diseases that interface with the body in this manner possess a level of resemblance to human passions. The nature and operation of any given disease – and furthermore, how to cure it – can be explicated by identifying which passion the disease imitates. For the plague, this passion is a powerful terror, violent and foreign but nonetheless capable of gestating within the Archeus:

Therefore I elsewhere writing of diseases, have not in vain demonstrated that joy, fear, anger, hatred, and other passions and perturbations, do generate in us their own proper and singular actual image, no otherwise than as terror does the Plague: But the generations of these are domestic and more ordinary off-springs in us. But the image of a pestilent terror brings forth a poison immediately existing in the Archeus, and draws its matter from the same: And therefore the Senses cannot conceive that image. The Archeus therefore, having beheld a mortal enemy nigh at hand, being bred within or brought to him from far, admits this enemy through his own terror and an image deciphered anew, and confirms him with his own character and substance.45

The disease image is familiar in that the conception of this idea mirrors the conception of other passions within the Archeus – that is, the conception of the disease idea is compatible with the conception of the passions in the sensitive soul. However, the conception of terror that subsequently usurps the command of the Archeus is a foreign one directed toward destruction of the body. This virulent image of terror may alone become the cause of infection where no occasional cause exists, communicated between persons by the power of the imagination and producing a variety of physical manifestations according to its reception in the Archeus. Here the immaterial interactions that van Helmont described in reference to witchcraft finds explanatory power in reference to the operation of the plague, emphasizing also his practical concern for deriving a cure from knowledge of the disease’s operation.

This description of the plague’s etiology illuminates to some extent van Helmont’s “Hippocratic” remedy. While sulfur has a more transparent purpose according to its incorruptible qualities, it is not immediately apparent, for instance, that the use of strong wine is an important means of administering it. In order to resolve itself into a mature disease with physical manifestations, this terror of the seminal plague must be confirmed on a fundamental

level in the sensitive soul (or Archeus, specifically). Imbibing strong wine is one way to inhibit the onset of terror that the plague requires to gestate. Wine also inhibits, says van Helmont, any acknowledgement of or concern for threatening or otherwise dangerous situations. This fundamental courage or cheerfulness is an important part of preventing the plague from infecting an individual or developing therein – though to destroy it, of course, wine alone is not sufficient. There must be some agent, such as sulfur, which is capable of destroying the disease image and its material products, which may then be driven out of the body through sweating.

Although sulfur is particularly efficacious, there are other cures that van Helmont offers in this treatise (as well as preservatives to guard against infection) that are more capable of illuminating the Archeal operation of the disease than is sulfur, which works by virtue of its incorruptibility. Among these he describes an ointment that can serve both as a preservative as well as a cure – an ointment prepared from dried toads. While odd and often repulsive, this remedy operates in a manner more specific to the Archeus and more dependent upon the development of terror. The toad, unlike sulfur, possesses a limited consciousness capable of formulating ideas comparable to those formed by the human imagination. Furthermore, says van Helmont, the toad carries an inherent hatred for human beings – and, more importantly, an intense terror of the same. This terror bred from hatred is a powerful idea naturally arising in the toad – unlike the foreign semina of the plague, a violent guest which terrorizes the inn of the Archeus. Therein lies the potential for a remedy:

For truly, the terror of the Toad kills and annihilates the Idea’s of the affrighted Archeus of man, because the terror in the Toad is natural, and therefore radically, and throughout his whole body incorporated in him, even when dead: but the Idea of terror in the Pest is only accidental and flowing.  

This opposing image of terror is more powerful and thus capable of supplanting the plague’s seminal image in the Archeus. There is an added benefit as well, in that the toad’s terror of human beings strengthens the Archeus when it perceives the horror of an inferior creature:

Hence it happens, that a poxson ariseth from a Toad, which kills the pestilent poxson of terror in man; to wit, from whence the Archeus waxeth strong, he not onely perceiving the pestilent Idea to be extinguished in himself; but moreover, because he knoweth that something inferior to himself, is terrified, is sore afraid, and doth flie: For so, in every war and duel, from an evident dread of the enemy, a hostile courage is strengthened.

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47 van Helmont, “Tumulus Pestis,” Opuscula, p. 79; Oriatrike, p. 1152: Hinc contingit oriri venenum ex bufone, interimens virus terroris pestilens in homine, unde nimium Archeus invalescit, nedom sentiens, extinstam in se Ideam pestilentem: sed insuper quia agnostit aliquid terreferi, pavesere, atque fugere, se longe inferius. Sic namque in omni bello, atque duello, e favore hostis conspicuo, animus hostilis roboratur.
This courage is also useful as a preservative against the plague, because the seminal disease is incapable of gestating within an Archeus that lacks a fundamental terror of it. For the toad, this remedy unfortunately requires that it die full of terror – or, as van Helmont perceives, that it dies of terror. Sparing the details, the dead frog, once dried, is powdered and made into an amulet worn by the patient.\footnote{But if you are so inclined: van Helmont, “Tumulus Pestis,” Opuscula, p. 76; Oriatrike, p. 1150: \textit{Iuss erat enim bu fonem magnum, mensem junio post meridiem captum, tibiis suspenderem prope focum, illique subtenderem patina e cera flava.} […] \textit{Dein Julio mense, descrecente Luna, veteres Bufones cepi, quorum oculi scatebant albia vermibus: nigriquis capitibus prominentes, adeo ut uterque oculus totus in vernes transformatus esset, fortassit 50. numero, in singulo oculorum foramine vernes erant dense compacti, quorum capita foris eminebant} […] \textit{Vermes autem in patinam ceram decidus, simulque cum eo quod per vomitum rejecit, in trochisicos parvulos redegi, addito cadavere bu fonis, et cera patina.} \footnote{van Helmont, “Tumulus Pestis,” Opuscula, p. 61; Oriatrike, p. 1135: \textit{Horumque jacturam velut praesentem, frequenter intueor, huiusque tractatus initium dedisse putaveris.}}} Terror, in this case, marks the operation of the disease as well as that of the cure.

Van Helmont’s theory of knowledge exists for these practical applications to which he applied it. His epistemology directly informs the disease etiology on which he builds his medical practice. Concerning the plague, he was particularly invested in this practical necessity. This is the disease that killed is two elder sons:

\[\text{[…] the loss of these my Sons, I frequently behold, as if it were present; and thou mayest suppose that it gave a beginning unto this Treatise.}\footnote{van Helmont, “Tumulus Pestis,” Opuscula, p. 61; Oriatrike, p. 1135: \textit{Horumque jacturam velut praesentem, frequenter intueor, huiusque tractatus initium dedisse putaveris.}}\]

The remedies that he describes in this work are ones that he is certain, had they been given to his sons as he directed, would have saved their lives. This absolute faith that van Helmont has in the integrity of his medicine reflects the infallibility that he demands of his medical practice and its epistemological foundations. He is able to produce practical results from his theory of knowledge, because it was entirely designed to address the problems presented by the needs of his patients. Through the same systems that illuminate the obscurity of nature and circumvent the limitations of human experience, van Helmont is capable of producing practical medical knowledge – in either case, by recognizing and manipulating the immaterial forces that govern the relationship between nature and the human body.
PERCEIVING THE WORLD

I: Helmontian Medicine after van Helmont

When an outbreak of the plague struck London in 1665, van Helmont’s remedies had already found a widespread following there among chemical physicians who sought an alternative to Galenic medicine. The epidemic was in many ways an opportunity to prove the efficacy of van Helmont’s medicine as well as the superior Christian religiosity of his epistemological approach compared to that of Classical (pagan) medical texts. Says one such Helmontian:

To visit, relieve and exhilarate any one whom God hath wounded with this Pestilential Arrow, is the part of a truly religious Samaritan; as to fly from him, or keep aloof, when he may preserve or do him good, is only proper to some distrustful wicked Priests, Levites, and Galenists.

This censure of Galenic medicine is the voice of George Thomson, a particularly famous English Helmontian physician who practiced from the 1660s into the 1680s. Here, he offers a cure informed by divine knowledge, implying that his professional dedication as a Christian physician would compel him to stay and treat the infected rather than evacuate with the wealthiest clients. This Helmontian physician could also, he claims, provide a cure for a disease stricken by some “Pestilential Arrow” sent by God into the Earth. The metaphor here presents a divinely appointed physician treating supernatural disease – in which case, this metaphor is also entirely misapplied. After van Helmont’s death and the posthumous publication of his works, his medicine finds itself attached to a movement characterized by a strong sense of divine


52 Citing Andrew Wear, Moote and Moote estimate that half the population of medical practitioners fled London in 1665, including the majority of the College of Physicians, a largely Galenic institution: A. Lloyd Moote and Dorothy C. Moote, The Great Plague: The Story of London’s Most Deadly Year (Baltimore: Johns Hopkins University Press, 2004), pp.143-4. The flight of physicians and George Thomson’s particular religious criticisms of fleeing the plague are major topics in Grell, "Plague, Prayer, and Physic: Helmontian Medicine in Restoration England.", with some specific discussion on pages 208-9.
appointment – one that actually fails to differentiate van Helmont’s naturalism from Paracelsus’ arrogation of the title magus, with its claim of influence over divine disease. This distinction between divine disease and natural disease, while perhaps lost in the enterprise of practical medicine, presents a useful opportunity to evaluate how van Helmont’s theory and practice, however carefully integrated, were appropriated and misappropriated by subsequent generations.

Thomson’s markedly religious interpretation of disease as a Helmintian physician is actually indicative of a certain ambiguity inherent in van Helmont’s medicine. It is, for instance, immediately apparent that van Helmont’s theory of disease is heavily informed by spiritual considerations in both structure and application. The cognitive mechanisms that govern the moment of inspiration are the same that invite disease. Likewise, the translation of the disease image into physical symptoms is instigated by these same immaterial mechanisms, which work in tandem with the physical mechanisms in the human body. There is, clearly, an integral part of van Helmont’s medicine that is heavily immaterial. For Thomson, however, these incorporeal mechanisms indicate a traditional form of natural magic. He fails to recognize, as van Helmont carefully emphasized, that there is only one sort of magical power “indifferently imploied to a good or evil end,” and that supernatural agency is only found in nature through human power or instances of divine miracles.

The deviation from van Helmont’s original opinion is apparent. When van Helmont presents his remedy for the plague, he is careful to limit the circumstances under which it can be used in order to account for acts of God. One primary consideration is where the plague has come from. In developing his remedy, van Helmont emphasizes the importance of knowing the cause before knowing how to approach treatment. However, when considering the involvement of the supernatural, a physician must admit that the power of human enterprise, operating always within nature, cannot countermand divine action – regardless of whether or not God “for the most part” chooses to act within nature:

So it is true; a certain Plague cometh from the hands of the Lord, the which to avoid, is impossible: because it comes from him who cannot erre in arching. Therefore I have decreed not to write any thing at all concerning this Plague, as neither of the curing of a miraculous one: For if a natural Plague be healed by a miracle, that belongs not to a Physician […]\textsuperscript{53}

Van Helmont’s medicine is limited to what can be performed within natural parameters, because anything beyond that is supernatural, which is outside human influence. Although he freely

claims the possibility of supernatural pestilence, he considers it to be irrelevant to medical practice. It may be over-confident, in this case, for the English Helmontians to claim the privilege of treating a patient stricken by God’s “Arrow of Pestilence.” While van Helmont insists that all plagues are spiritual diseases, he isolates the one divine in origin and places it beyond the power of medicine – after all, God “cannot err in arching.” Afterwards, when he proceeds to discuss a cure for the plague, he assumes an entirely natural process in order to remain within the limits of human influence. Questions concerning the limits of this human power over nature are what interest van Helmont’s medical enterprise, to the extent that the disease must be something within the capabilities of a physician to cure.

For van Helmont himself, unlike many of the later Helmontian physicians, the diseases that he faces in everyday practice are ones completely outside the purview of supernatural forces, because these are the circumstances under which medicine is effective. However, the mechanism of disease remains a spiritual one that utilizes the same processes that enable (or inhibit) illumination – a process that seems to be at least partly supernatural. While it is clear that van Helmont, to some extent, has placed the process of receiving divine understanding within a structured approach to medicine, it is not immediately evident to what extent (nor how often) he claims to utilize control over the illumination he receives in dreams. If he lacks influence over this illumination, then the knowledge he receives must be, again, controlled actively by divinity. This question of control is particularly important for van Helmont (and the Helmontians), because, as evidenced by the preceding discussion, the ability to exercise control over illumination is what enables utilization of these immaterial mechanisms in practical medicine. Part of the ambiguity in van Helmont’s medical theory stems from this hazy distinction between internal illumination (from knowledge of the soul) and the intervening hand of God, the latter of which reflects a more Paracelsian tradition of knowledge.

II: Waking Dreams

One primary consideration in determining the relationship between divinity and man in van Helmont’s natural philosophy is the extent to which he indicates a practical reliance on dreams. In fact, his dream of the sepulcher is only one of many such dreams that he relates in his work; likewise, the dreams that mark the beginning and end of his medical career were not isolated events. Van Helmont received divine dreams throughout his life. In most of these, he

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54 van Helmont, “Tumulus Pestis,” Opuscula, p. 31; Oriatrike, p. 1099.
describes himself uncovering occult qualities of nature, as the dream itself serves him after waking. In his sepulcher dream, he utilizes the help of divine illumination to see in the grotto and find the sepulcher in order to open it. This divine illumination is presented literally, appearing as candlelight. However, even this image has its ambiguities. Is the candle a divine endowment that must be lit by human endeavor, to produce the light of understanding? Or is the candle entirely human, awaiting the fire of divine enlightenment? Previously used to describe the human soul, this candle could be an internalization of divinity that circumvents a need to appeal to supernatural agents; recall that “the hidden knowledges of things, are infused by the Father of Lights into us, by means of this Candle.” Still, in van Helmont’s accounts of his practice there are varying degrees to which he must search and divinity must aid him, with his efforts unclearly separated from unexpected moments of inspiration seemingly beyond his control. The view of his workroom becomes chaotic; it seems tedious indeed to constantly labor in the alchemical laboratory, when one must await divine intervention in order to properly understand the results. Van Helmont himself, in a separate chapter devoted to epistemology, admits some uncertainty concerning this distinction between human efforts and divine help:

But whether that light be altogether supernatural, or that the understanding be of its own nature thus kindled, or enflamed, I had rather experience than determine. That one thing at leastwise, I know, that it doth not happen without grace.55

With this in mind, there enters a need for separation between the passive constancy of divine grace and the active experience of divine inspiration – and to what extent either is presented as reliant upon the internal image of God rather than supernatural interference.

Van Helmont’s emphasis on experience provides a number of opportunities to establish a clearer picture of how he understands the source of and processes behind dreams and visions. He records many such experiences throughout his work as engaging stories – ones that demonstrate a much less ambivalent attitude toward the role of divinity in natural philosophy than evidenced above. In a chapter discussing the power of medicines, he relates a dream that, like most of the others, demonstrates his struggle to uncover the mysteries of nature. This is a rare example, like the sepulcher dream, in which van Helmont narrates the entire experience. In this instance, however, he also alludes to what may have instigated it:

At length, I thought of a means whereby I might meditate, that all my tribulations were transferred on the head of Nero and Tiberius. Therefore I being at once wearied and refreshed, and suddenly with great consolation, sliding as though into a dream, I saw

55 van Helmont, “Venation Scientiarum,” Ortus, p. 28; Oriatrike, p. 23: Istud lumen vero sive sit prorsus supernaturale, sive quod intellectus sui natura sic ascendatur, malum experiri, quam determinare. Istud unicum saltem scio, quod non contingat absum graitia.
myself in a certain Kingly Palace, excelling human artifices. But there was a high Throne, encompassed with an inaccessible light of the Spirits.

As mentioned, van Helmont is relating here one of his many portentous dreams. Like his dream of the sepulcher, however, this isn’t just a dream – and in fact, he isn’t even asleep when he “dreams” it. His experience here is something that he likens to a dream (velut in somnum), but in fact this is a waking vision. This means that because he is not asleep when he receives this vision, he has consciously taken steps to reach this particular state of mind: “I thought of a means whereby I might meditate.” This waking vision is something that he has induced himself. In other words, he has bestowed divine knowledge upon himself. And immediately in this picture, God is placed behind “an inaccessible light of the Spirits.” This inaccessible spiritual light is the purely divine, and it has a markedly inactive role in the events that follow. The story continues:

But he who sat in the Seat of the Throne, is called [He is] and the foot-stool of his feet [Nature]. The Porter of the Court, was called [Understanding] who without speech, reached unto me a little Book, a choice out of darkness, the name whereof was [The bud of a rose not yet opened]. And although the Porter uttered no voice, yet I knew, that little Book was to be devoured by me. I stretched forth my hand, and ate it up. And it was of a harsh and earthy taste, as if it would stop up my wind-pipe; so as I swallowed it with a great slowness of labor. From whence afterwards, my whole head seemed to be transparent.56

Van Helmont’s interaction with divinity is mediated by “Understanding” (Intellectus), the king’s porter. The porter is as close as he gets to the throne, and when he is given this book, there is little resemblance to a process of divine revelation. It is a laborious process; van Helmont hears no voices and receives no instructions. He cannot even see where the book has come from. Once the book is given to him, he must utilize his own means to comprehend its contents. Once he’s finished consuming it, however, the knowledge literally becomes part of him. The result – mental transparency – is a seemingly simple transition from obscurity to clarity. In spite of the ambiguities, this experience indicates that van Helmont emphasizes his own efforts over divine agency.

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III: The Subversion of Biblical Vision

This odd vision is perhaps most immediately identifiable with the visions of the Biblical prophets; there are some telling differences, however, that further emphasize the passivity of the divine in van Helmont’s epistemological practices. For instance, the “throne room” image that he describes is one that appears more than once in Biblical visions, including those of Ezekiel. In Ezekiel’s first vision, God appears to him on a throne surrounded by a light – not unlike what van Helmont claims to have perceived in his own vision:

And above the firmament that was over their heads, was the likeness of a throne, as the appearance of the sapphire stone, and upon the likeness of the throne, was the likeness of the appearance of a man above upon it. And I saw as it were the resemblance of amber as the appearance of fire within it round about: from his loins and upward, and from his loins downward, I saw as it were the resemblance of fire shining round about. At this point, God addresses Ezekiel. It is important to note how van Helmont’s vision diverges here: there exists no mediator, like van Helmont’s porter, between Ezekiel and God. Their conversation is direct and personal. For van Helmont, God remains a silent figure behind the events of the vision. Like a true Catholic, perhaps, he does not claim to speak with God, neither to be a “searcher into divine Counsel.” And, in fact, he speaks with no one; instead, he interacts with Intellectus, the porter, apparently symbolizing the subconscious human quality of understanding or comprehension. Without speaking, this porter gives van Helmont a book from an unknown source. For Ezekiel, it is God that hands him a book:

And I looked, and behold, a hand was sent to me, wherein was a book rolled up: and he spread it before me, and it was written within and without: and there were written in it lamentations, and canticles, and woe. […] And he said to me: Son of man, thy belly shall eat, and thy bowels shall be filled with this book, which I give thee, and I did eat it: and it was sweet as honey in my mouth.

There seems to be little doubt that van Helmont was familiar with Ezekiel, but the similarities are only more pronounced in St. John’s Revelation. Here, the throne is described using less metaphorical language, and the book is conveyed by an angel rather than God himself:

And I heard a voice from heaven, again speaking to me and saying: Go and take the book that is open, from the hand of the angel who standeth upon the sea and upon the earth. And I went to the angel, saying unto him that he should give me the book. And

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58 van Helmont, “Terrae Tremor,” Ortus, p. 103; Oriatrike, p. 103: non quod consilii divini sum conscius, aut curiosus indagator
59 Ezekiel 2:9, 3:3. English quoted from the Douay-Rheims translation.
But again, van Helmont’s experience is notably different. There is no “word of God” in his dream. The book he receives is named *Gemma rosa nondum apertae*; it contains secrets of nature, not of divinity. It is significant that both must consume their books and that each describes the taste, but here another distinction is made. Van Helmont’s book is not “sweet as honey,” like the books given to the prophets. His has a harsh taste – that is, “earthy” (*terrestris*). In addition, and perhaps most importantly, his book requires a great deal of labor to consume. This is the prerogative of the physician; he labors to exhume knowledge of nature. The limited involvement of divinity has only one clear relation in van Helmont’s dream: *Natura*, God’s footstool. In this sense, the presence of God in the background of his vision can be interpreted as the passive presence of divine grace. In this comparison, van Helmont’s subversion of Biblical vision becomes quite clear: for the physician, there is medicine; for the saints, miracles. As van Helmont says: “if a natural Plague be healed by a miracle, that belongs not to a Physician.”

This dream and others like it provide van Helmont with the knowledge that he needs to work; however, the images therein have little to do with the medical questions for which they are intended to provide answers. Rather, the events in the dream illustrate illumination itself. Typically, van Helmont’s discussion of more specific questions in natural philosophy proceeds afterwards, when he relates the information that the vision illuminated. It may be unsurprising to note that these revelations are always specific to the particular medical problems that van Helmont was grappling with at the moment of inspiration. What the vision provides is understanding – access to that knowledge within the human soul. The distinction between van Helmont’s throne room vision and those of the biblical prophets reveals the distinction between divine inspiration and the results of human inquiry – in this case, self-inquiry. It is clear from the content of van Helmont’s visions that in spite of his professed uncertainty, the influence of the supernatural in his practice is thoroughly passive, merely permitting the process by which he apprehends visions – that is, the process of inducing a vision at will to address a specific problem.

Van Helmont’s experience after consuming the book in his vision also mirrors closely his foray into drug use. Although he neglects to clarify what “method of meditation” he employs in the above passage, he has before, in the case of the aforementioned wolfsbane, discussed the ingestion of alchemically processed poisons in an attempt to induce visions. In that instance, he related no specific dream but claimed that afterwards his dreams were generally more significant.

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60 Revelation 10:9-10. English quoted from the Douay-Rheims translation.
– that is, they more often signified something of import.61 So frequent are these dreams, that van Helmont often mentions them flippantly without relating anything more about his experiences. In this sense, he seems to have succeeded in apprehending the practical utility that he wanted from dreams; they become little more than part of his investigational process, mundane enough to obviate a detailed recounting. Designed to meet the demands of medical practice, van Helmont makes his visions practical.

**IV: Against the Helmontians**

Ultimately, the divine quality of van Helmont’s work bows to human labor and human potential, his emphasis on illumination seemingly lost on his disciples. Thomson, who praised the religiosity of van Helmont’s writing, nevertheless neglected to adopt his religious practices. Still, it may not be true that Thomson’s misguided reading extends to a likewise misguided application of van Helmont’s medicine. After all, the question remains, whether or not van Helmont’s visionary experiences must be recreated by a physician who simply wants to utilize the medical information in the text – information that these visions were entirely serviced to obtain. However, the alchemist who vexes nature in his laboratory is seeking armaments with which he may meet the blows of increasingly virulent diseases. Furthermore, van Helmont’s insistence that physicians rely on their own laboratory work is evidenced by his deliberate omission of key details. He clearly saw a need for a reliable epistemological system with which to meet the challenges likewise faced by his contemporary researchers, all grappling with the process of exploration.

What endured most from van Helmont’s natural philosophy in the works of his followers (and the arguments of those who criticized them) is not, in fact, the experience of inspiration but this labor of chemical experiment. Within the laboratory, Helmontian physicians see an opportunity to seize a novel and particularly empowering approach to medicine. It is telling to see this emphasis on experiment in their own works – and the degree to which their Galenic adversaries vilify them for promoting it. In 1671, Thomson learned from a friend that a certain work published earlier that year had been circulating among his colleagues and rivals. In this public letter he had been accused, among other things, of buying his doctoral degree. Thomson, as the leading practitioner of Helmontian medicine, found himself the nemesis of Henry Stubbe, the Galenic Physician who vilified van Helmont for excessive use of novel

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language. This publication from 1671 was the first of Stubbe’s letters aimed against Thomson specifically and the beginning of a short, public feud over issues of blood-letting, novelty, and chemical experimentation. In this first letter, Stubbe attacks the experiment-based approach to scientific inquiry that characterizes chemical medicine and the “Baconical Philosophy.” He begins:

That there are certain periodical revolutions in Nature, whereby the same calamities, distractions, and diseases renew themselves, and afflict man-kind over and over again, hath been the ancient observation of prudent men.62

His is an argument against new medicine and the chemical physicians, termed “barbarians,” who “promote a Licentiousness of Experiments in Physick.”63 His censure of Francis Bacon and the empirical philosophy that he found so repugnant is even more creative:

In representing of [Bacon's] failours, I thought I might deterr others from the like attempts, who are not Bacons, but Hogs, that yield much Cry, but no Wool.64

Thomson, loathe to be termed a “meer Emperick,” claims that the “wool” from his experiments and those of other chemical physicians is not only a superior form of medicine, but in fact the wool with which Galenic physicians secretly clothe their ignorance:

[…] it will come to light whether the Galenists can in any Adequate Measure overcome those Atrocious Calamities of Body, which at this day rage among us, without the help of Chymical Medicaments; the Oblation of which they oftentimes make secretly to their Patients, attributing the happy success coming upon them, to their feculent Galenical Mixtures (yet railing against publickly, and condemning the former, being the best flower in their Garden, ready to help them at a dead lift.)65

Their dispute in these passages concerns the novelty of van Helmont’s medicine, perhaps more radical for its general demand for change than for the novel terms that it presents. For the Galenic physicians, this demand for change is too chaotic to tolerate:

As for suppressing of Mountebanks and Empiricks of lesser note, I think the most ready course would be to acquaint the Nation with the History of the Faculty of Physick […] as also the dismal effects which followed all over Europe, after that Paracelsus and his followers had decryed the established Physick, and introducing new terms, principles, methods, and medicaments, and imboldened every Mountebank to make trials with his Arcana.66

63 Ibid.
64 Ibid., sig. A4v.
66 Stubbe, The Lord Bacons Relation to the Sweating-Sickness Examined, in a Reply to George Thomson, Pretender to Physick and Chymistry . . . , sig. A4v-B1r.
Stubbe’s grief is with the novelty of chemical experiment in particular, and Thomson’s defense is the potency of the medicine that chemical experiment provides – so potent that supernatural disease cannot stand against it.

V: The Magician’s Perspective

The enumerable influences and considerations that defined van Helmont’s natural philosophy cannot be comprehensively identified and discussed here, but what emerges as most characteristic of Helmontian medicine after van Helmont is the novelty of its practices, the considerable power attributed to such practices, and the keen attention to their novelty. The emphasis on knowing nature in order to control its effects on the human body reflects the practical emphasis of van Helmont’s work, stemming from that discontentment with contemporary medicine that he forwards as his initial motivation to become a physician.

This rhetoric of benevolence is a pervasive part of van Helmont’s self-presentation, but his indignation with academic medicine rings true. He recalls, in numerous anecdotes, many patients who were unfortunately treated by incompetent doctors before him. There were two young sisters he was called to help after they had been given medicine from an Italian physician; they died shortly after he arrived, in what he refers to as murder.67 He quotes another of his patients: “Oh my friend Helmont, thou toldst me this; that these Physicians will kill thee.”68 This one had been given a draught containing hellebore, and died two hours later. These stories appear frequently, and van Helmont presents his own history with a heavy emphasis on the frustration he experienced as a young physician trained by Galenists:

Truly it shamed me, even from a young man, that a Work-man, being called to a work, should promise that work, and stand to his promises: but that I being called to a sick man in the beginning of the Disease, and his strength as yet remaining, should suffer the same man to die.69

Even without the destructive ministrations of a preceding physician, he often found his medical learning inadequate before he abandoned it to develop his own. “The Physicians seek excuses,”

69 van Helmont, “Promissa Authoris,” Ortus, p. 11; Oriatrike, p. 6: Sane pulvit me, vel ab adolescente, quod operarius, vocatus ad opus, illud promitteret, stareque promissis. Ego vero ad infirmum, initio morbi, et constantibus aedibus sibi viribus, vocatus, eundem interire permitterem.
he says, “and the Earth covered their fault.”

Similarly, Thomson emphasizes the powerful practicality of van Helmont’s novel medicine, unwilling to accept the complacency of the Galenists, who insist that physicians should “by a pious and penitent life rather study to divert the Divine judgment, than to depend upon what is Humane.” Van Helmont’s discontentment with academia presupposed a need to gain complete control over an epistemological process that would allow him to demolish traditional medicine and build it anew, and his revolutionary fervor is still evident in the works of later chemical physicians.

But this focus on chemical experiment fails to recognize that such claims would not be possible without van Helmont’s determination to make magical ideas and practices more comprehensible and controllable. The boundary that limited his restructuring of medicine was one between the material and the immaterial: between practical medicine and spiritual knowledge, between symptoms of disease and their occult causes, and between the reality of nature and the language of illustration. Natural magic traditionally claims to naturalize and allow access to these immaterial operations without moral ambiguity, but van Helmont also seizes the power of ritual magic by claiming ready access to divine knowledge. In this way, he utilizes traditionally occult practices to illuminate occult knowledge:

These things I have spoken concerning occult or hidden properties, out of the Dream, that we may cease to be occult Philosophers, and may follow the manifest Doctrine of the more tractable ones.

After defining the difficult relationship between human experience and the natural world, he proceeds to provide a method of inquiry that answers these difficulties. Rather than use magic to reach outside nature into limitless power and knowledge, he confines magic in service to the natural processes that humans are capable of understanding and controlling – without sacrificing divine knowledge of nature.

Van Helmont, beyond question, created a novel theory of magic with powerful utility, but his natural philosophy remains fundamentally esoteric. Designed from its inception to oppose scholastic learning, it was potentially incapable of serving the same communicative functions of the academic institutions from which it is fundamentally distinct. Van Helmont recognized these limitations, particularly when attempting to articulate that non-verbal

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71 Stubbe, The Lord Bacon’s Relation to the Sweating-Sickness Examined, in a Reply to George Thomson, Pretender to Physick and Chymistry . . ., p. 77. Italics present in the original.

understanding instigated by personal illumination. His waking vision – the same described above – does not, in fact, end in the throne room:

I stood a good while silent; and then afterwards, a hand (the rest of whose Body I saw not) led me aside unto a pleasant Garden: where on a sudden, all Simples worshipped me, as though every one had been singular by themselves. In which assault, I felt or perceived all the Simples of the world, not indeed, as if their qualities did act in me (for I being but one, had not been sufficient for the bearing of them all) as it were, their object: but they were all seen, as on a Theatre, to represent in me their Tragedies.

And I wish, I may well declare them with my pen!73

This knowledge is frustratingly ineffable, but to van Helmont, this ineffability reflects a natural and unassailable quality of the human mind and the necessarily personal circumstances under which understanding occurs. Understanding is pre-linguistic, and illumination is unavoidably visual. It is perhaps telling that, when he describes the revelation he receives during his own investigations, he almost always prefaces these facts with *senti: “I perceived,” “I understood,” or, “I saw.” He is not, of course, the first to identify understanding with sight, but in the context of illumination, his visual description attains a powerful novelty when compared to Paracelsus’ use of the German *ablauschen: “to learn from listening.”74 What van Helmont cannot declare with his pen is the most fundamentally personal (and thus necessary) part of human understanding, justifiably omitted from his printed works. Every other aspect of his medical practice is included: the methods by which he obtains both divine and mundane knowledge, the spiritual hierarchies that describe and govern natural operations both inside the body and external to it, and his own motivation to devise the most powerful approach to practical medicine. A numinous quality remains, but van Helmont emphasizes the practice most powerful and most characteristic of magical tradition: the labor that leads to understanding.

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73 van Helmont, “Potestas medicaminum,” *Ortu*, p. 471; *Oriatrike*, p. 471: *Steti dudum silens, mocc deducit me manus (cuius reliquum de corpore non videbam) ad hortum ancenum. Ubi repente me adoribantur omnia simplicia, tangquam per se quodlibet esse singular. In quo insultu, sentiuebam univera mundi simplicia, non quidem quasi qualitates illorum agerent in me (non enim unus satis fui stem omnibus tolerandis) velut illorum objectum: sed singula in me, tangquam theatro, videbantur suas representare scenas. Atque utinam illas bene calamo explicem!*

74 Pagel indicated Paracelsus’ use of the verb *ablauschen* in relation to discerning the properties of herbs. See: *Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance*, p. 51.
THE MOUNTAIN

In 1336, Petrarch penned a letter addressed to his friend Dionigi da Borgo Sansepolco: “Today,” he writes, “driven by the sole desire to see the famous altitude of this place, I have climbed the highest mountain in the region....” Almost one thousand years before Petrarch, St. Augustine wrote of a different kind of ascension: that of the human soul aspiring to the moral standard of divinity. Petrarch’s ascent echoes the influence of his forebears both in his awe for the grandeur of nature and in his religious aspiration to look beyond it. And three hundred years after him, the mountain would continue to present such challenges and opportunities. When Gottfried Leibniz undertook a project to optimize mining in the Harz in 1679, he saw the mountain as an object to be conquered, broken, and studied. But even with this shifting identity, the mountain in the early modern world would remain an enduring and spiritually significant symbol of ascension, connecting men from Biblical myth through antiquity and into the Renaissance with the promise of access to a heightened perspective of the world and mankind’s place within it.

Petrarch’s ascent of Mt. Ventoux was inspired by Livy’s account of King Philip of Macedon, who ascended Mt. Haemus in hopes of viewing both the Adriatic Sea and the Black Sea from its peak – an advantaged perspective that would better equip him to conquer his enemies in Italy. Petrarch says that he isn’t sure whether or not these two seas are even visible from Mt. Haemus, but he would, given the opportunity, climb the same mountain and see for himself; it hardly matters if he climbs it so long after King Philip did. Though he must settle for Mt. Ventoux, Petrarch’s ascent is, in many ways, perfectly identical to that of King Philip. Neither the geographical distance between Mt. Ventoux and Mt. Haemus nor Petrarch’s distance from antiquity can meaningfully separate him from the shared experience of awe: “what I had heard and read about Mount Athos and Mount Olympus became less incredible for me as I gazed out from this mountain of lesser frame.” In one sense, the mountain is a monument of nature, persisting in the same form through the time of King Philip into that of Petrarch, bridging antiquity and the Renaissance with a shared view of nature. However, the unchanging

3 Petrarca, Petrarca’s Ascent of Mount Ventoux., p. 45.
4 Ibid., p. 96.
5 Ibid., p. 101.
form of the mountain does not impose an entirely invariable experience of it.

There are certain rigid criteria that make mountain-climbing a uniform experience – for example one must, as Petrarch finds, move up – but each must find his own path to the summit. When his climbing companion eagerly set out on a steep path, Petrarch chose easier routes, meandering in valleys and avoiding the inevitably demanding climb that would be necessary to reach the top:

The fact was I was trying to avoid the fatigue of climbing, but the rules of nature cannot be changed by human ingenuity alone, nor is it possible for any earthly body to reach high ground by descending. Why say anything more?  

Petrarch likens the difficulties of this climb with the difficulties of his spiritual journey. While King Philip climbed the mountain as a conqueror, Petrarch – distancing himself from this arrogant aggression – climbed the mountain to better know himself. This fundamental difference is illustrated well by his experience at the summit, where he is initially awed. He wanted to experience the same things that the ancients experienced – to marvel at nature, laid bare from this heightened perspective. But men who marvel at nature from the mountaintop neglect the divine experience that ascension should really entail: “What they were looking for in the world outside,” he realized, “they could have found within themselves.”

But perhaps the most telling distinction between Petrarch’s ascent and that of King Philip is that he is not really climbing the mountain at all. Entirely separated from King Philip’s palpable experience of the mountain – profane in both means and motivation – Petrarch instead composed an allegorical account of what was very likely a climb that never took place. When Petrarch wrote about his reenactment of King Philip’s ascent, he was also imitating the ancients in his writing; his letter was designed for publication in a compendium reminiscent of Cicero’s recently published (though less personally curated) epistolary collection. In composing this literary tribute, Petrarch neglects the actual experience of climbing the mountain. Indeed, when he reaches the summit of Mount Ventoux in this literary account, he reads a passage from St. Augustine’s *Confessions*, which awakens him to the more important ascent – that of the human soul to God: “And men go about to wonder at the heights of the mountains, and the mighty waves of the sea, and the wide sweep of rivers, and the circuit of the ocean, and the revolution of the stars, but themselves they consider not.”

Petarch’s knowledge of climbing the physical mountain remains secondhand, and his expression of awe, stilled by Augustine, is merely awe for the historical account.

6 Ibid., p. 99.
7 Ibid., p. 107.
8 Lokaj thoroughly discusses the evidence supporting this interpretation: ibid., pp. 28-43.
9 Ibid., p. 105.
Beneath the moral allegory of Petrarch’s short letter is a discourse between internal and external ascension, drawing from both the profane awe of nature as well as the spiritual awe of divinity. Petrarch turned to Augustine in order to reorient his spiritual focus in this worldly endeavor; and indeed, Augustine’s account of internal ascent marks a considerable shift in perspective from that of antiquity. While Democritus placed truth in the depths of a well, Augustine, with his contemporaries, placed it obscured at the summit of a mountain. Truth in this metaphor attains a much different status, elevated in dignity and placed behind the necessity of focused labor. In this elevation of truth, Augustine was himself borrowing from the near-allegorical accounts in scripture of men ascending mountains to speak with God. Moses climbed Mt. Sinai, and before that Abraham ascended to sacrifice his son – and in the period between Petrarch and Augustine, mystics such as St. Bonaventure once again ascended mountains. Rather than seek to benefit from the mountain’s heightened perspective of nature, these men cast their eyes beyond it, to divinity. Likewise, Petrarch’s rebuke recognizes the mountain itself as primarily a symbol of this more significant internal ascent.

In the seventeenth century, however, the mountain began to solidify into an object of ascension in nature as well as a symbol of spiritual ascension. Van Helmont, like Augustine, recognized that “almost all the Mysteries of God were celebrated in mountains,” but the internal ascension to divine mysteries in van Helmont’s account quickly becomes conflated with external experience. “I being fasting,” he says, “felt in the Alpes, the sweetness of an inbreathed Air”: inspiration on the mountain becomes the clear air at altitude; likewise, illumination becomes the unimpeded light at the summit. Spiritual ascension in van Helmont is delivered and informed by the profane experience of nature – by the panorama spread out before the summit of the mountain.

However, this changing perspective that brought nature closer to divinity often presented the mountain as an obstacle to expansion, a repository of industrial materials, and a blemish on

13 van Helmont, “Mons Domini,” Ortus, p. 791; Oriatrike, p. 806. In this treatise, van Helmont emphasizes the significance of the length of time that Moses spent at the summit of Mt. Sinai. Augustine, as Lokaj indicates, placed similar emphasis on the experience at the summit over the journey to reach it: Petrarca, Petrarch’s Ascent of Mount Ventoux., pp. 33-5.
14 van Helmont, “Mons Domini,” Ortus, p. 792; Oriatrike, p. 806.
the face of the earth. Leibniz exemplifies many of these early modern attitudes toward the mountain in his attempts to master nature with his mining project in the Harz Mountains. His plans were grand ones: to construct wind-mills that not only pumped water out of mines, but also powered its conveyance to reservoirs far above, where the water could proceed to power the waterwheels below. For six years he labored against local mining authorities, increasing financial difficulties, and the impracticality of his designs before admitting his project a failure. It is not always possible to overcome the difficulties that nature presents, no matter the elegance of theory, but Leibniz’s determination to meet this challenge presented by the mountain and to exert a dominance of artifice over the Harz reveals an ultimately optimistic approach to conquering the mountain. And in fact, his mining projects were accompanied by parallel investigations into the marvels that mountains present. When he viewed arrays of fossils in the earth, he recognized the mountain as a natural Kunstkammer, revealing the secrets of nature with a view into the design of its divine curator. The early modern mountain was still a symbol of ascension to divine knowledge, only now made possible by the palpable experience of nature.

The view from the summit is uniquely expansive. Stretching out in all directions is a landscape that from below can only be mapped through a collection of meticulously recorded and arranged experiences of particulars, imperfectly patched into a theory of its holistic appearance. But this heightened perspective provides contextual certainty; from the height of the mountain, places one has never visited find their sensible positions in a greater landscape. Petrarch, in his internal journey for spiritual ascension, feels himself admonished by his awe of this profane perspective. He writes, reflecting Augustine’s internal focus: “I should have learned a long time before [...] that, compared to the soul, nothing is great.” But for Leibniz, writing three hundred years later, the material mountain revealed the divine perspective as well; he saw the greatness of the human soul reflected in its heights, a natural monument likewise capable of elevating human understanding of nature. The mountain’s steadfast continuity through time orients the human relation to nature, and in the shared experience of ascension, a changing perspective emerges: that of the mercurial relationship between the elusiveness of nature and the human struggle to understand their place within it.

To fully explicate these topics in early modern natural history would require a study well beyond the scope of this essay. However, there are contemporary accounts that exemplify this changing evaluation of the mountain. For accounts of natural history, see: Robert Hooke, "Discourses of Earthquakes," in The Posthumous Works, ed. Richard Waller (London: printed by Sam. Smith and Benj. Walford, 1705), p. 279-450; and Leibniz, Protogaea. The most controversial account that vilified the mountain did so on scriptural grounds, citing the curse of the Edenic Fall: Thomas Burnet, The Theory of the Earth (London: Printed by R. N. for Walter Kettilby, 1697.), Book I pp. 34-45.

Leibniz makes this comparison to the Kunstkammer in: ibid., p. 61.

Petrarca, Petrarch’s Ascent of Mount Ventoux., p. 105.
CONCLUSION: 
THE LAST ALCHEMIST

“Therefore I insisting only in my own footsteps, I there saw far other things than the foregoing company of
Ancestors had described.”

Van Helmont’s career, viewed as that of the first chemist, can be described as an admirable effort to transition to a new, more systematic experimental practice, but neither his unusually meticulous quantifications nor his insights into the categorical relationship between disease agents and the human body – nor, indeed, any other superficially prescient aspect of his work – can be faithfully extracted from the eccentricities of a man who administered wolfs-bane to himself in an attempt to induce spiritual illumination. When Margaret Cavendish read van Helmont’s works, she likewise failed to perceive the seed of modernity. She found his liberty with novel language and metaphorical illustration to be needlessly frustrating, but also indicative of the unacceptably magical foundation supporting his natural philosophy:

It is no wonder, your Author has so many odd and strange opinions in Philosophy, since they do not only proceed from strange Visions, Apparitions, and Dreams, but are built upon so strange grounds and principles as Ideas, Archeus, Gas, Blas, Ferment, and the like, the names of which sound so harsh and terrifying, as they might put any body easily into a fright, like so many Hobgoblins or Immaterial spirits; but the best is, they can do no great harm, except it be to trouble the brains of them, that love to maintain those opinions; for though they are thought to be powerful beings, yet being not corporeal substances, I cannot imagine wherein their power should consist; for Nothing can do nothing.²

Cavendish’s reading may seem unforgiving, but van Helmont was aware to some extent that the strangeness of his ortus medicinae was breeding “Hobgoblins.” When he begins to describe the hierarchy existing between the immortal soul and the sensitive soul – and in turn, the physical “seat” of these immaterial components of the body in the Duumvirate – he attempts to define his terms adequately lest his readers be seized by the “terrour of novelty.”³ Any evaluation of van Helmont’s experimental practice must consider this fundamentally magical novelty, however terrifying.

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2 Margaret Cavendish, Duchess of Newcastle, Philosophical Letters, or, Modest Reflections Upon Some Opinions in Natural Philosophy: Maintained by Several Famous and Learned Authors of This Age, Expressed by Way of Letters (London, 1664), p. 239.
The linguistic novelty that van Helmont identifies indicates the greater novelty of his work; it follows from the ineffability of his theory of magic and, ultimately, from his response to the failings of reason. This novel language, often illustrative or metaphorical, reveals the extent to which he grappled with communicating non-linguistic knowledge – knowledge acquired from experiences rather than from texts. Van Helmont’s language is “strange,” as Cavendish notes, but more significantly, it is intentionally strange to serve his subversive interpretations of human reason, in the same manner as personal illumination. And just as van Helmont’s linguistic novelty is an expression of his magical epistemology, Cavendish’s complaints about his language accompany similar criticisms targeting his claims to potentially enthusiastic visions. The inherently personal nature of his work, his skepticism of and dissociation from institutional knowledge, and his uncompromising claim to truth and power over nature are all potential marks of such “enthusiasm.”

But these esoteric qualities of van Helmont’s work do not likewise render it discontinuous with contemporary thought; he was neither the only natural philosopher dreaming in the seventeenth century, nor was he the only one making claims to the epistemological value of such experiences.

Apart from the many parallels that their lives share, it is perhaps most striking that both Descartes and van Helmont claimed to experience dreaming visions. Like many other seventeenth century philosophers, each placed a divine encounter at the beginning of his career. Descartes, in fact, had three. According to his contemporary biographer, a period of spiritual agitation led him into a “spice of enthusiasm which disposed his Mind, already quite spent, in such a manner, that it was [able] to receive the Impressions of Dreams and Visions.” Though hardly given a negative connotation here, enthusiasm carries the same epistemic dangers as van Helmont’s “ecstasies” – one never knows when such experiences intersect with madness (or wine, in Descartes’ case). However, like van Helmont’s claim to clarity of mind, Descartes

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4 The term “enthusiasm,” like the term “magic,” has various and often conflicting meanings and connotations. My discussion of enthusiasm here, which must necessarily be limited, relies on criticisms of van Helmont’s works and the general features of enthusiasm indicated by Michael Heyd in “Be Sober and Reasonable”: The Critique of Enthusiasm in the Seventeenth and Early Eighteenth Century (Leiden: Brill, 1995), pp. 4-6.

5 Anthony Grafton notes that Descartes, who like van Helmont received a Jesuit education, would have been instructed in exercises for spiritual contemplation: “Descartes the Dreamer,” in Bring out Your Dead: The Past as Revelation (Cambridge, MA: Harvard University Press, 2001), pp. 256-7.


7 The danger of demonic deception is still keenly felt as well, through the vulnerabilities of imagination. See: Stuart Clark, Vanities of the Eye: Vision in Early Modern European Culture (Oxford: Oxford University Press, 2007), pp. 308-9 and Heyd, “Be Sober and Reasonable”, pp. 41-3. Descartes was, in fact, accused of enthusiasm by some critics and mocked for his credulity. See: ibid., p. 110ff, as well as the selection from Clark cited above.
“assures us, that he had been very Sober all that Day, and that Evening too and that he had not touched a drop of Wine for Three Weeks together.”

Descartes’ critics primarily targeted his approach to meditation, in which he relied on rational contemplation in lieu of the unreliable senses. This sort of personal illumination, undoubtedly enthusiastic, mirrors van Helmont’s attempts to perfect his knowledge of nature.

Compared to Descartes, van Helmont found a much more significant place for visions in his epistemological practice. For him, this dreaming vision was not simply ecstasy but more significantly experience. In this sense, he placed visions into an epistemic category equivalent to labor in the secluded laboratory. This knowledge is, as John Chandler phrases it, “experimental (not historical) Knowledge.” It comprises a particular kind of knowledge that is immediate, personal, and potent; more reliable than the mercurial interpretations of reason, this meditative, divinely-sourced knowledge allows sensory experience to be perfected. This is van Helmont’s experimental magic – not just a comprehensive explanation of natural operations, but a systematized practice that invokes internal vision in order to augment external vision in place of mortal reason.

What these threats of enthusiasm demonstrate is an acknowledgement of van Helmont’s unreasonable claim to Truth – and the necessity that this claim held for the utility of his work. Yet his main claim to authority was that of a practical physician, and his prerogative as such determined the development of his natural philosophy as well as the extent of its influence among later physicians, inspired by his reevaluation of the relationship between man and nature. Though accused of being distant from the reality of medical practice, van Helmont was hardly a stranger to his next-door neighbors. In response to Stubbe’s accusation of such, George Thomson claims:

For 'tis not your Malignant Accusation you lay to the Lord Bacon as Flagitious, can invalidate his experimental Philosophy; nor that effeminate or childish allegation against Van Helmont, to wit, that his Neighbours in the same Street knew him not, when he was enquired after by Dr Kraft, (perhaps such a crafty — as your self) will move any one intuitively intelligent, to disesteem so noble a Philosopher, beloved of Heaven above others; to

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8 Baillet, *The Life of Monsieur Des Cartes*, p. 36.
10 For example: “That there are Philosophical Enthusiasts, is as certain as there are Theological […] Paracelsus, Helmont, and many other Chymists, are Examples of the first sort […],” Richard Burthogge, *Organum Vetus & Novum, or, a Discourse of Reason and Truth: Wherein the Natural Logick Common to Mankind Is Briefly and Plainly Described* (London: Printed for Sam. Crouch, 1678), pp. 37-8, Quoted in: Peter Harrison, *The Fall of Man and the Foundations of Science* (Cambridge: Cambridge University Press, 2007), p. 126; see also Harrison’s wider discussion of experiment and experience, pp. 125-138 of the same work.
whom was granted the greatest inspection into Nature, above any we are this day acquainted with, as I can make evident if need be.\textsuperscript{12}

Van Helmont’s bold departures served his practical needs, and in turn, his practical authority thereafter was founded on his status as a true seer. Thomson says that van Helmont’s understanding of nature was “above any we are this day acquainted with,” possessing a religiosity that later Helmontians would value without likewise claiming to fully emulate. Van Helmont’s meditative practices – as integral as they were to his work – did not reach the same level of practical utility among his predecessors. Between the visual and the visionary that characterized van Helmont’s unique experimental magic, Helmontians like Thomson would adopt the former, leaving the latter to van Helmont’s closed chambers. The power he claimed eluded his followers and vexed his critics, who could not, as he had done, remove this power from the realm of the supernatural and make it natural to human beings. Van Helmont calls Galenists murderers, who allow far too many patients to die; and Stubbe insists, concerning the limitations of medicine, that “we are not as Gods.”\textsuperscript{13}

When he promised to expound the secrets of medicine, van Helmont called himself the “last of Alchemists,” placing himself within a clearly transitional period in medicine and natural philosophy in general.\textsuperscript{14} He relied heavily on the practices and epistemologies drawn from the magical tradition and their promise to circumvent human reason, and his work was yet identified by both his critics and his advocates as continuous with the same Baconian experimental philosophy that the Royal Society claimed as representative of their new science. These seemingly contradictory qualities that make van Helmont’s work so difficult to categorize can be extended further: his enthusiasm was in his willingness, like Descartes, to challenge the boundaries that his predecessors placed on the capabilities and responsibilities of humans to know and master nature; yet his ability to follow through on this challenge demanded that reason be abandoned in favor of an unmediated experience, inherently personal and so, it seems, impossible to communicate fully to the physicians who would adopt his works without adopting his methods. Both the benefits and the difficulties of his work follow from his conviction of the human potential to approach divinity.

Ultimately, van Helmont’s self-appointed task to reinvent medicine was perhaps too ambitious – as he says, “in this work I could not do so much as I would.”\textsuperscript{15} But his


\textsuperscript{13} Henry Stubbe, \textit{The Lord Bacons Relation to the Sweating-Sickness Examined, in a Reply to George Thomson, Pretender to Physick and Chymistry \ldots} (London: Printed for Phil. Brigs, 1671), p. 31.

\textsuperscript{14} van Helmont, “Respondet Author,” \textit{Ortus}, p. 524; \textit{Oriatrike}, p. 524; \textit{Spagyrorum postremus}

\textsuperscript{15} van Helmont, “Promissa Authoris,” \textit{Ortus}, p. 9; \textit{Oriatrike}, p. 4: \textit{etsi in hoc labore non, quantum volui, potuerim}. 
appropriation of magical tradition belies more than his perhaps excessive unwillingness to compromise; it reveals his lifelong obsession with the promise of human potential to supersede the limitations of mortality. From this labor comes the powerful utility that his successors valued most, a reflection of the ambition and ingenuity fundamentally characteristic of magic. This experimental magic was van Helmont’s most fundamental innovation, an integral part of the lifelong work and personal faith of a man who would inspire his son to assert with confidence: “Follow me, I walk thorow the whole World.”16

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16 Franciscus Mercurius van Helmont, “Ad Lectorum,” Ortus, sig. ****4v; Oriatrike, sig. er: Me sequere, universum perambulo Orbem.
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