THE PARACELSIAN ISSUE: ALCHEMY AND CHEMISTRY IN MID-SEVENTEENTH CENTURY

ENGLISH TRANSLATION

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Acknowledgements

I would like to thank my advisor and first reader, Professor Darin Hayton, for the invaluable help he provided on this project, as well as for his guidance on my academic journey in the Haverford Department of History. I would also like to thank my second reader, Professor Paul Smith, for his all of advice and encouragement over the past two years at Haverford. Finally, I would like to thank my friends and family at Haverford and elsewhere, whose friendship and support were essential to the completion of this undertaking.
Part I: Introduction

Historians of Early Modern Europe have written much on the topic of Paracelsus, with volumes devoted to everything from his biography to his writings to the lasting impact he had on various aspects of European society. Allen G. Debus, for example, has written extensively on the topic of Paracelsian chemical philosophy, exploring the general phenomenon of “chemical philosophy” in his book *The Chemical Philosophy*, as well as specifically how Paracelsianism affected the scientific communities in certain countries like England and France in *The English Paracelsians* and *The French Paracelsians*, respectively. Likewise, much has also been written on the topics of alchemy and chemistry in the Early Modern period, discussing what each of them was, how they generally differed, and what impacts the practices and philosophies associated with each had on the scientific and philosophical endeavors of the future. Debus has contributed to these topics, too, as have William Newman and Lawrence Principe, all of whose works I will explore in greater detail.

Given the chemical nature of Paracelsus’s works and teachings, it is unsurprising that much has been written about his and his followers’ connections with both alchemy and chemistry. This is mainly in Debus’s realm, as he explores how Paracelsian thought affected the European push towards chemical medicines in the 16th and 17th centuries, though Newman has contributions of his own, noting in his book *Atoms and Alchemy* the links between Paracelsian philosophy and corpuscular theory. Similarly, alchemy and chemistry have been linked, with work primarily from Newman and Principe arguing the position that the two terms meant the same thing in European scientific circles by the early 17th century. These linkages, however, leave a subtle but important gap in scholarship, as neither Debus, nor Newman or Principe, nor anyone else has written anything of note concerning the usage of the terms alchemy and
chemistry in Paracelsian thought and writing. Given the size and spread of the Paracelsian movement in the 16th and 17th centuries in Europe, I see this as a rather large oversight, one that glosses over numerous writers, thinkers, and translators of the age who all have their own reasons and motivations, both personal and social, for using the words they do in their writings. What I attempt to do in this thesis is address this hole in the scholarship, demonstrating that in mid-17th century English Paracelsian writings, the words alchemy and chemistry were not necessarily interchangeable and, further, to provide some explanations as to why that is the case. To accomplish this, I will first provide an overview of the life of Paracelsus himself, and follow with a brief foray into some of the more important parts of his and his followers’ philosophy, in particular those parts that will appear in the documents I analyze. From there, I will examine the appearance of Paracelsian philosophy in England, noting some of the more important figures and discussing some of the factors that allowed for the propagation of Paracelsian thought among the English scholarly community. With this historical context in mind, I will turn to more modern scholarship concerning the linguistics of alchemy, in particular a few studies by William Newman and Lawrence Principe, who have written extensively on the subject. I will then proceed to analyze five translations of Paracelsian works, using the historical context discussed earlier to parse out the meanings of “alchemy,” “chemistry,” “alchemist,” and “chemist” in each of the treatises as they appear. I will end with a brief discussion of the conclusions that can be drawn from these readings, including both how the individual words are used and why the words are used as they are, insofar as can be reasonably ascertained.

Part II: Paracelsus: His Life and Philosophy

Any discussion of Paracelsian chemical philosophy and ideology must begin with a brief exploration of Paracelsus himself, as well as some of the primary themes of the philosophy that
governed his and his followers’ actions, especially as it is his treatises and the works of his immediate followers that I will analyze. Philippus Aureolus Theophrastus Bombastus von Hohenheim, known the world over more simply as Paracelsus, was born in the Swiss village of Einsiedeln in 1493. His father was the physician of the village, who in his spare time, dabbled in alchemy, subjects that would prove to dominate Paracelsus’s life. \(^1\) At the age of nine, Paracelsus and his father moved to a town called Villach in Austria, where Paracelsus apprenticed in the local mines. \(^2\) During his apprenticeship, the young Paracelsus became familiar with metallurgy and minerology, as well as with the occupational illnesses that befell many miners. \(^3\) After leaving home at the age of fourteen, Paracelsus traveled around the European continent, attending universities and working as a military surgeon in a mercenary company. \(^4\) Though the happenings during the next few years of Paracelsus’s life are largely unverified, it is clear that Paracelsus was constantly on the move, roving from one town to the next, never staying too long in one place. In 1527, he arrived in the city of Basel, where he was appointed the town physician and a professor of medicine at the University of Basel after curing a leg ailment that the local physicians had been unable to treat. \(^5\)

It was during this stint that Paracelsus ran into trouble. While teaching at the University of Basel, Paracelsus showcased his abrasive personality immediately, declaring that he would not lecture on the medical wisdom of the ancients in favor of his own experiences, and doing so in the vernacular dialect rather than the more scholastic Latin. \(^6\) The resulting backlash from the

\(^2\) Ibid.
\(^3\) Debus, *The Chemical Philosophy*, 46-47.
\(^4\) Debus, *The Chemical Philosophy*, 47.
\(^6\) Ibid.
local literati, including a letter written by “Galen” from Hell decrying Paracelsus’s medical and philosophical views, drove Paracelsus from the city. In the remaining years of his life, Paracelsus continued as he had previously, moving around, writing and publishing works on medicine and philosophy, until his death in 1541 in Salzburg.8

Paracelsus’s ideas about medicine, philosophy, and the universe itself survived his opponent’s attacks during his life, and even managed to survive after his death, being taken up by his disciples and expanded upon in the subsequent decades. It is these ideas, written by Paracelsus and interpreted and extended by his followers, that I will call, broadly, Paracelsianism or Paracelsian natural philosophy.9 One of the primary tenets of this system, and a position that caused Paracelsus and his followers endless trouble, was the absolute rejection of the authority of the titans of medicine of the time: Galen, Aristotle, and Avicenna. In part, this was due to these ancient physicians’ ignorance of chemical remedies, upon which Paracelsians placed much importance. For the Paracelsian physician, experimentation and personal observation reigned supreme in terms of wisdom, justifying the scrapping of the logical proofs of the Galenic physicians. Additionally, though, the Paracelsian system refused to acknowledge the authority of pagan doctors like the Greek and Arab masters of the past, instead emphasizing purely Christian teachings. As might be expected, this rejection of teachings brought with it a rejection of methodology, as well as a rejection of the systems such teachings created. The Paracelsians replaced the purely logic-based medicine of the past with the chemical methods championed by

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7 Ibid.
8 Debus, The Chemical Philosophy, 51.
9 These two terms simply refer to the general system of beliefs held by Paracelsians and are descriptors that I use for convenience. I use them interchangeably in the remainder of this work.
Paracelsus, and substituted their own chemical explanation of disease for the humoral medicine of antiquity.\textsuperscript{10}

So far, we have only really seen subjects that Paracelsianism rejected; what, then, did it hold as being the truth? To begin, all of the pagan philosophy put forth by Aristotle and approved by Galen must be replaced by Christian ideas. The Earth, for instance, was finite, created by God according to Creation chapters of Genesis and destined to end according to the Book of Revelations. Thus, Paracelsian natural philosophy was composed of two “books”: the book of divine revelation, i.e., the Christian Scriptures, and the book of Creation, i.e. nature.\textsuperscript{11} For the Paracelsian, this was knowledge directly given to the first man Adam by God himself and passed down through the ages, preserved by a select few who were privy to it. Such knowledge, they held, could be rediscovered in the wisdom of the Old Testament of the Bible and in the occult teachings of Hermes Trismegistus.\textsuperscript{12} This combination, as might be expected, produced a natural philosophy that was both traditionally religious and heavily mystical. Interestingly, though, the influence of Hermeticism and other occult philosophies also promoted the use of experimentation and observation, as they in part drew from traditional alchemical practices that encouraged such actions. The experimental chemist, then, became the chief source of knowledge and wisdom for Paracelsians, taking the place of the Aristotelian mathematician or logician.

The result of this, naturally, was a largely chemical understanding of the natural world. As Allen Debus points out, Paracelsus believed that alchemy could satisfactorily explain each of the four classical elements, and as such could be used, either through lecture or through experiment, to discover all the secrets of the cosmos.\textsuperscript{13} In other words, the Paracelsians believed

\textsuperscript{10} Debus, \textit{The Chemical Philosophy}, 58.
\textsuperscript{11} Debus, \textit{The Chemical Philosophy}, 69.
\textsuperscript{12} Ibid.
\textsuperscript{13} Debus, \textit{The Chemical Philosophy}, 76.
that all natural processes were ultimately chemical in nature, and could be explained using terms
drawn from alchemy. A good example of this in action is the English clergyman and Paracelsian
Thomas Timme’s description of the creation of the universe, as it appears in the Book of
Genesis, in chemical terms. As he describes:

Moses, that auncient Theologue, describing & expressing the most wonderfull
Architecture of this great world, tels vs that the Spirit of God moued vpon the water:
which was an indigested Chaos or masse created before by God, with confused Earth in
mixture: yet, by his Halchymicall Extraction, Seperation, Sublimation, and Coniunction,
so ordered and coniojyned againe, as they are manifestly seene a part and sundered: in
Earth, Fyer included, (which is a third Element) and Ayre, (a fourth) in Water, howbeit
inuisibly. Of which foure Elements, two are fix|ed, as earth and fire: and two volatil, as
water & ayre.14

We can see, then, that Timme’s understanding of the Judeo-Christian creation story comes from
the “halchymicall” perspective. God, using the ancient alchemical techniques of extraction,
separation, sublimation, and conjunction, took the chaos that was the primordial waters and
ordered them into the four recognizable elements of earth, air, fire, and water. Furthermore,
Timme concludes that the use of these processes also resulted in the creation of the tria prima,
that is, the base elements mercury, sulfur, and salt in Paracelsianism:

That spiritual Motion of the first mouer, God, hath inspired al the creatures of this
vniuersal world, with that spirit of Life (which may truely be called the spirit of the

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world) which naturally moueth, and secretly acteth in all creatures, giuing them existence in three, to wit, salt, sulphure, and Mercury, in one Huposiasis.¹⁵

In these passages, we are able to clearly see the Paracelsian justification for their chemical natural philosophy. God, according to Timme, is the chief alchemist. As such, his use of alchemical processes in the very creation of the natural world, and the subsequent ability for men like Timme to explain that world in chemical terms, supports the Paracelsian “two-booked” natural philosophy.

This chemical understanding of the world extended well beyond biblical stories, with chemical explanations and analogies describing all sorts of natural phenomena, though the divine was usually never far from the explanation. Of particular interest to Paracelsian chemists and philosophers was the role heating substances had in both the laboratory and the natural world, and as such many of their explanations for natural phenomena involved some form of heating element; i.e., a fire of some sort. For instance, in the Paracelsian corpus, the processes of respiration and combustion are essentially equated, linked through both air and fire. In both cases, the key ingredient for the Paracelsian philosopher was not the air necessarily, but the “heavenly fire” that the air carried with it.¹⁶ This heavenly fire came from the sun, whose rays beat down upon the earth, and in doing so drive a number of chemical reactions whose results range from the formation of rain to the creation of life itself.¹⁷ Natural distillation was also used as an explanation for some natural phenomena, including the growth of plants and the formation of some mineral-rich streams.¹⁸ The heat source in this instance is usually the sun, though many

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¹⁷ Ibid.
¹⁸ Debus, *The Chemical Philosophy*, 89.

The process of natural distillation refers to the separation and purification of elements within the earth by the divine power of God himself. Under this theory, water which ran through such a collection of purified material
Paracelsian thinkers also came to believe that there existed at the center of the earth something of another sun, a “great central fire.” As evidence for the existence of this fire, the Paracelsians pointed to volcanoes, as well as hot springs and the high temperatures found deep in mines. How this great fire came to be and its source of fuel were not always agreed upon, with explanations ranging from concentrated sunlight to friction-ignited gas in the center of the earth. This latter explanation was further taken to explain the origins of metals and minerals as residues of natural vapors found in the earth, rather than the more traditional explanation of spontaneous generation on the Earth’s surface.

The concept of the *tria prima*, known as the three principles in English, is another of the important tenets of Paracelsian natural philosophy. The *tria prima* refers to the Paracelsian belief that, in general terms, all matter could be reduced to variable quantities of mercury, sulfur, and salt, much like how in traditional Aristotelian natural philosophy all matter was composed of proportions of earth, air, fire, and water. It was, essentially, a logical extension of the sulfur-mercury theory of the alchemists of old, which said that all metals were composed of only sulfur and mercury, differing only in the proportions of each, so as to include all matter rather than just metals. Interestingly, though, Paracelsus himself used both the *tria prima* and the Aristotelian model of elements in his teachings and writings. The relationship between the two was not very well defined by Paracelsus himself, save for his contention that the three principles were spiritual rather than physical, and that the nature of the three principles differed qualitatively across

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Regardless, the lack of a concrete relationship between the two elemental systems allowed for their coexistence in Paracelsianism into the seventeenth century, as we see in Timme’s writings.

By the middle of the seventeenth century, however, the *tria prima* had been expanded upon and better defined. They were assigned qualities that allowed their presence to be determined in normal laboratory operation, in particular through either combustion or distillation. Sulfur, for instance, was the substance that allowed a substance to be combustible, as well as giving a particular material its innate structure and substance. Mercury, meanwhile, gave a material a vaporous quality, and salt provided a material with solidity and color. For many Paracelsian chemists, however, these principles did not necessarily literally refer to mercury, sulfur, and salt. They were, instead, simply names that labelled much broader categories of basic materials. Scholars like Oswald Croll, whose translated writings we will examine more closely later, and Peter Severinus held this view, with Croll writing that matter could be separated into “mercury or liquor, sulfur or oil, and salt” and Severinus classifying the base substances as solids, inflammable oils, and ordinary liquors.

A final tenet of Paracelsian natural philosophy is the concept of the microcosm-macrocosm relationship. This is the idea that the microcosm of the human body is simply a miniature version of the macrocosm of the universe. Though this belief was not unique to Paracelsianism, it was nevertheless useful in Paracelsian medicine, where the mirror-like relationship between the human body and the broader universe was used to create an explanation for disease. According to this theory, “seeds” of disease were planted grew in the body by

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24 Ibid.
26 Debus, *The Chemical Philosophy*, 82-83.
external forces, just as the “seeds” of minerals were planted and grew in the earth.\(^{27}\) Related to this was the doctrine of signatures, which dictated that “God had ‘signed’ all things on earth for the benefit of His Creation—man—and that the true magus would be performing a service to his Creator by discovering these divine secrets.”\(^{28}\) The Paracelsians believed that these signatures could be found by subjecting matter to various chemical processes, particularly the application of heat, to reveal true divine essences. These essences, in turn, could be used by a skilled physician to create powerful medicines.

**Part III: Paracelsianism in Early Modern England**

The preceding section provided some philosophical context for our later analysis in the form of an overview of some of the key parts of Paracelsian beliefs. However, the historical relevance of English Paracelsian translations cannot be found with only a list of beliefs. Linking sixteenth-century continental European beliefs to those of English translators and physicians a century later requires more direct links. One of these firmer ties can be found in the relative prevalence and general acceptance of chemical medicine in England during this time period. Despite its more conservative and traditional beginnings, by the middle of the sixteenth century English physicians were generally becoming more accepting of chemical remedies for disease. Outside of the immediate London area, for example, traditional herbal medicine\(^{29}\) abounded due to a shortage of trained doctors, with citizens relying instead on local healers and wandering medicine men.\(^{30}\) By 1543, these practices had spread to the city of London itself, with the London College of Physicians overseeing physicians and apothecaries, both chemical and more

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\(^{27}\) Debus, *The Chemical Philosophy*, 107.

\(^{28}\) Debus, *The Chemical Philosophy*, 100.

\(^{29}\) That is to say, not based in Galenic or Aristotelian philosophy

\(^{30}\) Debus, *The Chemical Philosophy*, 175.
traditional, censuring those it deemed to be frauds or charlatans.\textsuperscript{31} In addition, more ideas about chemical processes and medicines made their way to England from continental Europe, with one of the more important works, Conrad Gesner’s \textit{Treasure of Euonymus}, arriving in 1559. This work provided English chemical physicians with a battery of remedies derived using alchemical processes, with emphasis given to those created using metals.\textsuperscript{32} Interestingly, though this emphasis on chemically-derived treatments in Gesner’s treatise sounds remarkably Paracelsian in nature, Gesner himself was a staunch opponent of Paracelsus, refusing to diverge from ancient medical authority and going so far to call Paracelsus a fraud, though at the same time grudgingly admitting that his chemical cures had aided many people.\textsuperscript{33}

Despite Gesner’s and many others’ opposition to Paracelsus and his followers, the grudging admiration for his medicine’s curative powers continued to grow in England in the late sixteenth and early seventeenth centuries, especially as the works of more continental Paracelsians, such as the French alchemist Joseph Du Chesne, were translated into English. With this said, however, explorations and translations of the works of Paracelsus and his followers at this point generally did not delve too deeply into the underlying philosophy behind the wonderous chemical cures. Those English authors who did write more deeply of Paracelsian natural philosophy were in large part not known to be medical authorities. For instance, as Debus points out, the writer of the first Paracelsian apology in English, one R. Bostocke, is known only by name, and the translator Thomas Timme was a cleric.\textsuperscript{34} Nevertheless, the chemical medicines promoted by these men and others ultimately came to a head with the 1618 publication of the \textit{Pharmacopoeia Londinensis}, a comprehensive list of medicines published by the London

\begin{itemize}
\item \textsuperscript{31} Ibid.
\item \textsuperscript{32} Debus, \textit{The Chemical Philosophy}, 176.
\item \textsuperscript{33} Ibid.
\item \textsuperscript{34} Debus, \textit{The Chemical Philosophy}, 179.
\end{itemize}
College of Physicians.\textsuperscript{35} Though the *Pharmacopoeia* was published in a second edition in 1650, the section concerning chemical remedies remained largely unchanged from its original version thirty-two years before.\textsuperscript{36}

Though medicine is perhaps the most obvious example of Paracelsian chemical philosophy being used for the benefit of humankind, the philosophy was also used in a number of other disciplines in attempts to aid the state as a whole, in particular, agriculture. Of note is the Englishman Sir Hugh Plat, who used the writings of the French chemist and likely scholar of Paracelsian chemical philosophy\textsuperscript{37} Bernard Palissy as a basis for his own agricultural experiments.\textsuperscript{38} Palissy, and Plat by extension, held that the Paracelsian principle of salt was of the utmost importance in farming, as this salt holds the key to all growth.\textsuperscript{39} In farming, Palissy said, manure derives its growing power from the salts dissolved within, though that salt can lose its growing power if it is dissolved in the rain.\textsuperscript{40} Palissy concluded that this salt that was responsible for growth was “vegetative salt,” and though Plat agreed with this conclusion, he felt that Palissy had not gone far enough in his experimentation.\textsuperscript{41} Plat extended these observations from Palissy with his own experiments with salting fields, observing that corn soaked in

\textsuperscript{35} Debus, *The Chemical Philosophy*, 189.
\textsuperscript{36} Ibid.
\textsuperscript{37} I refer to Palissy as a “likely scholar of Paracelsian natural philosophy” because, as Debus points out, though he does not explicitly reference Paracelsus in his treatises on agriculture, several of his views concerning the usefulness, nature, and origin of salt seem to come directly from Paracelsus himself. Though Palissy may, like Conrad Gesner, have disagreed with some aspects of Paracelsianism, he had almost certainly read, and agreed with, Paracelsus’s chemical views.
\textsuperscript{38} Debus, *The Chemical Philosophy*, 411-412.
\textsuperscript{39} Debus, *The Chemical Philosophy*, 412-413.
Of note here is that the term salt as used by Palissy and Plat does not necessarily refer to sodium chloride or other similar compounds. It refers instead to, essentially, solids that can be extracted from materials. They hold that there are as many salts as there are substances and the term salt does not refer to any particular substance. The examples Debus uses to illustrate this point are saltpeter, ash, and a cinnamon-tasting compound in oak tree bark, all of which had the power of “salt.”
\textsuperscript{40} Debus, *The Chemical Philosophy*, 413, 417.
\textsuperscript{41} Debus, *The Chemical Philosophy*, 419.
seawater grew better than dry corn, and that lacing a field with a bushel of sea salt resulted in superior growth to a field fertilized with two bushels of regular manure. Armed with these observations, Plat concluded that with natural transmutation, regular sea salt could become vegetative salt, and thus English agriculture could be greatly improved with the simple application of sea salt. All of these experiments and conclusions stem directly from the Paracelsian tria prima.

The shift from approval of chemical medicine to full-blown Paracelsianism finally came with the rise of the Rosicrucian movement in the seventeenth century. The philosophy of Rosicrucianism began with the publications of Fama Fraternitalis and Confessio in 1614 and 1615, respectively. These treatises, originally published in Germany, described a secret order of mystics, occultists, and sages called the Fraternity of the Rose Cross who possessed great esoteric and cabalistic knowledge. They further describe the group’s desire to remake Europe into a Christian, utopian society using what they called the “True Philosophy,” what we might call esoteric Christianity. These works, and the Rosicrucian movement in general, had a few themes in common with Paracelsianism, and some scholars of the time even went so far as to call the Rosicrucians a branch of Paracelsian philosophy. Indeed, interest in the two philosophies grew simultaneously during the tumult of the English Civil War, with more Paracelsian documents being translated into English in the 1650s than in the previous fifty years put together.

One of the primary focuses of both the Fama and the Confessio was a call for a complete overhaul of the European educational system. The general belief common between the two

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42 Debus, The Chemical Philosophy, 418.
43 Debus, The Chemical Philosophy, 419.
44 Debus, The Chemical Philosophy, 387.
45 Debus, The Chemical Philosophy, 386-387.
movements was a disenchantment with traditional scholasticism, a desire to do away with the
pagan logicians and mathematicians of old and to replace them with new, Christian scholarship
based largely in new experimental and observational science.\textsuperscript{46} We see this in some of the
philosophical writings of the day, with notable examples being Francis Bacon’s writings and the
works of Samuel Hartlib and his Czech friend Jan Comenius. Bacon, for his part, critiqued what
he saw as a university system that was much too rigid and formulaic, claiming that university
students were largely unable to think critically or for themselves due to the constraints of the
university system.\textsuperscript{47} In an expression of his displeasure with the status quo, he wrote \textit{New Atlantis} in 1627, which presented an idealistic and utopian vision of human scientific discovery.
Part of this was a description of his ideal university, called “Solomon’s House,” which was
outfitted with numerous laboratories and a dearth of scientific equipment in accordance with
Bacon’s dream for higher education.\textsuperscript{48}

Fourteen years later, Samuel Hartlib wrote to Parliament with a similar idea, describing
in his work the idyllic kingdom of Macaria, in which scholars at a “college of experience” create
medicines for the benefit of humankind.\textsuperscript{49} Further, he directly addressed the hypothetical
argument that this educational system was in contradiction with contemporary medical practice,
to which he replies that the true nature of medicine is divine, referencing the twin books of
Paracelsian natural philosophy.\textsuperscript{50} Jan Comenius, friend and colleague of Hartlib, agreed with and
extended the arguments of his friend and Bacon, calling for university reformation a la Bacon.
However, Comenius believed Bacon’s vision was not sufficient in its focus on solely nature, and

\textsuperscript{46} Debus, \textit{The Chemical Philosophy}, 384.
\textsuperscript{47} Debus, \textit{The Chemical Philosophy}, 383-384.
\textsuperscript{48} Ibid.
\textsuperscript{49} Debus, \textit{The Chemical Philosophy}, 388.
\textsuperscript{50} Debus, \textit{The Chemical Philosophy}, 384.
as such preferred the *Christianopolis* of Johann Andreae, which looked further to the heavens and to religious truths.\(^{51}\) Additionally, Comenius called for the removal of Aristotelianism from university curricula, seeing them as heretical, and instead championed Christian creationism, as well as observation and experimentation, as the only sources of truth.\(^{52}\)

Shortly after being invited to England by Hartlib in 1641, Comenius was driven from the country by the outbreak of the English Civil War the next year. Despite his early departure, Comenius seems to have had a lasting impression on education reformers in England, with numerous works on the subject being published in the ten years following his departure.\(^{53}\) The ultimate victory of Oliver Cromwell and the Parliamentarians stoked this reformative fire, with calls for education reform following the abolition of the monarchy and restructuring of the Church of England. In fact, it was his concern for the education of ministers that prompted John Webster to pen his *Academiarum Examen* in 1653.\(^{54}\) Though largely echoing the sentiments of Bacon, Comenius, and a number of others, Webster’s treatise represents a full synthesis of the Paracelsian, Rosicrucian, and general reformer movements, as Webster drew from each of these sects to create his final critique. Thus, from these we can easily see how Paracelsianism was able to relatively easily take hold in the minds of scientifically-minded Englishmen of the mid-17th century.

**Part IV: Linguistic Studies**

We now have something of an idea of who the Paracelsians were and why their movement became popular in England in the mid-seventeenth century. We must now address the
primary focus of this project: why the terms chymistry and alchemy appear at different times throughout the translated Paracelsian corpus. For this, it is necessary to turn to linguistic and etymological analysis of the two terms. When it comes to etymological and linguistic analysis alchemy and chemistry, it quickly becomes clear that William Newman and Lawrence Principe are the preeminent scholars on the subjects, and as such, I will use their scholarship and conclusions, either as coauthors of works or alone, in my own overview of current scholarship concerning the terms alchemy and chemistry in early modern England. We might begin with Newman and Principe’s coauthored essay entitled “Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake.” In their words, “We shall show that the terms were not used with any difference of meaning and that the boundaries between retrospectively call ‘alchemy’ and ‘chemistry’ were extremely fuse at best.”55 To accomplish this goal, Newman and Principe examine the writings of a number of seventeenth-century chymists from across the European continent, though with a primary focus on figures from France and modern-day Germany. Their examination of these writings includes both direct definitions of chymistry and alchemy from the chymists themselves, as well as contemporary responses to the authors, and finally some connotative analysis on the part of Newman and Principe. Their ultimate conclusions, unsurprisingly, mirror their introductory aims: “First, the terms ‘alchemy’ and ‘chemistry’ were synonymous until at least the last two decades of the seventeenth century. This is true of French, German, and English sources, and for both believers and deniers of the reality of metallic transmutation.”56 This reading of seventeenth-century alchemical and chemical sources informs the rest of the conclusions we shall see in this section, and is repeated almost

verbatim in another article Newman and Principe cowrote, called “Some Problems with the Historiography of Alchemy” in the book *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*.

In light of these conclusions, we might now turn to Newman’s book *Atoms and Alchemy: Chymistry and the Experimental Origins of the Scientific Revolution*. Its aim, generally, was to explore how chymists and chymical processes and theories influenced experimental science leading up to and during the period we term the Scientific Revolution in Europe. While most of Newman’s research in this case is beyond the scope of this essay, the introductory section, called “The Problematic Position of Alchemy in the Scientific Revolution,” is, as the title suggests, much more relevant. It is in this section that Newman analyzes the denotative and connotative meanings of alchemy, both in the seventeenth century and in contemporary society. To this end, he cites Marie Boas Hall’s “The Establishment of the Mechanical Philosophy,” which was a 1952 publication which Newman claims is “still widely cited as a definitive study of early modern corpuscular theory.” Regarding the content of Boas Hall’s study, he notes: “Boas Hall… erected an anachronistic dichotomy between early modern ‘chemistry’ and ‘alchemy’ that served to legitimize the former as the discipline of Robert Boyle while casting the latter in the role of obscurantist impediment to scientific progress.” He goes on to say that much of modern scholarship examining the Scientific Revolution repeats this idea, that alchemy and chemistry are two distinct entities, and that alchemical thought is inherently unscientific.

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57 William Newman, *Atoms and Alchemy: Chymistry and the Experimental Origins of the Scientific Revolution* (Chicago: University of Chicago Press, 2006), 6. Corpuscular theory refers to the theory of matter put forth in the 17th century that all physical matter was composed of tiny particles, termed corpuscles. While similar to atomism and atomic theory, corpuscular theory differed in that these corpuscles could theoretically be divided into smaller particles, while atomism held atoms as indivisible.

58 Ibid.
As another example of this thinking, Newman cites Peter Dear’s *Revolutionizing the Sciences*, in which Newman claims that “Dear views alchemy as essentially secretist and bound up with the spiritual perfection of the would-be adept, unlike the emerging science of chemistry.” These perspectives given by Boas Hall and Dear, however, do not align with Newman’s own conclusions on the nature of alchemy. As Newman ultimately concludes, it was alchemical ideas and procedures that heavily influenced thinking with regards to corpuscular theory and, more generally, the Scientific Revolution as a movement. With this in mind, Newman claims, it would be disingenuous to classify alchemy as inherently unscientific; rather, it is quite the opposite, laying the framework for significant portions of scientific discovery and experimental theory.

While Newman and Principe do provide a rather comprehensive look into chemistry and alchemy in early modern Europe, I wish to push back slightly on their conclusions regarding the terms “alchemy” and “chemistry.” Their final positions I find to be something of blanket statements, too general and with no room for nuance or exceptions. For instance, in a footnote addressing Paracelsus’s own terminology, they state:

> Although it is true that Paracelsus von Hohenheim (1493-1541) "reformed" alchemy by emphasizing its role in preparing medicines, he did not establish a clear demarcation between alchemy and medical chemistry (called chemiatria or iatrochemia by his followers, and treated as a species of chemia). As Alan Rocke has pointed out, Paracelsus continued to use the German term Alchimey or Alchimei for all chemical concerns and Alchimist for the practitioner thereof ("Agricola, Paracelsus, and Chymia," Ambix 32 (1985), 38-45).60

In the original German, Newman and Principe’s statement could very well hold true, and perhaps it also remains true for some of Paracelsus’s international followers. However, as we shall see, this terminology that they outline is not used by a number of 17th century English translators of his work. My aim in this endeavor is to bring these exceptions in Newman and Principe’s rigid linguistic framework to light and to show that, at least among the followers and translators of Paracelsus, “alchemy” and “chemistry” are not necessarily the same field.

Part V: An Analysis of Esoteric Translations

I will begin with an analysis of a few documents that demonstrate a discernable difference in the meanings of alchemy and chemistry. The first of these is Robert Turner’s translation of Of the Chymical Transmutation, Genealogy and Generation of Metals and Minerals, a Paracelsian treatise published by Turner in 1657. In brief, in this document Turner presents the philosophical basis for the transmutation according to the Paracelsian worldview, and additionally provides some very general practical tips concerning how one might go about transmuting metals and, perhaps more importantly, creating the Philosopher’s Stone. Before attempting to draw meaning from parts of the treatise itself, however, I believe it useful to examine Turner’s dedication and forward, as they hold some indicators denoting the tone and terminology employed in the rest of the piece.

Turner dedicates Of the Chymical Transmutation “To the Worshipful and worthy Mecaenas William Bakehouse of Swallowfield,” who he identifies as a “true Son of Hermes.”

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61 Paracelsus, Of the chymical transmutation, genealogy and generation of metals & minerals. Also, of the urim and thummim of the Jews. With an appendix, of the virtues and use of an excellent water made by Dr. Trigge. The second part of the mumial treatise. Whereunto is added, philosophical and chymical experiments of that famous philosopher Raymund Lully; containing, the right and due composition of both elixirs. The admirable and perfect way of making the great stone of the philosophers, as it was truely taught in Paris, and sometimes practised in England, by the said Raymund Lully, in the time of King Edw. 3, trans. Robert Turner (London, 1657), 9. The word mecaenas Turner uses can be translated as “patron.”
That Bakehouse, or as it is often spelled Backhouse, was a true Son of Hermes is, in fact, very true. William Backhouse, master of the Swallowfield manor as of 1649, was well-known as a Rosicrucian, chymist, and patron of occult and Hermetic arts. Apart from simply patronizing others, Backhouse was himself knowledgeable in occult and Hermetic material, translating a number of works dealing in occult knowledge from French into English. He also served as the master and friend of Elias Ashmole, who himself became a renowned alchemist and Hermetic philosopher, evidently imparting upon a young Elias the secrets of the Philosopher's Stone. Given his patron’s learned background, it is no wonder that Turner implores Backhouse both to patronize “this piece of Hermetical Philosophy” and to “examine and correct [his] Errata's; relying upon the candor of your ingenuity and learning, that thereby [he] may be the better fortified, and securely armed against the batteries of ignorance.”

In Turner’s forward to the reader, he makes it clear that his objective in translating the Paracelsian document is the elevation of Paracelsus’s public image, as “his sleeping ashes have been ignominiously unraked out of their silent grave.” Additionally, Turner expresses his hope “that the English Tyroes may hereafter reap the benefit of [Paracelsus’s] admired and experienced labours [sic].” He does add a warning to the forward, entreating all those “whose brains are made of the Mercury (not of Philosophers, but) of Fools” not to “aspire to the Turrets of Minerva;” that is, to attempt to understand the knowledge contained within. Taken in conjunction with his dedication, Turner’s forward to his readership seems to imply that he expected his readers to be similar to his patron: well-versed in Hermetic and Paracelsian

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64 Paracelsus, *Of the Chymical Transmutation*, 3.
65 Paracelsus, *Of the Chymical Transmutation*, 4.
66 Ibid. The term “tyroes” Turner uses here refers to beginners or novices.
67 Ibid.
philosophy and terminology. This sentiment is displayed throughout the treatise and, as we shall see, Turner’s mystical, Hermetic language seems to influence the connotative meanings of alchemy and chymistry.

We see the term “alchymy” used twice in this particular work, and both times within a few lines of each other while describing how a practitioner would go about executing the step of coagulation during a transmutation operation:

But the first Coagulation of heat is made by industry in Art, observing the gradations of the Fire, and is fixed; but the other Degrees of cold in Alchymy [sic] are not fixed. The later Coagulation of heat is made by an Aetnean Fire and Mineral under the Earth and under the Mountains, and is gradated by a natural Arch of the Earth. Not unlike to this is the Fire, which being gradated by the Art of Alchymy, is excited and brought to Coagulation.\textsuperscript{68}

The use of mystical or occult terminology here, such as the distinction of Aetnean fire from any other kind of fire, is, I think, key to understanding how Turner viewed alchemy. The terms “Aetnean Fire,” “Mineral under the Earth and under the Mountains,” and “Arch of the Earth” are unsurprisingly highly esoteric and nearly incomprehensible to the casual reader without a key or cypher, or better, an understanding of Rosicrucian philosophy, none of which Turner does not provide elsewhere in the treatise. When we take into account the information gleaned from Turner’s dedication and forward, it is not unlikely that Turner expected his readers to possess enough knowledge of Hermetic philosophy to understand the meanings behind these terms without further explanation on his part.

\textsuperscript{68} Paracelsus, \textit{Of the Chymical Transmutation}, 9.
Ultimately, though the esoteric meanings of these terms and phrases are largely immaterial for my purpose, their very usage is not. The fact that they are placed in proximity to “alchymy” implies that Turner thought of alchemy as being more than simply mechanical or chemical operations. Rather, Turner’s Art of Alchymy was in large part philosophical, with the meanings and reasoning tied to various instruments and procedures being just as important as the objects and acts themselves. Indeed, Turner seems to say as much, separating “industry” from “Art” in the first line of the above passage.\(^69\) This “industry,” a distinct part of the overall Art, can be understood generally as “chymistry.” This distinction is evident in a few cases, such as when Turner briefly discusses metals and their properties and uses, noting that “why there are in use seven Metals and no more, six whereof are solid, and the seventh fluxible and thin; the Reason is given in Philosophy, and not in Chymistry.”\(^70\) Turner’s chymistry, then, does not seem to include a philosophical aspect, instead being the practical portion of the Art of Alchymy. This is reinforced throughout the rest of the treatise, with Turner referring to the instruments and tools used to perform transmutations as “Chymical Instruments,” which are utilized by chymists, the practitioners of the art, to perform what Turner terms “Spagyric Work,”\(^71\) a synonym for alchemic work.

A second work that begins with a similar tone is a translation of Paracelsus’s *Archidoxis*, translated and published by a man only known as J. H. We can, however, be reasonably sure that this J.H. refers to the translator John Hester, who is known in part for his translations of Paracelsian writings. Though the *Archidoxis* is slightly different in overall tone than *Of the Chymical Transmutation of Metals*, in that it concentrates much more on the practical

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\(^69\) Ibid.
\(^70\) Paracelsus, *Of the Chymical Transmutation*, 17.
\(^71\) Paracelsus, *Of the Chymical Transmutation*, 24, 26.
applications of Paracelsian philosophy, it still includes significant portions of both raw philosophical musings and practical recipes for the manufacture of medicines. Interestingly, though the term alchemy or one of its derivatives appears more than ten times, the word “chymistry” is not used once; rather, Hester only uses the derivative “chymical” as an adjective to describe some other noun, such as in the cases of “Chymical Manual Operations” and “Chymical Preparations.” This implies that, like Turner, Hester imparts different meanings upon the terms alchemy and chymistry, or chymical as the case may be. In only one instance are the two terms used in the same sentence, and there we see how closely related the terms are in the mind of Hester:

There is not given a more certain, a more noble, and better way, then by the water of Salt, or its Oile prepared on such wise as I have evidently described in my books of Alchimy [sic] for such a Water doth fundamentally and radically extract out of all Metalline bodies, their natural liquor, or Sulphur, and most excellent Crocus, as well for Medicinal, as for Chymical operations…

From this passage, it is obvious that the chymical operations Hester refers to are a part of what he calls alchimy, as he makes reference to such operations in his other alchemical books. However, the fact that he does not refer to these chymical operations as a body of knowledge called “chymistry” is paramount. That Hester does not seem to equate the two implies that he believes, like Turner, that these chymical operations do not exist in a vacuum. Instead, they are

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72 Spelled as both alchimy and alchymy

73 Paracelsus, Paracelsus, his Archidoxis comprised in ten books: disclosing the genuine way of making quintessences, arcanums, magisteries, elixirs, &c: together with his books of renovation & restauration, of the tincture of the philosophers, of the manual of the philosophical medicinal stone, of the virtues of the members, of the three principles, and finally his seven books of the degrees and compositions, of receipts and natural things, trans. J. H. (London, 1660), 134-5.

74 Paracelsus, Archidoxis, 59.
one portion of a greater, more inclusive body of scholarship which he terms alchimy. The fact that Hester also refers to the people actually undertaking these chymical operations not as chymists, as Turner does, but as alchemists strengthens this contention. We might conclude, then, that while chymical operations and preparations are of vital importance to Paracelsian medicine, are but a part of a larger entity that, when combined with Paracelsian philosophy, constitute the discipline of alchemy.

Part VI: The Works of Oswald Croll

In this next section, we will move away from the translated works of Paracelsus himself, and instead turn to two treatises by one of the more famous of the followers of Paracelsian philosophy, a German philosopher named Oswald Croll. The first of these works is titled *Philosophy Reformed and Improved in Four Profound Tractates* and, as the title insinuates, is a discourse covering a number of aspects of Paracelsian natural philosophy. The book I am using as evidence was not originally published by Croll himself, actually being printed almost fifty years after Croll died. It is, rather, a translation by a man named Henry Pinnell who, like a number of the other translators we have seen, claims to have written this “for the increase of Learning and true Knowledge” in 1657.75

In this case, the “Learning and Knowledge” Pinnell aims to impart upon his readers is entirely philosophical. In brief, the majority of this treatise is an overview of Paracelsian natural philosophy, especially as that philosophy relates to medicine and the physician. Croll begins with a few sections describing what Pinnell terms the “true physick.” This, he says, is “the mear gift of the most high God,”76 by which he means the perfect nature, or quintessence, of an object or

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76 Croll, *Philosophy Reformed & Improved in Four Profound Tractates*, 23.
entity, which appears opposite the thing’s mortal, imperfect nature. He goes on to explore the Paracelsian concepts of microcosm and macrocosm, which are humans and the world, respectively. The microcosm of man, he says, is simply a scaled-down version of the macrocosm, each with visible and invisible aspects, and each three parts of a single essence: “As God is One in Essence, Trine (or Three) in persons, so Man is One in Person, Trine (or Three) in distinct Essence, that is, composed Triune, of a Terrene Body, an Aethereall Spirit of the Heavens, and a living vivifying Soule which God breathed into him.”77 From here Pinnell’s translation moves into a discussion of where one might find the aforementioned “true physick,” saying that “the true medicine (or Physick) is wrapt up in rindes, barks, matrixes, receptacles, husks, garment and cottages, as Almonds and all kernells are covered with bark and rind (for Nature doth not bring forth the kernell of the Chestnut with a shell and prickly husk).”78 This is, like before, alluding to the position that all things are composed of an imperfect, mortal part and a perfect, divine part. This divine part, the “true physick” or quintessence, can be removed and purified by “industry,” 79 which Croll and Pinnell expound upon in the following section. The final three chapters of the treatise are concerned with the medicines themselves, with the first of the three discussing how these medicines operate and cure diseases in the body, the second discussing the role of the physician in the curing of disease, and the third describing what Pinnell translates as “that one onely chiefe Medicine of the most Ancient Phylosophers.”80

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77 Croll, *Philosophy Reformed & Improved in Four Profound Tractates*, 62.
78 Croll, *Philosophy Reformed & Improved in Four Profound Tractates*, 77.
79 Ibid.
Given what we have learned about Paracelsian philosophical belief, it comes as no surprise that Croll and Pinnell mention and discuss chymistry and alchemy numerous times throughout the work. For instance, it is through chemical processes that a philosopher can separate the true physick from its mortal shell, and thus the physician must be knowledgeable about the subject of chymistry. As Pinnell translates, “As Gold is tryed seven times in the fire, so should a Physitian be proved by Chymistry.” Indeed, for Croll:

Physick and Chymistry cannot be separated. For Chymistry… doth make manifest, not onely the true Simples, Wonders, Secrets, Mysteries, Vertues, Forces respecting health, but also in imitation of the Archaeon Ventricle or Naturall In-bred Chymist, it teacheth to segregate every mystery into its own reservacle, and to free the medicines from those scurvy raggs wherein they were wrapt up by a due separation from the impurities and corruptible and filthy mixture of superficiall and externall Elements, that that pure and Christiline matter may be administred to our bodies.

From this passage, it is clear that Croll’s understanding of chymistry is rather similar to that of other translators we have examined before. It is all of those processes that allow for the separation of elements from one another, thereby isolating and purifying useful ingredients that can then by used to create effective medicines. Further, it serves as a step towards greater understanding of a number of other subjects that Croll asserts are necessary in the manufacture of medications: “there are so few to be found who have the true medicines prepared according to Theophrastus his minde, of which he treateth at large in his Books: for they require solutions, solutions, solutions.

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81 I plan to discuss this in an earlier introductory section all its own, covering generally what Paracelsus and most Paracelsians believed about the natural world. I think inclusion of this section will clear up a lot of things concerning terminology and the like.

82 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 131.

83 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 94-95.
mortifications, cohitions, resuscitations, &c. truly Phylosophycall, which cannot be understood
without true Physick, Astronomy, and Chymistry.”

What is interesting, though, is that chymistry does not seem to be the only term Pinnell
uses in his translation to describe these various processes. Unlike what we have seen before,
Pinnell seems to use alchemy to describe the same practices that he ascribes to chymistry, on
occasion using the two terms in the same sentence. When discussing the location of the true
physick, Pinnell translates: “The Formes in thee medicines or Astra's of the medicaments
separated by Alchymie from their bodies are the true Directoryes,” essentially saying that true
medicine can only come through separation by this alchemy. He reinforces this position by
saying, “It is an honorable Calling when the Physitians live long and are not idle in it, for without
this Chymicall Phylosophy all Physick is but livelesse; Without Alchymicall skill there can be no
Speculative or Practick Physick.” Earlier, too, though it is not the precise word, he refers to
“the most laudable and honourable name of true and noble Alchymistry.” What is notable in
these two instances, I think, is the lack of any overt tonal difference between these passages and
those using terms like chymistry and chymical preparations and operations. It is this very lack
that suggests that, at least to the translator Pinnell, chymistry and alchemy refer to essentially the
same field.

Complicating matters is the way Pinnell uses the terms chymist and alchemist, as he uses
both terms. A chymist, in this case, seems to refer to a practitioner of chymistry or alchemy. for
instance, Pinnell translates, “Tis necessary that the first life of hearbs and medicines should die
that the second life by the Chymists help may be attained through Putrefaction and

84 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 111.
85 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 81.
86 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 95.
87 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 13.
Regeneration," which are, as we have previously seen, two of the primary chemical processes used regularly. Additionally, “the Chymist perfecteth the last matter by Fire,” that is to say, the chymist is able to take imperfect, mortal matter and, through the use of the various processes represented by Fire, transform it into something that could be considered perfect. This usage of the word “chymist” is not so strange when compared to its use in other Paracelsian books and treatises; in fact, Pinnell uses the term in a very similar way to those others.

Contrary to this is Pinnell’s use of the term alchemist, which, despite the name, does not seem to refer to a practitioner of the art of alchemy, and instead carries with it a rather negative connotation. In this treatise, Pinnell refers to “vulgar Alchymists” who, if given the proper knowledge, “would have surpassed all other Physitians, and prostituted the Art to the great wrong and injury of Nature.” Just before, he refers to “Sophisticall Alchymists” who have been “bewitch'd with a greedy desire of Gold.” From this, we can conclude that although chymistry and alchemy in Philosophy Reformed and Improved likely do refer to the same field of practice, chymist and alchemist most certainly do not.

We might now look to another work of Oswald Croll’s, the more famous Bazilica Chymica. This particular copy, like my copy of Philosophy Reformed and Improved, was published well after Croll’s death, in this instance translated by a man known only as “a Lover of Chymistry” and printed in London in 1670. Whereas Philosophy Reformed and Improved is entirely philosophical in nature, Bazilica Chymica is nearly entirely practical, with lists of medical conditions, followed by recipes for medications used to cure them, and only interrupted

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88 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 43.
89 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 92.
90 Croll, Philosophy Reformed & Improved in Four Profound Tractates, 151.
91 Ibid.
by relatively brief interludes of explanation describing how and why certain things work in the way they do.

Given the original author of the *Bazilica*, Oswald Croll, and its recipe-laden subject matter, we might expect the conventions concerning the use of chymistry and alchemy, as well as their derivatives, to hold true in the *Bazilica Chymica*, and in this case we would be generally correct. Interestingly, the similarities in the uses of the derivatives are easier to see than the similarities of the words themselves. Like in the previous text, alchemists are referred to in a bad light: “The method and ways of vulgar Alchymists in preparing *Aurum-potabile* are improper, inconducible to Humane Nature, and far distant from the purpose of Phylosophers, also whatsoever by this Name they boast of, and falsly speak…”

Interestingly, this is the only instance in the *Bazilica Chymica* where the term “alchemist” is used, and it is also one of the only places where Croll references a corrupting of philosophy. With this in mind, we can conclude that, though this is a very small sample size, Croll’s “alchymists” practice, at best, a baser, lower form of chymistry. At worst, they practice it incorrectly or maliciously.

In any case, the alchemist is distinct from the chymists, also called chymical practitioners, who are not derided so. We can see this in a rather innocuous example, in which Croll describes a few instances of experimentation: “In preparing Mercury, divers wayes have been experimented by Chymical Practitioners: Some of which (and not evilly) have endeavoured to perform it by Spirit of common Salt Aqua-fortis, and Oyl of Vitriol, others by itself, or with Flints, which is done in (i) length of time.” The key phrase in this instance is “not evilly,” which stands in stark contrast to Croll’s statement concerning the vulgar alchemists. The fact that

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92 Oswald Croll and Johann Hartmann, *Bazilica Chymica, & Praxis Chymiatricæ, or, Royal and Practical Chymistry in Three Treatises*, 1670, 113.

93 Croll and Hartmann, *Bazilica Chymica, & Praxis Chymiatricæ, or, Royal and Practical Chymistry in Three Treatises*, 18-19.
the majority of practitioners of the art are referred to as chymists, as well as the praising rather than derogatory attitude of the work as a whole, suggests that Croll views the chymists as practitioners of the true, “noble” form of chymistry.

Regarding the base terms alchemy and chymistry, the picture is slightly less clear, though we can still draw a few conclusions. Beginning with alchemy, we can immediately see that it is used in a similar manner as it was in *Philosophy Reformed and Improved*. The translator makes the assertion that alchemy was, and continues to be, an integral part of medical practice, claiming that “because Alchimy, and true Medicine… were inseparable, without the dissolution of either, so soon as the Hermetick Science expired in the primitive Phisitians, that Medicine by a like Fate was extinct also.” With this in mind, we can find the meaning behind chymistry from the address to the reader, in which the translator describes the content and layout of the work as a whole. He writes, “for an introduction into Medicine, here presented this Author Oswaldus Crollius, &c. and at the end of his Books, the *Practical Chymistry* of Dr. Hartmannus, a Man of no lesse experience in preparing, and adhibiting *Spagirick Remedies*, then himself, as appears by his Learned commentations on the present Work. Both together seem to make an intire System of *Chimical Medicine*. Linking the phrase “spagyrick remedies” to the treatise *Practical Chymistry* implies that these remedies fall under the category of chymistry, which, if taken with the following sentence, confirms that “chemical medicine” refers to medicine that uses chymistry as the method for the creation of remedies. Thus, comparing the former statement concerning alchemy and the latter dealing with chymistry, we can see that they mirror each

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94 Spelled alchimy throughout.
95 This is actually unclear, but context implies that the Love of Chymistry wrote the first forward to the reader, rather than Croll himself.
96 Croll and Hartmann, *Bazilica Chymica, & Praxis Chymiatricæ, or, Royal and Practical Chymistry in Three Treatises*.
97 Croll and Hartmann, *Bazilica Chymica, & Praxis Chymiatricæ, or, Royal and Practical Chymistry in Three Treatises*. 
other. This, in turn, confirms that chymistry and alchemy are indeed used in *Bazilica Chymica* in a very similar fashion to how they were used in *Philosophy Reformed and Improved*, that is to say, that the two refer to essentially the same field, while their derivatives refer to radically different personnel.

**Part VII: Translation from a Non-Paracelsian**

We come now to the final case study in my collection, that of a document published in 1656 entitled *Paracelsus his Dispensatory and Chirurgery*. This text, like two of the other documents, was translated by an effectively anonymous translator who refers to himself only as W.D. Despite his anonymity, it is still possible for us to draw some conclusions about this translator’s beliefs and attitudes using the comments he makes in his introductory passage to the reader. Initially, the translator makes an appeal to the authority of Paracelsus and other physicians like him, saying of his writings: “I need do no more to commend these following Treatises to thee, but to tell thee, that they are *Paracelsus’s*, who very well deserves the Title of *Princeps Medicorum*, The chief Physician of the Microcosm, and the best Anatomizer of the Macrocosm.”98 He later states that “In Chymistry, *Paracelsus* was excellent, and indeed, Posterity is much beholding unto him for reviving an Art so useful.”99 The inclusion of these sentences and other compliments like them is very much like the other texts we have seen before, heaping praises upon Paracelsus and emphasizing the importance of his chemical and experimental procedures and findings. Also like some of the other Paracelsian texts, the translator of *Dispensatory and Chirurgery* defends the reputation of Paracelsus, which he views as having been sullied.

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98 *Paracelsus, His Dispensatory and Chirurgery*  
99 Ibid.
Interestingly, though, this defense comes with a caveat, which is something that is unique among my collection. The translator explicitly acknowledges that Paracelsus was not faultless, especially when he addresses philosophical teachings:

Many of his Philosophical Opinions are not to be approved… and whereas the truth of Phylosophick Opinions, which must be found out by reasoning... is hardly found out; therefore Paracelsus, as most part of Philosophers do, useth a liberty and a latitude in such Opinions: But let the Reader use discretion in reading, and be cautious in receiving such Opinions…

This critique of Paracelsian thought indicates that though the translator was a believer in and supporter of Paracelsian chemical medicine, he was not necessarily a full-fledged Paracelsian himself, as he holds reservations concerning several aspects of Paracelsian natural philosophy. Consequently, it is not unreasonable to say that this translation of *Dispensatory and Chirurgery* is the closest thing we have here to a translation of a Paracelsian text by a non-Paracelsian; that is to say, a mainstream translation. The effect this fact has on the usage of chymistry versus alchemy, and chymist versus alchemist, is not clear, though there does seem to be a very interesting correlation present.

We have seen one use of the word chymistry already, with the translator noting Paracelsus’s excellence in the subject, though this reveals virtually nothing about the meaning of the word. The first real example of meaning comes in a discussion of a cupric compound the translator terms “coperas,” which the author claims “makes the best Copper out of iron.” To this end, there follows an examination of what constitutes good coperas, and it is here where we see two uses of the word chymistry: “There is another way to try the goodnesse of Coperas for

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100 Ibid.
101 Ibid.
Chymistry, thus; put your Coperas in a pot, and set the pot in the fire till your Coperas be turned into a red powder, then melt it, and if it yeild Copper, it is good for Chymistry, but not so good for physick.”\textsuperscript{102} It seems, then, that much like the other texts we have seen, chymistry for W.D. refers to operations involving transmutation; in this case, iron into copper. He later refers to chymistry as both an art and a practice. Of additional note is the distinction the author makes between chymistry and physick, implying that chymical operations, though they can be used for medicinal preparations, are not medical practices in and of themselves.

Turning now to the uses of alchemy, we see that it is used in much the same way as its counterpart. Alchemy, for example, “hath discovered many excellent secrets to physicians.”\textsuperscript{103} Alchemy, like chymistry, is considered to be a separate discipline from medicine or physick, as substances that are “not fit to bee used in physick they are best for Alchimy.”\textsuperscript{104} We can see in another passage that alchemy seems to also refer to the manufacture of new substances; in this case medicinal oils: “Alchymy hath been wronged in many things, especially in Coperas, how many deceitful oyls and spirits of Coperas have we in stead of that true oyl, and true spirit of Coperas which the ancient physicians used.”\textsuperscript{105} These findings are not particularly surprising or unique, as Oswald Croll and his translators used chymistry and alchemy essentially interchangeably.

What is much more interesting, however, is how W.D. uses the terms chymist and alchemist. Unlike in Croll’s works, in which chymists were markedly different from alchemists in connotation if not in practice, in \textit{Dispensatory and Chirurgery} the two terms seem to mean essentially the same thing. The job of the alchemist, in brief, is to perform alchemy; that is to

\textsuperscript{102} Ibid.  
\textsuperscript{103} Ibid.  
\textsuperscript{104} Ibid.  
\textsuperscript{105} Ibid.
say, to perform operations that bring about a change or transmutation in an object. An example the author cites is an attempt by some alchemists to “turne a Jacinth into a Carbuncle.”¹⁰⁶

Alchemists also work to draw tinctures and oils out of substances to achieve a similar effect. The chymist, likewise, works with oils and tinctures, though the evidence for this is slightly less explicit. In a discussion regarding attempts to create silver with a certain “white liquor” and to create gold with a “red oyl,” the author states that “never any thing would bee effected with this white liquor, neither by the ancient, nor by the modern Chymists; but in the red oyl are secrets worthy to be known.”¹⁰⁷ The implication here is that the two liquids were used by ancient and modern chymists in attempts to achieve the desired effects. Looking at the two terms, then, we can see that they both encompass the same kinds of procedures and have the same objectives. Thus, we can safely conclude that, at least for the translator W.D., alchemists and chymists are, like their respective disciplines, the same.

Part VIII: Conclusions

Having now analyzed a number of Paracelsian works and treatises, it is possible to draw some conclusions regarding the language used. I might first say that scholars, like Newman and Principe, who hold that chymistry and alchemy were essentially interchangeable in this period are not entirely incorrect. Indeed, we see in the *Dispensatory and Chirurgery* that alchemy and chymistry refer to the same discipline and are, as a result, interchangeable. However, this does not hold true for all Paracelsian writings. The translations of Croll, for instance, seem to also equate chymistry and alchemy, though the terms alchemist and chymist seem to mean radically different things, with the former being praiseworthy and legitimate and the latter vulgar and

¹⁰⁶ Paracelsus, 159.
¹⁰⁷ Paracelsus, 158.
illegitimate. Yet other translations, such as Turner’s and Hester’s, imply that chymistry and alchemy, while similar, are not the same discipline, with chymistry covering purely procedural topics and alchemy more philosophical and esoteric issues.

To a degree, we can even draw some conclusions as to why these differences in language occur, though the lack of available information concerning the translators makes the task much more difficult. In essence, the use or disuse of either “alchemy” or “chymistry” stems from what each individual translator or author wanted to do with their particular work. John Hester and Robert Turner, for instance, kept the company of a number of Rosicrucians, and thus it follows, given the Rosicrucian propensity for the esoteric and occult, that their writings would reflect their friends and benefactors. The Rosicrucian inclusion of esoteric philosophy in their own chemical practices, as well as their labeling of these chemical practitioners as alchemists, would likely have influenced how men like Turner and Hester viewed the term. In contrast, Henry Pinnell and the “Lover of Chymistry” who translated the *Bazilica Chymica* seem not to have been so tied to the esoteric philosophies of the Rosicrucians, instead writing, they claim, for the propagation of “true knowledge.” This being the case, marking the distinction between alchemy and chymistry, which, as Newman and Principe point out, was already falling out of fashion by the 17th century, was likely not of great importance to the translators. This seems to have not been the case with their descriptions of the practitioners of chymistry or alchemy, where the two terms were likely used to mark chymists as legitimate philosophers in the vein of Paracelsus, and alchemists as dangerous charlatans and grifters. Representing the other extreme, there is W.D.’s translation of *Paracelsus His Dispensatory and Chirurgery*, in which he clearly designates himself as a non-Paracelsian by stating his disagreement with Paracelsus’s philosophy. Thus, despite translating a work by Paracelsus, W.D.’s apparent indifference in distinguishing between
alchemy and chymistry, alchemist and chymist, is unsurprising due to his likely more mainstream sensibilities and opinions regarding chemical philosophy and medicine.
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