

# ILLUSTRIOUS PROVIDENCE AND THE SUPERNATURAL ART.

A RENAISSANCE ALCHEMIST AND HIS PURSUIT OF SALVATION

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## Abstract

### English version

The historiographical construal of the relations between science and religion in terms of conflict has long undermined the legitimacy of the study of spiritual alchemy. Recent studies have illustrated the compatibility of natural philosophy and theology during the early modern period. This project will follow the recent trend in reassessing this conflict by examining the work of an illustrious renaissance alchemist, Gerhard Dorn (c. 1530/5 – after 1584). I will approach Dorn as a ‘secular theologian,’ a natural philosopher who attempted to restore harmony and unity in the world by means of a scientific-philosophical discourse. Dorn’s practice of alchemy serves him in the creation of the universal medicine which needs to be understood in two ways. Alchemy can be understood as a reprise of Creation and as an internal process where man can restore his unity through a conjunction of the body, the spirit and the soul. This study will explore how alchemy was employed to inquire and contemplate the cosmos on both a physical and a metaphysical level through a study of Gerhard Dorn’s *De Artificio Supernaturali* (1594). By studying the junctures and mutual dependencies of theology and empirical research in early modern alchemy, this project will enhance our knowledge of the precise relation of the physical and the metaphysical and how these two cohere and come together in a soteriological praxis.

### Dutch version

De historiografische constructie van een conflict tussen religie en wetenschap in de vroegmoderne periode heeft lange tijd in de weg gestaan van een legitieme studie van spirituele alchemie. Recent onderzoek heeft uitgewezen dat, in tegenstelling tot een conflict, er eerder sprake is van een samengaan van de disciplines theologie en natuurfilosofie in deze eeuwen. Mijn onderzoeksproject sluit aan bij deze these en vertrekt van een illustere renaissance alchemist, Gerhard Dorn (ca. 1530/5 – na 1584). Ik benader Gerhard Dorn als een ‘seculiere theoloog,’ een natuurfilosoof die vanuit zijn wetenschappelijk-filosofische achtergrond probeert om de harmonie en eenheid te herstellen in de wereld. Zijn alchemische praktijk is gericht op het creëren van het universele medicijn, wat op twee manieren wordt verstaan. Enerzijds dient alchemie als een herneming van de Schepping en anderzijds wordt alchemie beschouwd als een innerlijk proces waar de mensheid zijn eenheid kan herstellen door middel van een samenvloeiing van het lichaam, de geest en de ziel. Vanuit zijn traktaat over de bovennatuurlijke kunst reconstrueer ik hoe hij alchemie gebruikt om de kosmos zowel op een fysische als op een metafysische vlak te bevragen en onderzoeken. Ik kijk hoe deze twee zich tot elkaar verhouden en hoe ze samenkomen in een soteriologische praxis.

Key words: alchemy, philosophy, religion, renaissance science, Hermetic Tradition



## Preface

Et quid amabo nisi quod aenigma est?

- Giorgio de Chirico

The subject of this dissertation has proved to be as slippery and ambiguous as the alchemist's argent-vif. It presented itself as enigmatic and volatile, fleeing from my textual vessel, leaving me to wonder whether I'll ever be able to coagulate it into a coherent whole. But, at last, I managed to fixate it in the form of this dissertation.

Alchemists believed that it took about forty weeks to complete their *magnum opus*. Coincidentally, this is also the time it took me to complete my thesis, which is the *magnum opus* of a student wanting to obtain her master degree in history. I'd like to think of it as my very own Philosopher's Stone. As you will read later in this text, the alchemist generates it from his intellect, and I'd like to believe that I poured a bit of my intellect into this.

Making sense of the enigma of the supernatural art has been an exciting, challenging and suspenseful journey. Luckily, I did not have to do this alone.

I want to profusely thank my supervisor, Steven Vanden Broecke for his guidance, his support and his time. He provided me with literature suggestions, helped me tackle the source material as well as aiding me with interpreting it. Thank you for your enthusiasm, your knowledge and your time; this dissertation would not have been possible without it.

I also want to thank my parents for their continuing support and for allowing me to study history instead of something more lucrative as medicine. I also want to thank them for their patience. This year has not always been easy and thank you for being there for me. I want to thank my mom for reading my work and ensuring that someone without knowledge on the subject could make sense of it. I also want to thank my dad for the proofreading he has done over the years. I know my choice of subjects was not always to your tastes, but you did it nonetheless. I want to thank my sister as well as my parents for letting me ramble about all the things I've learnt throughout my study.

I could not have got through the last four years without my fantastic and wonderful friends who were there to distract me as well as giving me some kind words when things were not going according to plan. I want to thank Paulien Baeyens for being someone that I could talk to about the ups and downs of the writing of a dissertation. I also want to thank Zoë Van Breusegem for letting me know that it's okay to want to excel and to aim high and that you sometimes have to

make tough decisions to get where you want to go. I want to thank Sarah Ginsberg for the comic relief and for hearing me out about my struggles with my subject.

I further want to thank Marijke De Wilde for proofreading this dissertation on such short notice. I want to thank the staff of both the University Library and the Faculty Library. They were always there with a smile and never complained about the many books that I had on loan, as well as renewing my loans several times.

I also want to thank Paul Ferguson for his translations of two texts from Dorn. He has saved me some time by sharing his translations with the world and has made it a little easier for me to grapple with Dorn's writing.

Lastly, I want to thank Mike Zuber for suggesting to take a glance at the work of Gerhard Dorn when asked for research suggestion for a student who wished to write a dissertation about spiritual alchemy. Without his suggestion, I would never have immersed myself in the work of Gerhard Dorn.

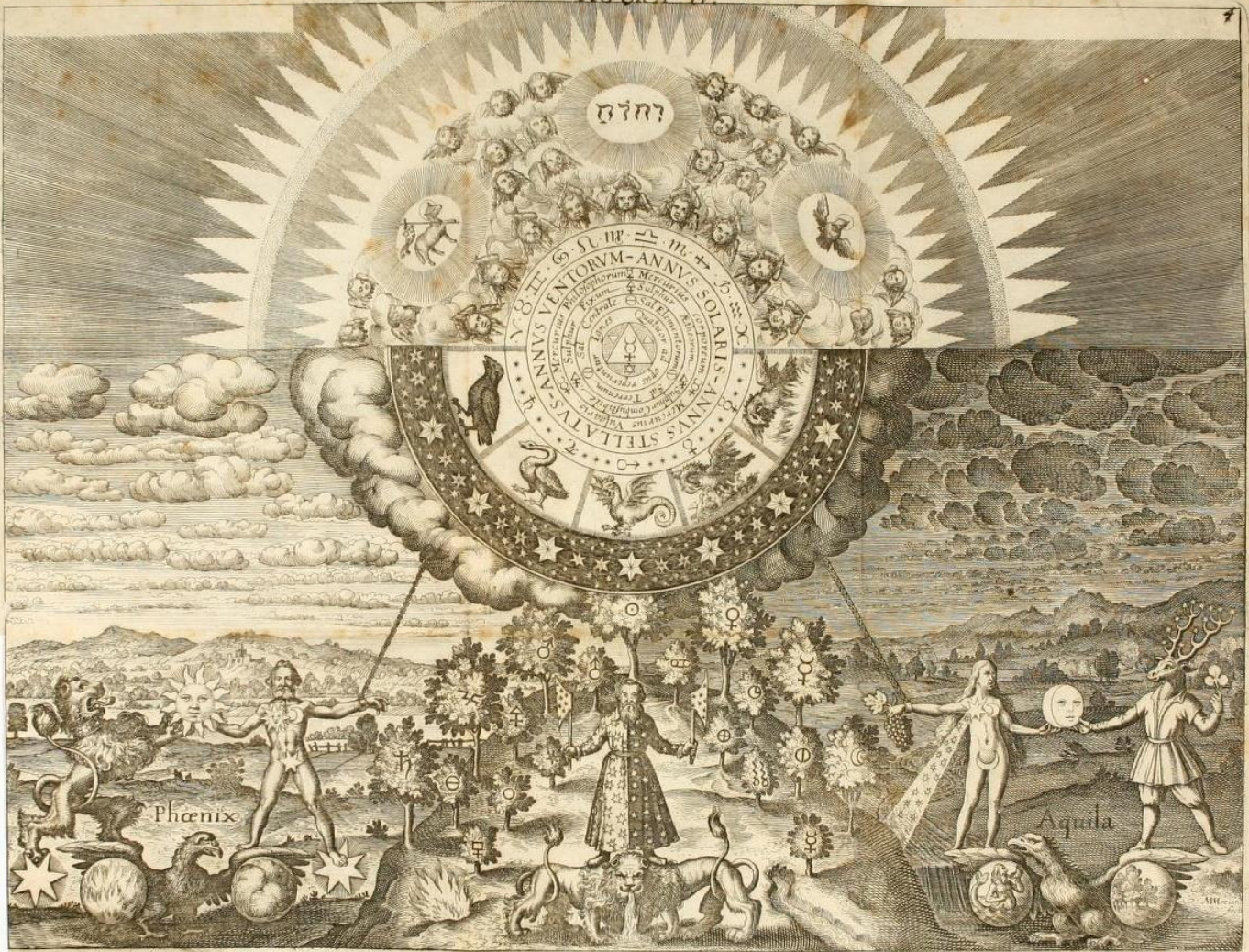
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VERBO DOMINI FIRMATI SUNT COELI, ET SPIRITU ORIS EJUS OMNIS EXERCITUS EORUM, Psalm. 33. SPIRITUS DOMINI REPLEVIT ORBEM TERRARUM: OMNIA SATIANTUR BONITATE TUA DOMINE: AVERTENTE TE FACIEM, TURBANTUR: AUFRERS SPIRITUM EORUM, ET DEFICIUNT ET IN PULVEREM SUUM REVERTUNTUR: EMITTIS SPIRITUM TUUM ET CREANTUR: SIC RENOVAS FACIEM TERRÆ: GLORIA TUA IN SECLUM. Psalm. 104.

SMARAGDINA HERMETIS TABULA.

Verum, sine mendacio, Certum & verissimum: Quod est inferius, est sicut quod est Superius, & quod est Superius est sicut quod est inferius ad perpetranda miracula Rei Unius. Et sicut omnes Res fuerunt ab Uno, meditatione Unius: Sic omnes Res natae fuerunt ab hac Una Re Adaptatione. Pater Eius est Sol, Mater Eius Luna. Portavit illud Ventus in Ventre suo. Nutrix ejus Terra est. Pater omnis Telesmi totius mundi est hic. Vis ejus integra est, si versa fuerit in terram. Separabis Terram ab Igne, subtile a spisso, suaviter cum magno ingenio. Ascendit à Terra in Caelum, iterumque descendit in Terram, Et recipit Vim Superiorum & Inferiorum. Sic habes Gloriam totius Mundi. Ideò fugiet à te omnis obscuritas. Hic est totius fortitudinis fortitudo fortis, quia vincet omnem rem subtilem, omnemque solidam penetrabit: SIC MUNDUS CREATUS EST. Hinc erunt Adaptationes mirabiles, quarum modus hic est. Itaque vocatus sum Hermes Trismegistus, habens Tres partes Philosophiz totius Mundi. Completum est quod dixi de Operatione Solis.

Figure 1 Microcosm and macrocosm

## List of Abbreviations

The abbreviations listed below have been used to refer to the various treatises frequently cited throughout this dissertations. A full bibliographical reference is found in the bibliography under the section of primary sources.

AS	<i>De Artificio Supernaturali</i> (1602).
CTPC	<i>Clavis totius philosophiae chymisticae</i> (1594).
DMH	<i>Dictionnaire Mytho-Hermetique</i> (1787).
DTP	<i>Dictionarium Theophrasti Paracelsi</i> (1584).
FE	<i>Les Fables Egyptiennes et Grecques</i> (1786).
NL	<i>Liber de Naturae Luce Physica</i> (1602).
PG	<i>Physica Genesi</i> (1602).
PHT	<i>Physica Hermeti Trismegisti</i> (1602).
PM	<i>Philosophia Meditativa</i> (1602).
PT	<i>Physica Trithemii</i> (1602).
SP	<i>Speculativa Philosophia</i> (1602).





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- Figure 7: Emblema XXXIV. In balneis concipitur, & in aere nascitur rubeus verò factus graditur super aquas. In Michael Maier, *Atalanta Fugiens*, (Oppenheim: Hieronymus Gallerus and Theodore de Bry, 1618), 145.



## 1. Introduction

Alchemy was both a philosophy and an experimental science, and the transmutation of the metals was its end only in that this would give the final proof of the alchemistic hypotheses; in other words, alchemy, considered from a physical standpoint, was the attempt to demonstrate on the material plane the validity of a certain philosophical view of the Cosmos.<sup>1</sup>

The citation touches the heart of the historical study of alchemy. The author, Herbert Redgrove, a chemist and self-proclaimed student of mysticism and transcendentalism, attempts to reconcile the two most extreme stances in the debate on the significance of alchemy. That this was already done in the early twentieth century is remarkable, because few historians wished to tangle with the historic study of alchemy due to its the esoteric and mystic association. Recent decades have witnessed a growth of inquiries in this elusive practice, but a univocal standpoint on the object of study has not been found. The lack of a consensus about the ideas and practices of alchemy is not only because of the various interpretations, but it also has to do with a diverse and long standing tradition, dating back to Antiquity. It has its roots in the Greco-Egyptian period and was further developed during the Arabic or Islamic period. The alchemical tradition was established in the Latin West during the late Middle Ages and saw its heyday in the sixteenth and seventeenth centuries.<sup>2</sup> It was later picked up by esoteric, occultist and spiritual movements, shattering much of what was left from the experimental and scientific aspects of the discipline.

### 1.1. The Problem of Conceptualisation

Alchemy developed throughout the centuries, it was constantly repackaged and trimmed to fit within a certain worldview. The recurring debate about whether alchemy is to be interpreted as a semi-mystical religious pursuit of self-purification, or as an instance of antiquated science and technology devoted to the unlimited accumulation of wealth has not done a great service to the historical study either. The dichotomy makes the mistake of assuming that alchemy presents a monolithic whole.<sup>3</sup> Alchemy is as chimerical as the art it ascribes to be. The discipline has adapted itself to different contexts and times, has coalesced with different philosophical ideas, theological doctrines and other Hermetic Traditions.<sup>4</sup> The lack of a clearly delineated field of the alchemical discipline makes for a manifold of practices: it could refer to laboratory

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<sup>1</sup> Herbert Stanley Redgrove, *Alchemy: Ancient and Modern*, (London: William Rider & Son LTD., 1922), 1.

<sup>2</sup> Lawrence M. Principe, *The Secrets of Alchemy*, (Chicago: Chicago University Press, 2013), 4.

<sup>3</sup> An overview of alchemy from antiquity until present, describing different trends, important alchemists and developments can be found in Wouter J. Hanegraaff, ed. *Dictionary of Gnosis and Western Esotericism*, (Leiden: Brill, 2006), 12-58.

<sup>4</sup> Didier Kahn, *Alchimie et Paracelsisme en France à la fin de la Renaissance (1567-1625)*, (Geneva: Librairie Droz, 2007), 7.

experiments, as well as to psychological and mystical speculations. The religious dimension was further enhanced by the breakdown of a unified Christianity after the Reformation.<sup>5</sup> This also gave way to several religious enthusiasts who “elaborated on religious and metaphysical themes.”<sup>6</sup>

The presence of a mystical and religious dimension has led to the assumption that alchemy had no place in a history of science and thus treated the subject as a pseudoscience. The fact that alchemy did not develop into an institutionalised science, such as chemistry or physics, has raised the impression that a gradual historical marginalisation was inevitable. Some historians of the early twentieth century, inspired by positivist tendencies, even argued that it ran counter to the ‘Scientific Revolution’ and placed alchemy in the category of the occult and esoteric practices.<sup>7</sup> The conception of alchemy as inimical to science was further influenced by its eighteenth century reinterpretation as solely concerned with the transmutation of metals into gold.<sup>8</sup> Scholars such as Mary Anne Atwood and Carl Jung have also contributed to the idea of an animosity between alchemy and science. Atwood conceptualised alchemy as a “monolithic, constant and ancient tradition,” which made use of Mesmeric trances in its search for “spiritual elevation.”<sup>9</sup> She wrote off the practitioners in laboratories as those who failed to understand the true, hidden meaning of alchemy.<sup>10</sup> Carl Jung’s psychological interpretation of alchemy as “hallucinatory ‘irruptions of the unconscious’ which are ‘projected’ from the alchemists’ psyche onto the contents of his flask,” has constituted to the wrongful relegation of alchemy to pseudoscience and occult practices.<sup>11</sup>

## 1.2. Aim of this Thesis

This “process of disjunction,” as Kocku von Stuckrad calls the exclusion of magical and occult qualities by Enlightenment thinkers from the newly emerging sciences, has differentiated magic and religion from science. This process is the result of the power of a newly emerging episteme, that is a general agreement about what can be reasonably thought in the world.<sup>12</sup> It is therefore important to separate the study of early modern alchemy from the current

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<sup>5</sup> Allison P. Coudert, “Alchemy in the 16th to 18th Century,” in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 46.

<sup>6</sup> Alexandre Koyré, *Mystiques, spirituels et alchimistes du XVIIe siècle allemande*, (Paris: Gallimard, 1971), 10.

<sup>7</sup> Lawrence M. Principe, “Alchemy I: Introduction,” in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 14.

<sup>8</sup> Lawrence M. Principe and William R. Newman “Some problems with the historiography of alchemy,” in *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, eds. William R. Newman and Grafton, Anthony, (Cambridge: MIT Press, 2001), 385-432.

<sup>9</sup> Principe, “Alchemy, I,” 13.

<sup>10</sup> Principe, “Alchemy I,” 13-4.

<sup>11</sup> Principe, “Alchemy I,” 14.

<sup>12</sup> Kocku von Stuckrad, *Locations of Knowledge in Medieval and Early Modern Europe*, (Leiden: Brill, 2010), ix.

episteme which differentiates science from religion. The aim of this thesis is to move away from the post-Enlightenment process of disjunction and show the compatibility between the empirical research into the nature and the metaphysical explanations that are both characteristic of alchemy.<sup>13</sup> Alchemy and alchemical practice will serve as a focal point for investigating early modern notions of the precise relation of the physical and the metaphysical and how these two cohere, or not, in alchemist's expectations and self-understanding. I will thus examine how alchemy could be used to inquire and contemplate the cosmos on both a physical and a metaphysical level.

This study aims to dissolve the dualistic model of the natural and the supernatural interpretation of alchemy that is recurrent in the study of early modern alchemy. Some scholars, most notably William Newman and Lawrence Principe, marginalise the supernatural school of alchemy, even going as far as to state that “no historical records countenances” an esoteric interpretation of alchemy.<sup>14</sup> Their efforts in untangling alchemy from the nineteenth century spiritual and Jungian interpretation have been instrumental to a better understanding of alchemy. It has, however, also further propagated the opposition of the natural and the supernatural within early modern alchemical practice, and even more so, it has cultivated a rather anachronistic view of science and religion in terms of conflict.

### 1.3. Source Material

The aim of this thesis is thus to show the compatibility of ‘science’ or natural philosophy (a system of interpretation that addresses the natural world) and ‘religion’ or theology (a hermeneutical strategy to engage metaphysical or transcendent issues) by studying the junctures and mutual dependencies of theology and empirical research in alchemy. I will study Gerhard Dorn's *De Artificio Supernaturali*, an addition to the second edition of his *Clavis totius philosophiae chymisticae* (1594).<sup>15</sup> The *Artificio* was also included in the *Theatrum Chemicum* (1602), alongside other texts by Dorn. Upon studying the *Artificio*, I noticed similarities with other texts of Dorn. The author has incorporated parts of the meditative philosophy and the physics of Trithemius in his *Artificio*. The copied parts are found in the last chapter of the *Artificio* and have been slightly adapted as well as intermingled with the new text. The *Artificio* thus appears as both an original treatise as well as incorporating and bringing together parts of other texts. Due

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<sup>13</sup> Von Stuckrad, *Locations of Knowledge*, 145.

<sup>14</sup> Lawrence M. Principe and William R. Newman “Some problems with the historiography of alchemy,” in *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, eds. William R. Newman and Grafton, Anthony, (Cambridge: MIT Press, 2001), 398.

<sup>15</sup> Gerhard Dorn, *Clavis Totius Philosophiae Chymisticae, Per Quam Potissima Philosophorum Dicta Referantur: Cui Accessit Iam Recens Artificium Supernaturali*, (Herborn: Corvinus, Christoph, 1594). The first edition was published in 1567 in Lyon, but did not contain the *Artificium*.

to it being a partial compilation, I have also relied on these other texts throughout my dissertation. Furthermore, I have also made use of Dorn's *Clavis* and the *Liber de Naturae Luce* (1602) which holds both the text on the meditative philosophy as on the physics of Trithemius. The *Naturae Luce* is also found in the first volume of the *Theatrum Chemicum*.

The *Theatrum Chemicum* is a compendium of alchemical texts, which initially consisted of three volumes, but spanned six volumes by 1660. Both the *Theatrum Chemicum* as the *Clavis* can be consulted online. The *Clavis* digital reproduction is from the original in the Wellcome Library of London.<sup>16</sup> Due to some legibility problems with the scan, I have chosen to work with the digital reproduction of the *Theatrum Chemicum*, the first edition, published in 1602. The digital reproduction is provided by the digital library 'e-rara.ch.' Their scan is made from the original volume of the Foundation of the Works of Carl Gustav Jung.<sup>17</sup>

The renaissance alchemist has rarely been studied, though his contribution to the spread of Paracelsian alchemy through his translations has been paramount. He has also written various texts on alchemy, the *Clavis* being the first work from his own hand. Dorn's *Clavis* stands out by the way it combines alchemical philosophy with religious ethics. The combination of a practical, theoretical and medical manual with a speculative philosophy illustrates the engagement of Dorn with both natural philosophy and theology. This serves as the backdrop to his supernatural art. What it is will be examined in this dissertation. The intriguing title does not give much away, but it does offer a unique source to explore the relation between the order of nature and the order of grace; God in the laboratory, as it were.

#### 1.4. Structure of this Thesis

This thesis will explore the interplay between the conceptual framework of Dorn's empirical practice and Dorn's own quest for (self-)purification. I believe that Dorn's operational alchemy will serve as a mirror for a process of internal transformation. The aim is to move beyond the Jungian metaphorical interpretation and to include the operational alchemy in the laboratory as a valid practice in the worldview of the alchemist. To further develop this hypothesis, I will relate Dorn's alchemical discourse to his specific worldview that connects the material world to that of the heavens and of God, which in turn relates to the connection between the body, the

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<sup>16</sup> This is the link provided by the library website of the university of Ghent to the digital reproduction: < [http://gateway.proquest.com/openurl?url\\_ver=Z39.88-2004&res\\_dat=xri:eurobo:&rft\\_dat=xri:eurobo:thumbnails:hin-wel-all-00000433-001](http://gateway.proquest.com/openurl?url_ver=Z39.88-2004&res_dat=xri:eurobo:&rft_dat=xri:eurobo:thumbnails:hin-wel-all-00000433-001) >, consulted on 10.05.2017.

<sup>17</sup> Link to the digital reproduction of the first edition of the *Theatrum Chemicum*: < <http://www.e-rara.ch/cgi/content/titleinfo/2284847> > consulted on 10.05.2017.

soul and the spirit.<sup>18</sup> Alchemical transmutation of manifest forms (material) into occult ones (hidden; spiritual) is part of a process of purification. There is a need for a conjunction of both the material process of making pharmaceutical remedies through chymical arts and the relation to the celestial sphere: it wasn't just about the process; it was also about the connection of the human body to the celestial realm.<sup>19</sup>

Dorn himself emphasises the importance of the creation of the universal medicine which he perceives in two, interrelated ways. On the one hand, Dorn perceives it as a reprise of the creation of the world, where the goal of the artist is to reduce the physical world to the world before the Fall.<sup>20</sup> Considering this perception, I'd explore the underlying theo-cosmological myth which supports Dorn's work. What is Dorn's hermeneutical strategy to address metaphysical issues? And what exactly needs to be understood as Dorn's speculative philosophy? On the other hand, Dorn refers to it as an internal process where a human being can restore his unity or where he can produce his own miracle through a conjunction of the *spiritus* (spirit), *animus* (soul) *et corpus* (body).<sup>21</sup> What is the system of interpretation of the theo-cosmological myth? What was Dorn's own experience of transmutation?

By examining the interplay between the three levels in Dorn's philosophy (metaphysical, operational, internal) this study aims to lay bare the coherence of the empirical research of nature and the metaphysical explanation that was present in early modern alchemy. I will commence with an exposition on Gerhard Dorn, looking at his life and work before moving on towards his main influences. These range from the Hermetic Corpus to the medieval alchemist Jean de Rocquetaillade (1310 – 1366/70) to Renaissance Neoplatonism by way of Marsilio Ficino (1433 - 1499). The influence of Paracelsus (1493 – 1541) and Dorn's contribution to Paracelsian tradition will also be explored before moving to Johannes Trithemius (1462 – 1516) whose ideas have left a clear mark in the alchemist's philosophy. The renaissance mathematician and philosopher, John Dee (1527 – 1609), also proves to be marginally present in Dorn's work and will be treated alongside Trithemius.

After reconstructing Dorn's life and influences, I will address the theo-cosmological myth underlying the supernatural art. The chapter will deal specifically with Dorn's discourse of alchemy as a reprisal of the creation. In order to understand Dorn's theo-cosmological myth, I

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<sup>18</sup> Alexandre Koyré, *Mystiques*, 86.

<sup>19</sup> Lynn Thorndike, *A History of Magic and Experimental Science*, (New York: Columbia University Press, 1941), V, 632-4.

<sup>20</sup> Jean-François Maquet, "Philosophie et alchimie chez Gerhard Dorn," in *Alchimie et philosophie à la Renaissance*, eds. Jean-Claude Margolin and Matton, Sylvain, (Paris: Vrin, 1993), 215.

<sup>21</sup> Maquet, "Philosophie et Alchimie," 215.

will include a different work from the same author, where he offers a commentary on the six days of creation, *Naturae Luce Physica* (1583). This will then be related to the *Artificium*, which provides some hints on how the supernatural art fits within the theo-cosmological myth. Once the myth is established, I will look at the key notions deployed throughout the *Artificium*. The alchemist's terminology is highly ambiguous; thus, a clear understanding of the key notions is warranted. Once I've established Dorn's conceptual framework, I will examine Dorn's alchemical praxis, where he creates the Philosopher's Stone and the universal medicine in the laboratory. The process of creating the stone is part of the transmutatory art, where materials are purified and perfected. Transmutation is a key concept in alchemy, applicable to not just the physical world, but it can also serve as a process of personal rebirth or transmutation.

I will explore Dorn's alchemical discourse of transmutation in *De Artificio* to lay bare how he employs it to refer to both a material process and a spiritual process of purification. Furthermore, I will examine how Dorn's internal process of self-purification applies the Trithemian notion of the rejection of the binary so that the trinary can be turned into the unitary. Before doing so, I wish to shed some light on the socio-epistemic imaginary in Dorn's text. The process Dorn describes to purify the soul delineates between a community of adepts, who can achieve the art, and the vulgar, who are unworthy. This imaginary proves interesting when relating to the discourse of the mystic as researched by Michel de Certeau. It will then be related to the Trithemian notions employed in Dorn's supernatural art and how our alchemist offers the aspiring adept a guideline as to how to become part of the community of adepts.

After elaborating on the two lines of thinking present in Dorn's alchemy, I will bring them together to look at the interplay between the theo-cosmological myth and Dorn's quest of purification. This will serve as my conclusion and should provide an answer as to how alchemy functioned in inquiring and contemplating the cosmos on both a physical and metaphysical level.

Before analysing the complexities of Dorn's theo-cosmological myth and his chymical practice, I will provide a *status quaestionis* on early modern alchemy as well as on the little research that has been done on our Renaissance alchemist. I will then offer a crash course in alchemy, briefly explaining the main ideas and principles of the practice as well as an overview of the *magnum opus* of the alchemist, namely the production of the Philosopher's Stone.

## 1.5. Terminology

The distinction that is now made between chemistry (science) and alchemy (pseudoscience) was not yet present in the seventeenth century. Some authors therefore opt to use the term



'chymistry' to refer to the multitude of alchemical pursuits in the early modern times.<sup>22</sup> Not all historians studying the field of alchemy and chemistry agree, but since I do not plan on using chymistry as a historical category for analysis, there is no need to touch upon this debate. In this paper, alchemy, chemistry and chymistry each refer strictly to the diversity of ideas and practices held by the early modern alchemist.

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<sup>22</sup> This was first proposed by William Newman and Lawrence Principe: William R. Newman and Lawrence L. Principe, "Alchemy vs. Chemistry: the Etymological Origins of a Historiographic Mistake," *Early Science and Medicine*, 3 (1998): 32-65.



## 2. Historiographical Overview<sup>23</sup>

### 2.1. Constructing Boundaries: Fragmentation of the Occult

Alchemy has long found itself clouded in a smoke of mysticism and esotericism. The typical imagery of the alchemist as a mad scientist who turns lead into gold proves to be persistent in the modern-day association of the alchemist with charlatans, frauds and sages. The association of alchemy with theosophical and hermetic societies such as the Rosicrucians and the Order of the Golden Dawn has not helped to dispel this aura of mysticism. This section will critically review the construction of alchemy as pseudoscience and look at its re-integration in the history of science.

From the late seventeenth century onwards, the production of precious metals was viewed as the core business of the alchemist. This perception is a result of what a historian of science, John Henry, calls ‘the fragmentation of the occult.’ He argues that some aspects of the occult arts and sciences during the renaissance and early modern period were appropriated into the developments of a new science, while others were banned to the realms of the newly defined category of magic.<sup>24</sup> The practice of transmutation was left aside in the occult, non-scientific activities. Other aspects of alchemy, such as its use in medicine, the formulation of matter theory, or assaying processes were incorporated in the development of chemistry in the eighteenth century. The remnants of this fragmentation are still visible in the modern-day classification of alchemy as a pseudoscience.

In “Paranormalism and Pseudoscience as Deviance” Erich Goode states that “sciences are based on *established contemporary* knowledge about how nature works.”<sup>25</sup> He includes alchemy as one of the examples of this claim, noting that serious investigators of nature would turn to alchemy to find answers to their questions. Goode’s postulation brings us to *Les Mots et Les Choses* of Michel Foucault where he posits the notion of “episteme.” An episteme is historically a priori, delineating an area of knowledge in the whole of experience. It defines the object of the given area and lends itself to the perceptions of the theoretical abilities of humans; determining the preconditions of the grounds on which a discourse can be conceived as true and acknowledged

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<sup>23</sup> A large part of this chapter is based on an unpublished paper to obtain a bachelor of arts degree in history: Zoë Van Cauwenberg, “A Hunt for Nature’s Secrets or Fraudulent Parlour Tricks? Aspects of Early Modern Alchemy as Seen Through the Search for the Philosopher’s Stone,” (Gent: Universiteit Gent, 2016).

<sup>24</sup> John Henry, “The Fragmentation of Renaissance Occultism and the Decline of Magic,” *History of Science*, 46 (2008): 6-11.

<sup>25</sup> Erich Goode, “Paranormalism and Pseudoscience as Deviance,” in *Philosophy of Pseudoscience*, eds. Massimo Pigliucci and Boudry, Maarten, 147.

as such.<sup>26</sup> It is the archaeological foundation which lends it coherence to the “knowing,” produced during a certain era. Foucault recognises different epistemes within western thinking. The first episteme is resemblance, which is held during the Renaissance period. The Renaissance episteme would be replaced by the classical episteme of representation after 1650. Then the modern episteme of analytics acts as the foundation of knowledge after 1750.<sup>27</sup>

The Renaissance man is said to view the world in terms of correspondences. Foucault classifies four relations between the words and the objects: convention, emulation, analogy and sympathy.<sup>28</sup> The *conventia* connects the objects that can be associated with one another due to proximity; such as water and sea, body and soul. *Aemulatio* entails the resemblance on a certain distance, for example the air is the face whereas the sun and moon are the two eyes. Analogy is based on similar relations whereas sympathy entails an unlimited comparison and is corrected by its contrary, antipathy: fire is hot and dry, water is its contrary because it is cool and wet, air is found between the two.<sup>29</sup> The words and objects form one coherent whole where the philosopher investigates the signatures, the outward signs, for their meaning: gaining knowledge entailed a process of semiology and hermeneutics where the sign and the meaning come together.<sup>30</sup>

An episteme acts as a specific view of the world, imbedded in the structure of society. They are the very foundations making knowledge and truth possible. They determine whether a discourse is valid or not and thus impact the production of knowledge. Due to their inherently changing nature, epistemes are radically different from one another and thus the pillars of knowledge differ from time period to time period. Our current episteme is not the correct tool to understand the enterprise of the alchemist working in a world of correspondences and analogies. Some historians of alchemy were aware of this and argued for looking at the established contemporary knowledge of the time period.

Walter Pagel’s article “The Vindication of Rubbish” warned historians of science and medicine against an overly positivistic approach upon interpreting early modern sources.<sup>31</sup> Taking the source material out of their contemporary setting and placing it alongside modern day science could “endanger the presentation of historical truth.”<sup>32</sup> Pagel argues for the integration of

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<sup>26</sup> Michel Foucault, *De woorden en de dingen*, trans. Walter van der Star, (Amsterdam: Uitgeverij Boom, 2006), 16-17.

<sup>27</sup> Foucault, *De woorden*, 456.

<sup>28</sup> Foucault, *De woorden*, 456.

<sup>29</sup> Foucault, *De woorden*, 40-9.

<sup>30</sup> Foucault, *De woorden*, 456.

<sup>31</sup> Walter Pagel, “The Vindication of Rubbish,” *Middlesex Hospital Journal*, 45 (1945): 42-5.

<sup>32</sup> Walter Pagel, “Vindication of Rubbish,” 42.

philosophical, mystical or religious pursuits in a history of early modern science. Doing so would lead to a better understanding of how these practices interacted with the development of new scientific ideas.<sup>33</sup> Allen Debus, a student of Walter Pagel, continues this line of thinking, stating that where Pagel argued for looking at “the total man” as an expression of their time, the same could be said for the “development of science as a whole.”<sup>34</sup> Debus concludes that historians of science should not only focus on the success stories of the Scientific Revolution, but also investigate alternative contemporary systems of knowledge in order to gain a “deeper understanding in the rise of modern science.”<sup>35</sup>

The rise of modern science brings us to the question of the inevitability of alchemy’s exclusion. Why is alchemy so easily dismissed as non-scientific? Thomas Nickles’ “The Problem of Demarcation” reconstructs the demarcation and traces the origins to the scientific thinkers of the Enlightenment.<sup>36</sup> Nickles argues that it was their efforts in distinguishing a “new science from pretenders” that created a concern with demarcation.<sup>37</sup> Thomas Nickles argument is similar to John Henry’s explanation of the fragmentation of the occult.<sup>38</sup> Henry states that Enlightenment thinkers broke alchemy down in chemistry, akin to a modern science, and alchemy which was presented as a chrysopoic practice, solely focussed on the transmutation of base metals into gold. The distinction between alchemy and chemistry is placed within a broader trend to separate the new natural philosophy from magic.<sup>39</sup> This idea is resonated in von Stuckrad’s conceptualisation of the exercise of Enlightenment thinkers to exclude occult and magical qualities from the new science as a ‘process of disjunction’ which has led to our modern-day association of science with a strong empirical methodology and the banishment of alchemy to the realm of pseudoscience. Yet, there are two arguments that undermine alchemy’s exclusion.

Keith Hutchison argues for the inclusion of occult qualities in the scientific revolution in his article “What happened to the Occult Qualities in the Scientific Revolution.”<sup>40</sup> He informs the reader that occult qualities were nothing more than so-called hidden qualities, opposed to the manifest qualities. They existed alongside the hot, cold, moist and dry qualities and could be

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<sup>33</sup> Walter Pagel, *William Harvey’s Biological Ideas: Selected Aspects and Historical Background*, (New York: Karger, 1967), 82.

<sup>34</sup> Allen G. Debus, “Chemists, Physicians, and Changing Perspectives on the Scientific Revolution,” *Isis*, 89 (1998): 70.

<sup>35</sup> Debus, “Changing Perspectives,” 70-71.

<sup>36</sup> Thomas Nickles, “The Problem of Demarcation,” in *Philosophy of Pseudoscience*, eds. Massimo Pigliucci and Boudry, Maarten, 101-20.

<sup>37</sup> Nickles, “Problem of Demarcation,” 105.

<sup>38</sup> Henry, “Fragmentation of Renaissance Occultism,” 6-11.

<sup>39</sup> Henry, “Fragmentation of Renaissance Occultism,” 21-2.

<sup>40</sup> Keith Hutchison, “What happened to Occult Qualities in the Scientific Revolution?” *Isis*, 73 (1982): 233-253.

examined by the human intellect. These occult qualities were not in necessary opposition with the development of the new science, the appropriation of these qualities were even perceived as a sign of superiority of their new philosophy.<sup>41</sup> Alchemy did have an experimental tradition. Alchemists worked in laboratories and tested their theories. William Newman and Lawrence Principe have illustrated the empirical methodology through replicating some experiments of seventeenth century alchemist, George Starkey.<sup>42</sup> The study of early modern laboratories has also provided insight into the material practice of the alchemist.<sup>43</sup> Martínón-Torres argues that the laboratory practices were a combination of innovation and tradition, which he places in line with Bacon's conception of Solomon's House, a mystical institution that was founded in order to unveil the true nature of all things.<sup>44</sup> Alchemy proved to be more than just an antiquated science, it was innovative and receptive to the developing discipline of chemistry.

The propagation of the idea that alchemy took part in the development of chemistry places the endeavour in a grander narrative of the Scientific Revolution. Looking at the role alchemy played in the development of science, undermines the idea that alchemy with its occult practices hampered the process of scientific innovation. It, however, narrows the diversity of the alchemical endeavour by limiting it to a purely operational alchemy. This tension between wanting to validate the scientific side and coming to terms with its speculative, hermetic and even esoteric dimension is still an issue for certain historians of alchemy. William Newman and Lawrence Principe's *Alchemy Tried in the Fire*, for example, portrays Starkey not as just the "last philosophical alchemist of the seventeenth century," but as part of the development of chemistry. And while they include Starkey's practice of alchemy as a way of uncovering higher arcana and of finding the key to transmutation, their focus is on the actual experiments rather than the theological and spiritual implications for the alchemist himself.

How then approach the early modern study of alchemy? Is a strict division between the scientific practices and the religious and spiritual dimension necessary? The dualistic model can be viewed as a remnant of the historiographical debate about the relationship between science and religion. The Draper-White thesis that propagated the relationship as one of warfare where science was the "force of the intellect" which battled with the tradition of faith

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<sup>41</sup> Hutchison, "What happened to Occult Qualities," 242.

<sup>42</sup> William R. Newman and Lawrence M. Principe, *Alchemy Tried in the Fire: Starkey, Boyle and the fate of Helmontian chymistry*. (Chicago: Chicago University Press, 2002).

<sup>43</sup> See for example: Marcos Martínón-Torres, "Inside Solomon's House: An Archaeological Study of the Old Ashmolean Chymical Laboratory in Oxford," *Ambix*, 59 (2012): 22-48.

<sup>44</sup> Marcos Martínón-Torres, "Inside Solomon's House: An Archaeological Study of the Old Ashmolean Chymical Laboratory in Oxford," *Ambix*, 59 (2012): 24, 46-7.

and the power of religion and the church.<sup>45</sup> This radical view of the conflict thesis has been discredited, yet it has imprinted itself in the popular consciousness.<sup>46</sup> Furthermore, a general agreement on the relationship between science and religion has not been reached: some tend to view it as peaceful coexistence, whereas others propagate one of mutual inclusion where the two disciplines were combined in the knowledge production.<sup>47</sup> A mere coexistence between natural philosophy and theology in a Renaissance and early modern context appears insufficient to fully grasp the activities of early modern philosophers.

In trying to define the relation between theology and natural philosophy in the sixteenth and seventeenth centuries, Amos Funkenstein conceived the notion of ‘secular theology,’ which, according to him, was a “new and unique approach to matters divine.”<sup>48</sup> It was the treatment of theological issues by laymen rather than university trained theologians. He believed that the secular aspect lay in the orientation toward the world while dealing with theological issues such as God, the trinity, spirits and salvation.<sup>49</sup> The secular theologians construct a treatise on God and science, not from a theological standpoint, but from their position as philosophers and investigators of nature. It is this kind of discourse that is also found in Dorn’s *Supernatural Art*: the philosopher needs to understand the secrets of nature to accomplish the marvellous in nature.

## 2.2. Gerhard Dorn and the Chymical Philosophy

Jean-François Maquet’s article “Philosophie et alchimie chez Gerhard Dorn” illustrates the alchemist’s approach of divine matters by way of an operational alchemy and medicine. Maquet drew from the wealth of texts left to us by Dorn and reconstructed Dorn’s theo-cosmological myth. The author provides a detailed account of Dorn’s appropriation of the Genesis narrative, beginning from the absolute one who brought forward the *Mysterium Magnum*, from which everything was brought forward by God. Maquet then guides the reader through the dangers of the binary and how our alchemist believed it could be overcome by means of a healing process that could liberate the incorruptible nature of men. The seven pages based on a plethora of works from the Dornean corpus offers a good introduction into the speculative philosophy

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<sup>45</sup> John William Draper, *History of the Conflict between Science and Religion*, (Cambridge: Cambridge University Press, 2009), vi. The original was published in 1875.

<sup>46</sup> In 2010, David Lindberg described it as a “a widespread myth that refuses to die,” David C. Lindberg, “The Fate of Science in Patristic and Medieval Christendom,” in *The Cambridge Companion to Science and Religion*, ed. Peter Harrison, (Cambridge & New York: Cambridge University Press, 2010), 21.

<sup>47</sup> Rivka Feldhay, ‘Religion’, in *The Cambridge History of Science*, vol. III: *Early modern Science*, eds. Katharine Park and Daston, Lorraine, (Cambridge: Cambridge University Press, 2006), 728.

<sup>48</sup> Amos Funkenstein, *Theology and the Scientific Imagination from the Middle Ages to the Seventeenth Century*, (Princeton: Princeton University Press, 1986), 3.

<sup>49</sup> Funkenstein, *Theology and the Scientific Imagination*, 3.

underlying Dorn's chymical and operational endeavour. It illustrates the foundations of the operational alchemy which aspires to create the miracle of the universal medicine by means of simulating the process of creation, as well as the internal process of restoring unity by means of an internal transmutation which activates the Edenic core that lies hidden in mankind.

The main authority on Gerhard Dorn is the French historian Didier Kahn. He has written an account of the alchemist for the alchemical lexicon of Karin Figala and Claus Priesner where he provided a brief overview of Dorn's life, work, the impact and reception of Dorn's writings and ideas.<sup>50</sup> A more expansive account of Dorn's life and activities are the subject of "Les débuts de Gérard Dorn."<sup>51</sup> The article is the result of Didier Kahn's attempt at distilling biographical elements from Dorn's early works. The biographical details presented in the article are integrated in an overview of Dorn's life in chapter four. Aside from the uncovered fragments of the biography, Kahn's study also deals with an autograph in Besançon, dating from around 1565. The autograph was an early draft of the *Clavis totius philosophiae chymisticae* (1567). Kahn carefully examined the autograph and compared it to the published *Clavis*. The most notable result is that the autograph gave proof of a superficial knowledge of Paracelsian doctrines. It appeared to rely more heavily on Trithemius, by which the author concludes that Dorn gained a deeper understanding of Paracelsian doctrines after moving to Lyon in 1566. He would publish his *Clavis* in the following year, which illustrated a more profound knowledge of Paracelsian principles.

The above-mentioned article was also reworked and added in Didier Kahn's *Alchimie et Paracelsisme en France*. The volume explores the production of alchemical works and the dissemination of alchemical and Paracelsian ideas and the debates in France, from the late middle ages until the year 1620. He places Dorn at the forefront of the development of "theo-alchemy," an amalgamation of alchemy with religion that, according to Kahn is especially telling for the early modern period, since it was not yet present in alchemy before the Renaissance.<sup>52</sup> Kahn's study of the Paracelsian tradition in France aims to reconstruct an intellectual landscape in order to understand the end of the Renaissance.<sup>53</sup> He examines the men engaging with alchemy and Paracelsian ideas and what their place was in early modern society and in the early modern intellectual world. By examining the reception of Paracelsian

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<sup>50</sup> Didier Kahn, "Gerhard Dorn," in *Alchimie: Lexikon einer hermetischen Wissenschaft*, eds. Claus Priesner and Karin Figala, (Munich: C.H. Beck, 1998), 112-4.

<sup>51</sup> Didier Kahn, "Les débuts de Gérard Dorn," in *Analecta Paracelsica*, ed. Joachim Tell, 59-126. (Stuttgart: F. Steiner, 1994).

<sup>52</sup> Kahn, *Alchimie et Paracelsisme*, 8.

<sup>53</sup> Kahn, *Alchimie et Paracelsisme*, 4.



and alchemical ideas Kahn establishes a base to further examine their impact and their role in the alchemical culture.

Dorn's association with Paracelsus and Paracelsianism is reflected in the literature. The alchemist is briefly mentioned in Allen Debus' *Chemical Philosophy*. Debus' book provides an idea on how Paracelsian thought developed further in the early modern times by looking at a wide array of chymical philosophers, such as Robert Fludd and Jean van Helmont. Furthermore, he shows how their complementary study of the two books, the Bible and the Book of Nature, was aimed at restoring a pristine knowledge. The influence of Christian, Neoplatonic and Hermetic texts was apparent in their philosophy. Alchemy was perceived as the key to understanding the cosmos, either through laboratory procedures or through analogy. Gerhard Dorn is briefly mentioned in the section on Paracelsian 'Mathematics.' Debus states that Dorn showed great concern with numerical studies as well as the power of mystical numerical analysis. He attempted to relate the "triune nature of divinity with the universe as a whole."<sup>54</sup> The author does not expand much further on it; he merely places Dorn's mathematical-geometrical theme within the Paracelsian tradition as well as mentioning the similarity with John Dee's *Monas Hieroglyphica* (1564). Gerhard Dorn is also mentioned in the passage relating to the Paracelsian conception of Creation as a "chemical unfolding of nature."<sup>55</sup> Dorn further developed this Paracelsian theme and provided a commentary of the first six days of Creation.<sup>56</sup>

A more profound analysis of Dorn's account of Creation, as found in his *Liber de naturae luce physica, ex Genesi desumta* (1583) is found in Michael Walton's *Genesis and the Chemical Philosophy*.<sup>57</sup> Walton's study illustrates the interconnectedness between the rise of western science and the Christian theological-philosophical context. The biblical account of creation bridges the gap between theology and natural thought due to its openness to interpretation.<sup>58</sup> Walton dedicates three pages to Dorn's commentary on *Genesis*, providing an excellent introduction to the key elements of Dorn's account of Creation.<sup>59</sup>

Lynn Thorndike's monumental *History of Magic and Experimental Science* also reserves a few pages to Gerhard Dorn. The various volumes produced by Thorndike span the period from early Christianity to the seventeenth century and is concerned with the history of magic in the western world. Thorndike's account of Dorn is found in the fifth volume, concerned with the

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<sup>54</sup> Debus, *Chemical Philosophy*, 74.

<sup>55</sup> Debus, *Chemical Philosophy*, 76.

<sup>56</sup> Debus, *Chemical Philosophy*, 77-6.

<sup>57</sup> Michael T. Walton, *Genesis and the Chemical Philosophy. True Christian Science in the Sixteenth and Seventeenth Centuries*, (New York: AMS Press, Inc., 2011).

<sup>58</sup> Walton, *Genesis*, 1-2.

<sup>59</sup> Walton, *Genesis*, 62-4.

sixteenth century.<sup>60</sup> Dorn is found in the chapter on the Paracelsian revival. Thorndike outlines the main ideas present in Gerhard Dorn's philosophy, touching on Dorn's critique of the current state of knowledge and his call for a reformation to purify the education which he believed to be too pagan and scholastic. *Magic and Experimental Science* also offers an account of Dorn's conception of medicine and astrology, as well as sketching the role Dorn ascribed to the chymist. Gerhard Dorn was also criticised and entered in a polemic with Jacques Gohory (1520 – 1576), a fellow alchemist and Paracelsian, who published under the name of Leo Suavius. Thorndike's account provides a brief overview of the central themes in Dorn's work.

Surprisingly, Dorn is also found in James Partington's *History of Chemistry* as well as in Charles Gillispie's *Dictionary of Scientific Biography*.<sup>61</sup> Partington's entry is heavily based on Thorndike's research and does not add anything to what has already been stated above. Gillispie attempt to provide an overview of his biography as well as looking at Dorn's influences and his philosophy. He also touches on the fact that Dorn's alchemy was more than simply material: it was a spiritual process that sought a "sublimity of mind."<sup>62</sup> Gillispie thus combines the scientific aspects without losing sight of the spiritual current present within Dorn's philosophy.

Dorn's inclusion in works on the history of chemistry is also interesting because it illustrates the ambiguity of early modern alchemy. Bruce Moran's chapter on Andreas Libavius and the Art of *Chymia* explores the ambiguity surrounding the concept.<sup>63</sup> Libavius was a chrysopoeic alchemist who tried to purify the alchemical art from the hermetic Renaissance tradition.<sup>64</sup> Moran contrasts Dorn conception of chymia and the supernatural art against that of Libavius. Chymia for Dorn was the extraction of hidden powers through chymical operations of separation and distillation.<sup>65</sup> Libavius argued against Dorn's conception of the chymia as well as it being something supernatural. Dorn's chymia aimed to move nature by that which was above nature: the divine was present.<sup>66</sup>

The conception of chymia held by alchemists such as Dorn, would slowly be relegated to the speculative and non-scientific, practices. It is exactly through the purging enterprises of alchemists such as Libavius. Yet, as the following section will show, the spiritual and hermetic

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<sup>60</sup> Thorndike, *Magic and Experimental Science*, 630-5.

<sup>61</sup> James Riddick Partington, *A History of Chemistry*, II, (London: MacMillan, 1961), 159-61. Charles Coulston Gillispie, *Dictionary of Scientific Biography*, vol. 4, (New York (N.Y.): Scribner's sons, 1970), 169-71.

<sup>62</sup> Gillispie, *Dictionary of Scientific Biography*, 170.

<sup>63</sup> Bruce T. Moran, "Andreas Libavius and the Art of Chymia," in *Bridging Traditions: Alchemy, Chemistry, and Paracelsian Practices in the Early Modern Era*, Karen Hunger Parshall, Walton Michael T., and Moran, Bruce T., eds. (Kirkville: Truman State University Press, 2015), 59-78.

<sup>64</sup> Frances A. Yates, *The Rosicrucian Enlightenment*, (London: Routledge & Kegan Paul, 1972), 69-70.

<sup>65</sup> Moran, "Libavius and the Art of Chymia," 60-1.

<sup>66</sup> Moran, "Libavius and the Art of Chymia," 76-7.

alchemical tradition did not end with Dorn. It remained popular and flourished in the early modern period.

### 2.3. Spiritual Alchemy: the Search for God, the Secrets of Nature and the Hermetic Tradition

Gerhard Dorn does not appear to be present in the main body of research concerning spiritual alchemy. I've already touched on the emphasis on the theoretical and scientific side of alchemy where the little to no attention was given to the spiritual and mystical side of alchemy. And although it is important to look at both the natural philosophical side and the theological and spiritual dimension, this section will mostly delve into the spiritual alchemy and the historiography about the topic. The aim is to provide an overview of the various appropriations of alchemy in discourses about God and the relation of alchemy with the Hermetic Tradition.

Paulo Porto's article "Michael Sendivogius on Nitre and the Preparation of the Philosophers' Stone," shows, that reconstructing the actual historical course of alchemical procedures is no walk in the park.<sup>67</sup> It is not always clear where theory and practice meet, how they interrelate and how they influence the final account of the alchemist. Problems of interpretation are also common, due to the alchemists' use of encode languages and *decknamen*. And it doesn't just pose a problem for the modern reader, it also made for difficulties in the early modern period.

An excellent example to illustrate the problem of secrecy for the early modern alchemist is the creation of the Philosopher's Stone. The creation of the Philosopher's Stone (or the Stone of the Sages, or in Latin, *Lapis Philosophorum*; Elixir or Tincture) was considered as the *magnum opus* of the alchemist.<sup>68</sup> It served as a universal transmuting agent; meaning that the Philosopher's Stone could turn any base metal into gold.<sup>69</sup> In order to create the Stone, an alchemist needed a recipe, but unfortunately, there was no single true method of making the Philosopher's Stone. The need for secrecy among alchemists didn't help. The use of *decknamen*, a cover name, to cover up the true name of the substance was not out of the ordinary in alchemical texts. Even for the Elixir, there were *decknamen*, for example, salamander could refer to the Stone because a salamander was fire resistant, just like the fire that was used to create the Stone could not destroy it.<sup>70</sup> Alchemists thus had to invent ways to circumvent the secrecy and uncover the

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<sup>67</sup> Paulo Alves Porto, "Michael Sendivogius on Nitre and the Preparation of the Philosophers' Stone," *Ambix*, 48 (2001): 1-16.

<sup>68</sup> Lawrence M. Principe, "Lapis Philosophorum," in *Alchemie: Lexikon einer hermetischen Wissenschaft*, eds. Claus Priesner and Figala Karin, (Munich: C.H. Beck, 1998), 215.

<sup>69</sup> Principe, *The Secrets of Alchemy*, 112.

<sup>70</sup> Principe, "Lapis philosophorum," 216.

recipe for the Philosopher's Stone. One way was trading the recipe, or to find it in alchemical tracts. Another way was that it was brought on by divine illumination.<sup>71</sup>

The belief in the “necessity of divine inspiration for the art” was up for debate in the early modern times.<sup>72</sup> This debate, Tara Nummedal argues, stems from the tension between the idea of alchemy as a sacred art and the reality of entrepreneurial alchemy. She argues that alchemical knowledge was quite widespread and that people could choose to become alchemists.<sup>73</sup> This didn't sit well with the illuminated alchemists who saw themselves as being granted the privilege of receiving the knowledge of the alchemical arts. These contrasting views on alchemy would lead to debates about the definition of alchemy and gave rise to the image of the fraudulent alchemist. One of these illuminated alchemists who argued against the fraudulent alchemist was Michael Maier, an early seventeenth century alchemist.<sup>74</sup> He believed in the divine sanctioning of the art and that it was only accessible to a select few. Hereward Tilton's study of Michael Maier is aimed at studying alchemy as part of western esotericism, rather than the history of science. His work, *The Quest for the Phoenix* illustrates that spiritual alchemy was an active current in early modern alchemy that should not be dismissed. The introduction of Tilton's *Quest for the Phoenix's* explicitly counters Newman and Principe's material view of alchemy by pointing to the way Maier combined both spiritual and material elements and that he was influenced by both Christian (protestant) and pagan beliefs, the Hermetic Tradition of alchemy, mysticism and Rosicrucianism.

The confluence of alchemy with several other traditions translates in the variety of alchemical texts available to the aspiring alchemist. Tara Nummedal also notes that alchemy has an “extraordinarily rich and diverse textual tradition” and that an “ancient thread stressed the more mystical elements of the alchemical art”<sup>75</sup> This ancient thread were the writings attributed to Hermes Trismegistus, a legendary figure of Greco-Egyptian origin. The *Hermetica*, Hermes' corpus, was a collection of Neoplatonic and philosophico-theological writings and, Nummedal states, inspired a revival of the mystical current in alchemy. Early modern alchemists influenced by the Hermetic Tradition looked to alchemy as a way of understanding God.<sup>76</sup>

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<sup>71</sup> Principe, *The Secrets of Alchemy*, 115-27.

<sup>72</sup> Tilton, *Quest for the Phoenix, Spiritual Alchemy and Rosicrucianism in the Works of Michael Maier (1569-1622)*, (New York: Walter de Gruyter, 2003), 255.

<sup>73</sup> Tara Nummedal, *Alchemy and Authority in the Holy Roman Empire*, (Chicago: Chicago University Press, 2007), 27, 38-9.

<sup>74</sup> Hereward Tilton, *The Quest for the Phoenix: Spiritual Alchemy and Rosicrucianism in the Works of Michael Maier (1569-1622)*, (New York: Walter de Gruyter, 2003).

<sup>75</sup> Nummedal, *Alchemy and Authority*, 25-6.

<sup>76</sup> Nummedal, *Alchemy and Authority*, 22.

The Hermetic Tradition was given new life by Renaissance philosophers such as Marsilio Ficino. He not only breathed new life into the Hermetic Tradition, but he also found religious legitimation in the corpus of Hermes for his brand of magic. The renaissance Neo-Platonism conceived by figures such as Ficino perceived the cosmos “as a network of magical forces with which man can operate.”<sup>77</sup> Frances Yates’ chapter on the Hermetic Tradition in Renaissance science provides the beginnings of a new approach to the “history of science through Renaissance magic.”<sup>78</sup> She illustrates how the changing view of man’s relation to the cosmos during the Renaissance relates to the conception Renaissance magic and philosophy. Her chapter untangles the web of occultism and mystique, constructing a narrative where ‘occultists’ such as John Dee and Henry Cornelius Agrippa are placed alongside Leonardo da Vinci and Roger Bacon. Her studies have been an incentive for reassessing the Renaissance period and the relation between natural philosophy and magic, as well as taking into account the magical view of the cosmos in the development of science.

So too, does Owen Hannaway’s *The Chemists & the Word*.<sup>79</sup> His study focusses on the didactic origins of chemistry which he traces to a book of Andreas Libavius. Owen looks at how Libavius attempts to reconstruct a new science by expunging the Hermetic-Paracelsian influences from it. Hannaway’s first chapters are concerned with the Hermetic underpinnings of the Paracelsian teachings. He illustrates the interconnectedness between the Renaissance magic and the Paracelsian tradition by way of the work of Oswald Croll, one of the first generation interpreters of Paracelsus. Hannaway’s *Chemists and the World* show the “fragmentation of the occult” at work, yet nuancing it by way of including the ‘occult side.’ The narrative of the science that is being defined and purged is placed alongside the impure elements that are part of a Hermetic, gnostic and Neoplatonic tradition. The study includes the Hermetic Tradition and Renaissance magic as a valid practice, contrasting it to the attempt at constructing the new science of chemistry.

Charles Webster’s monograph *Paracelsus: Magic, Mission and the End of Time* explores the scientific, medicinal, religious, ethical and political aspects of Paracelsus’ ideas and shows how they all come together in his mission for a total reform.<sup>80</sup> Webster illustrates how, in Paracelsus’ thinking, different ideas came together and were combined in a novel way. Paracelsus perceived

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<sup>77</sup> Frances A. Yates, “The Hermetic Tradition in Renaissance Science,” in *Art, Science and History in the Renaissance*, Charles Southward Singleton, ed. (Baltimore: John Hopkins Press, 1970), 255.

<sup>78</sup> Yates, “Hermetic Tradition,” 256.

<sup>79</sup> Owen Hannaway, *The Chemists & the Word. The didactic origins of chemistry*, (Baltimore: John Hopkins University Press, 1975).

<sup>80</sup> Charles Webster, *Paracelsus: Magic, Mission and the End of Time*, (New Haven: Yale University Press, 2008).

himself as a reformer with a higher calling, as the protagonist in the rebirth of knowledge, social amelioration and spiritual regeneration.<sup>81</sup> In doing so, Webster also points to the use of apocalyptic imagery and how it influenced his innovative medicinal theory, which distanced itself from the traditional Galenic medicine, by incorporating a “spiritual dimension of the human constitution.”<sup>82</sup> Furthermore, Webster examines the role of the *tria prima* in Paracelsus’ thought, and his trichotomous division of body, soul and spirit as well as the idea that there were three basic chemical substances, sulphur, mercury and salt.<sup>83</sup> By studying how all these different ideas come together in Paracelsus’ mission to reconcile with God through a stepwise spiritual process, Webster shows how science and magic, medical and mystical terminology come together and are mutually dependent.

It wasn’t just Paracelsus and his followers who concerned themselves with the interrelation between the manipulation of nature and the divine order, alchemy had a resonance in its engagement with early modern religion.<sup>84</sup> Tara Nummedal argues that the study of the connection between alchemy and Christianity illustrates the “productive synergies among ideas, practices, and techniques” in an individual practitioner’s alchemical and religious works.<sup>85</sup> Individuals “sought to integrate their faith” with the alchemical art and would use “interlocking methods of exploring the human, divine and natural world.”<sup>86</sup>

The integration of alchemy within a particular Christian belief system in early modern England has been studied by Bruce Janacek.<sup>87</sup> He explores the “religious and philosophical significance alchemists attributed to their work within the political and religious contexts of their life.”<sup>88</sup> Alchemy thus became a vehicle to understand the secrets of nature. By studying the historical significance of these alchemical, occult, and theological beliefs, Janacek aims at providing an understanding of the seventeenth century political and religious culture. The alchemical works of Thomas Tymme, Robert Fludd, Sir Francis Bacon, Sir Kenelm Digby and Elias Ashmole are examined for the way in which they employed alchemy to prove theological doctrines. Different uses of alchemy are brought to light. Alchemy could be applied in the hopes of healing a divided society and strengthen the religious institution of the Church of England. The entanglement of faith and alchemy is also illustrated through the use of alchemy in gaining a better

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<sup>81</sup> Webster, *Paracelsus*, 7.

<sup>82</sup> Webster, *Paracelsus*, 165.

<sup>83</sup> Webster, *Paracelsus*, 132-7.

<sup>84</sup> Tara Nummedal, “Alchemy and Religion in Christian Europe,” *Ambix*, 60 (2013): 311-22.

<sup>85</sup> Nummedal, “Alchemy and Religion,” 319.

<sup>86</sup> Nummedal, “Alchemy and Religion,” 312.

<sup>87</sup> Bruce Janacek, *Alchemical Belief: Occultism in the Religious Culture of Early Modern England*, (University Park: Pennsylvania State University Press, 2011).

<sup>88</sup> Janacek, *Alchemical Belief*, 12.

understanding of the creation as well as how God's entanglement with "earthly matter" resulted in creation and resurrection.<sup>89</sup> Other alchemists, such as Elias Ashmole believed that alchemy could help him uncover a *prisca sapientia*, "the first and purest form of human wisdom" that had existed before the Fall of Adam and the rediscovery could lead to a new dawn of humanity.<sup>90</sup>

A further consideration of the interaction between religion and alchemy is offered in the Robert Schuler's article "Some Spiritual Alchemies of Seventeenth-Century England."<sup>91</sup> The author argues for the existence of different religious interpretations of alchemy. Schuler examines three documents from the time period 1600-1650 to support his argument. The aim of the article is to show that different strands of religions (moderate Anglicanism, orthodox Calvinism and radical puritans) could harmonise their faith with certain elements of alchemical practice. Schuler concludes that the "religious heterogeneity of the seventeenth century" warrants the use of spiritual alchemy in a general way.<sup>92</sup> The variety of religious beliefs and experiences influenced the early modern individual's attitude of alchemy and it is important to note that these differences led to converging ideas of alchemy's aims.

The idea of harmonising faith with alchemy can also be found in the appropriation of kabbalist tradition by Christian alchemists. In "*Cabala Chymica or Chemia Cabalistica – Early Modern Alchemists and Cabala*" Peter Forshaw explores the relationship between the Christian reformulation of the Kabbalah (hence "Cabala") and the alchemical tradition.<sup>93</sup> This article demonstrates how certain alchemists drew from the cabalist tradition in the hopes of uncovering the secrets of alchemical texts and the book of nature. The blending of these two traditions could propagate a deeper understanding of the secrets of nature and of God.

The entanglement of alchemy with magic, religion and spirituality will be cultivated further by several alchemists, until it reaches its heyday in the seventeenth century. Paul Monod's *Solomon's Secret Arts*' main focus is on the occult in the Enlightenment, but the first chapter focusses on alchemy in seventeenth century England.<sup>94</sup> Paul Monod looks at the intellectual community of alchemists and wonders what made their work occult. An assessment of the lives and labours of a diverse intellectual community of alchemists and the socio-political situation

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<sup>89</sup> Janacek, *Alchemical Belief*, 56.

<sup>90</sup> Janacek, *Alchemical Belief*, 155.

<sup>91</sup> Robert M. Schuler, "Some Spiritual Alchemies of Seventeenth-Century England," *Journal of the History of Ideas*, 41 (1980): 293-318.

<sup>92</sup> Schuler, "Some Spiritual Alchemies," 318.

<sup>93</sup> Peter J. Forshaw, "*Cabala Chymica or Chemia Cabalistica – Early Modern Alchemists and Cabala*," *Ambix*, 60 (2013): 361-389.

<sup>94</sup> Paul K. Monod, *Solomon's Secret Arts: the Occult in the Age of the Enlightenment*, (New Haven: Yale University Press, 2013).

provides a setting for Monod's closer examination of three figures from the seventeenth century. Through Elias Ashmole and Thomas Vaughan, two individuals who were at the vanguard of the alchemists' community, Monod explores the association of alchemy and occult philosophy, "which dipped into enthusiasm, unorthodoxy and ritual magic."<sup>95</sup> He argues that Ashmole's engagement with magic was aimed at providing an intellectual foundation and respectability for alchemy. The attraction to magic had its resonance in Elias Ashmole's conception of alchemy: the alchemist, claims Monod, possessed an ultimate supernatural wisdom and power. *Solomon's Secret Arts* contrasts Ashmole's careful consideration to Thomas Vaughan's imaginative approach to the magical base of alchemy. But unlike Ashmole's, Vaughan's alchemy was interlaced with a religious mysticism, which, according to Monod, was sometimes met with opposition because it was unorthodox. Alchemical debate was still very much alive in the seventeenth century and Monod turns to William Cooper to reveal the public face of alchemy. Cooper was a publisher, book auctioneer and practicing alchemist, and as Monod argues, his publications are an example of how "supernatural magic and empirical science" found each other in the great work.<sup>96</sup> *Solomon's Secret Arts* explores the interaction between a supernatural or mystic worldview and alchemy. Paul Monod's exploration of the complex relation between theology, magic and alchemy demonstrates the dynamic dialogue between the practitioners of the alchemical art. *Solomon's Secret Arts* provides a picture of alchemy as an unfixed enterprise, engaging with other disciplines in order to come to an understanding of the secrets of nature.

The manifold of practices and ideas result in a differentiated endeavour that had no fixed truth. Each alchemist created his or her own truth, drawing from older philosophies, or through reacting against traditional institutionalised forms of knowledge. Alchemy held different meanings for different practitioners and it is only through examining their beliefs, ideas and practices that the significance of alchemy for an early modern individual is exposed. In the following chapters, we will attempt to uncover the meaning and use of alchemy in Gerhard Dorn's philosophy and practice.

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<sup>95</sup> Monod, *Solomon's Secret Arts*, 31.

<sup>96</sup> Monod, *Solomon's Secret Arts*, 45.



### 3. Recapturing the Chimerical Art. Alchemy through the Ages.

As illustrated in the introduction, alchemy is a highly diverse and chimerical subject. It covers different aspects, ranging from practical aspects to theoretical, nature-philosophical and medical contemplations as well as to mystical and spiritual interpretations.<sup>97</sup> This variety has been present since the early beginning of the art in antiquity, where practical artisanal knowledge was merged with theoretical speculations about the nature of matter in order to make gold and silver.<sup>98</sup>

#### 3.1. Philosophical Foundations: Plato and Aristotle

Before looking further into the development of alchemy, the philosophical basis will be explored briefly through the ideas of Plato (ca. 427 – 347 BCE) and Aristotle (384 – 322 BCE). Important for alchemists and especially in the later Renaissance period where Neoplatonism would be influential for some alchemists, is Plato's view of creation. According to Plato, there is a Demiurge (something akin to a God, though not omnipotent) who shaped a single, uniform and eternal matter. It was then divided into triangles which were then put together to form a regular polyhedra. This regular polyhedra would represent the four elements. Material substance were then formed through a further aggregation of the polyhedra. While Plato's main concern did not lie in speculations on matter, his belief brought together several ideas from Greek thought.<sup>99</sup>

Aristotle would speculate on matter and would lay the foundations of matter theory. He understood an object as composed of a single matter upon which a form was imposed. This was coined 'hylomorphism,' derived from the Greek 'hule' (matter) and 'morphe' (form). It was the form that gave the material its characteristics such as colour, texture, taste... Aristotle would explain the changes in substances as one form becoming another. The Greek philosopher would also prove influential for his theory of the elements.<sup>100</sup> The doctrine of the elements went back to the Ionic nature-philosophers such as Empedocles. He perceived each element as a primary substance. The mixture of the "four root powers," air, fire, water and earth, formed the basis of everything that existed. The combination of the elements was the result of two basic forces: conflict, which separated them, and love, which brought the elements together.<sup>101</sup> For Aristotle,

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<sup>97</sup> Bernard D. Haage, "Alchemy II: Antiquity-12th Century," in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 16.

<sup>98</sup> Lawrence Principe, *Secrets of Alchemy*, 13.

<sup>99</sup> Lawrence Principe, "Chemistry to 1699," 3-4. (unpublished paper)

<sup>100</sup> Principe, "Chemistry," 4.

<sup>101</sup> Haage, "Alchemy II," 18.

the elements were not prime matter, but arose from an initial combination of prime matter. They were thus a combination of qualities (wet, dry, hot and cold). These primary qualities exist in two opposing pairs (hot – cold, wet – dry) and the elements were formed from a mixture of the non-opposing pairs. This theory also explained simple changes such as the conversion of water into air through boiling it (water is cold and wet and through heating it, it becomes hot and wet, which are the constituents of air).<sup>102</sup>

## 3.2. Alchemy's Origins and Development: from the Greeks to the Arabs and back to the West.

### 3.2.1. Alchemy's Obscure Origins

The origins of alchemy are rather obscure. It most likely originated from an oral tradition, rooted in the practice of gold-and silversmiths which found its form in writing in the third century. These alchemical texts, such as the *Physika kai Mystika* of Pseudo-Demokritos, entail technical literature and recipes, combining practice and theory as well as metaphors for suffering, death and resurrection.<sup>103</sup> From the very beginning of the written tradition, the mystical tenet was present in the description of “processes of purification and initiation both in the alchemical work and in the soul of the alchemist” which stemmed from the mystery-cults in the Hellenised world.<sup>104</sup>

Medieval and renaissance alchemist traced their art back to the legendary Hermes Trismegistus (the thrice blessed), an Egyptian sage of remote antiquity associated with “knowledge of the material and spiritual world and their interrelation.”<sup>105</sup> His name was connected to the *Tabula Smaragda*, the Emerald Tablet, an obscure mystical text which inspired many alchemists. Hermes would become known as the founding father of alchemy, although the *Hermetica*, the corpus of texts ascribed to Hermes Trismegistus, have no obvious relation to alchemy. Still, the Hermetic art would become almost synonymous for alchemy.<sup>106</sup>

### 3.2.2. Arabic Alchemy

The beginning of the middle ages marks the disappearance of alchemy from the Latin West. The endeavour would be further developed by the Arabs in the Islamic world.<sup>107</sup> They developed new

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<sup>102</sup> Principe, “Chemistry,” 4.

<sup>103</sup> Haage, “Alchemy II,” 16.

<sup>104</sup> Haage, “Alchemy II,” 16.

<sup>105</sup> Roelof van den Broeck, “Hermes Trismegistus,” in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 474.

<sup>106</sup> Principe, *Secrets of Alchemy*, 30.

<sup>107</sup> Wayne Shumaker, *The Occult Sciences in the Renaissance*, 169.

theories and concepts as well as new techniques and substances.<sup>108</sup> The alchemist Jabir would formulate the doctrine of weight and balances, which entailed that every substance in the world is composed of a definitive mathematical mixture. This theory provides a theoretical foundation for the possibility of transmutation. The influence of the Pythagorean number mysticism which believed in perfect mathematical ratios and harmonies.<sup>109</sup> Another development of the Arabic alchemists was the enunciation of the Mercury-Sulphur theory. Mercury (moist exhalation) and Sulphur (smoky exhalation) are the principles that constitute all metals. These are the result of the underground exhalations which create minerals. The combination of different quantities and purities of the Mercury and Sulphur produce the different metals.<sup>110</sup> The word 'alchemy' itself comes from the Arabs. This is a transmission of the Greek 'chemia,' which was given the Arabic definitive article 'al,' and resulted in the Arabic 'al-kimiya.'<sup>111</sup>

### 3.2.3. Medieval Heritage

In the twelfth century, there was an alchemical renaissance in the Latin West, when Arabic alchemical texts were translated into Latin. Here we find alchemists such as Raymond Lull, Geber, Albertus Magus, Roger Bacon, who would further develop the science of alchemy.<sup>112</sup> Medieval alchemists sought to discover and apply the laws of nature through theory and experiment. Its foundation was the correspondence of the macrocosm of the stars and the microcosm of man and nature. Their aim went beyond the exploration of nature, they wanted to perfect nature. Alchemy became a booming engagement in the late Middle Ages. Manuscripts circulated, mostly written in Latin, but some alchemists would write in vernacular languages. Both theory and practice would be represented in the alchemical texts. With its rising popularity, criticism also spread. This was mostly directed to alchemists who claimed to be gold-makers but were nothing but forgers. Monarchs would promulgate bans, but they had very little effect.<sup>113</sup>

Through its contact with Christianity, alchemy underwent an expansion that it had known in its Islamic period. Analogies and comparisons were drawn between Christian doctrines and alchemical process. Alchemy gained credibility amongst Christian authors and could be used to support Christian beliefs. Alchemical interpretation of Biblical passages further extended the entanglement between alchemy and Christianity. The Passion of Christ and the Resurrection

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<sup>108</sup> Principe, *Secrets of Alchemy*, 27.

<sup>109</sup> Principe, "Chemistry," 9.

<sup>110</sup> Principe, *Secret of Alchemy*, 35.

<sup>111</sup> Haage, "Alchemy II," 16. See this article for further discussion on the roots of the word.

<sup>112</sup> Wayne Shumaker, *The Occult Sciences in the Renaissance*, 169.

<sup>113</sup> Buntz, "Alchemy III," 34-7.

were linked to certain alchemical processes. It is this relation between religion and alchemy that would be deepened in later theosophical and esoteric alchemy.<sup>114</sup>

The alchemical heritage of the middle ages would be further expanded and developed, as well as influenced by revived philosophies, such as Neoplatonism and Kabbalah. Alchemical theories and practices would be further developed and elaborated, debates and polemics would arise and slowly, metallic transmutation and spiritual interpretations would become separated from the laboratory practices. Chemistry would start defining itself as a science in the eighteenth century onwards and would purge itself from its speculative foundations, ascribing them to the esoteric and occult alchemy.

### 3.3. Turning the Common into the Precious: the Great Work of the Alchemist

Alchemy was not just something people believed in; it was something that people did. Alchemists investigated nature, drawing on different traditions of natural philosophy. Some used it to make medicines, other pursued alchemy for metallurgical purposes, and others still sought to profit from nature's secrets by trying to make gold and silver.<sup>115</sup> For many a practitioner the ultimate goal of alchemy was the coveting of the Philosopher's Stone. This was considered as the *magnum opus* of the art.

#### 3.3.1. The Philosopher's Stone

By creating the Philosopher's Stone, the alchemist would be able to transmute any base metal into gold, The creation of the Philosopher's Stone (or the Stone of the Sages, or in Latin, *Lapis Philosophorum*) would aid the alchemist in his endeavour of transmutation.<sup>116</sup> The Stone of the Sages served as a universal transmuting agent; meaning that the Philosopher's Stone could turn any base metal into gold.<sup>117</sup> The idea of transmutation was already present in the Hellenic and Egyptian texts where they sought a powder that could transmute base metal into gold and was called *lithos ton philosophon*, Ancient Greek for the Philosopher's Stone. Alchemical texts don't always mention the Philosopher's Stone, but would sometimes use 'Elixir' to refer to it. This name is derived from the Arabic name of the transmutation powder *al-iksir*, which in turn came from the Greek *xerion*, a term used by Greek alchemists to refer to the capabilities of the powder

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<sup>114</sup> Herwig Buntz, "Alchemy III: 12th/13th – 15th Century," in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 34-6

<sup>115</sup> Bruce T. Moran, *Distilling Knowledge: Alchemy, Chemistry and the Scientific Revolution*, (Cambridge: Harvard University Press, 2005), 9-10.

<sup>116</sup> Lawrence M. Principe, "Lapis Philosophorum," in *Alchemie: Lexikon einer hermetischen Wissenschaft*, eds. Claus Priesner and Figala Karin, (Munich: C.H. Beck, 1998), 215.

<sup>117</sup> Principe, *The Secrets of Alchemy*, 112.

to heal wounds. Elixir is nothing more than the Latinised form of the Arabic *al-iksir*. The Philosopher's Stone is sometimes also called 'Tincture', derived from the Latin *tingere*, to dye.<sup>118</sup> The different names allude to the powers ascribed to the stone: it can be used to heal, but it is also capable of changing the qualities of metals.

The idea of turning lead into gold seems like an impossibility, but for the early modern individual it was plausible. They based their theory of transmutation on the idea that all metals were composed of different compounds. Metals could be separated and broken down into their constituent ingredients; what these ingredients were was up for discussion. By altering or purifying these ingredients, they could transmute one metal into the other. They believed that metals automatically strived to perfection and the alchemists were simply speeding up the natural processes. It was not so much a question of whether it was possible but more a question of finding the right method to alter these properties.<sup>119</sup>

### 3.3.2. The Great Work

How to make the Philosopher's Stone? There was no single true method of making the Philosopher's Stone. Questions concerning starting materials and methodology were ever present in the early modern alchemist's quest for the Philosopher's Stone. Another problem in the creation of the Tincture was the need for secrecy among alchemists (e.g. the use of *decknamen*, which has already been touched upon in the introduction). The aspiring alchemist would need a recipe which could be traded, found in books, or brought on by divine illumination. Once he had a formula, the alchemist would need a starting material. The lack of a consensus on starting materials, which was propagated further by the need for secrecy and allegory, proved challenging for alchemists. Luckily for the early modern alchemist, there was considerable agreement on the method of preparing the stone.

To create the Philosopher's Stone, the starting material must be reduced to the first matter, the *prima materia*. This is done through a series of stages, which according to the colours that appear throughout the *opus magnum* are the *nigredo* (black), *albedo* (white), *citritas* (yellow) and *rubedo* (red). Different alchemical processes are necessary in order to produce the Stone. There is no general agreement on the order of the processes and they can differ from author to author.

Generally, the alchemist would start with calcination, a process of oxidation through heating. This would be followed by solution, where the metal oxides are dissolved in mercurial liquids. Then comes putrefaction, a form of decomposition. The solution is gently heated either through

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<sup>118</sup> Principe, "Lapis philosophorum," 216.

<sup>119</sup> Nummedal, *Alchemy and Authority*, 107-8.

placing it in warm compost or a warm water bath. This induces the process of fermentation and it stimulates digestion. The matter usually turns black before colouring white. This is succeeded by reduction where the fugitive 'spirits' are recovered during the calcination process by means of a fluid. This process brings about a yellow colour. Then comes the sublimation, which brings out the red colour. A 'spiritual' substance is added to the matter in the vessel so it attains a higher degree than the *prima materia*. The substance is then solidified during the fixation or coagulation; this is in accord with the principle of *solve et coagula*. In some cases, alchemists will mention a stage of fermentations where they add a bit of gold to accelerate the process. Thereafter, the *prima materia* is elevated and purified into the *ultima materia*, the Philosopher's Stone. Usually it is described as a heavy, dark, red and shining powder. Heating the powder gives it a waxy consistency (*ceratio*) but on cooling, it solidifies. Once the stone is produced, more can be made from a little of its residue. This is called the multiplication. And the final stage is the projection where the powder is thrown on a base metal to transmute it into gold. This process is also called *Tinctura*, which is analogous to the application of the elixir in medicine.<sup>120</sup>

Alternatively, after the calcination there can be a process of separation, where components are separated from the others, which is followed by conjunction, where two opposite components are joined together. Then follows putrefaction and hereafter comes the process of congelation. It entails that a thin liquid is converted into a congealed thick substance. Then comes the fermentation followed by the exaltation, where the substance is elevated into a purer and more perfected nature. This is succeeded by multiplication and projection.<sup>121</sup>

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<sup>120</sup> Haage, "Alchemy II," 17.

<sup>121</sup> Shumaker, *Occult Sciences*, 171-3.

## 4. A Renaissance Alchemist and the World. A Reconstruction of the Intellectual Realm of Gerhard Dorn.

### 4.1. A Fragmentary Biography of an Elusive Renaissance Alchemist

Gerhard Dorn (ca. 1530 – after 1584) has left a wealth of written and published material for alchemists and scholars to explore, though little is known of his origins and education. A contemporary alchemist of Dorn, Michael Toxites (1514 – 1581), states that Dorn was *Belga*.<sup>122</sup> This origin is confirmed by the appearance of Dorn's name and town, Malines, on the matriculations list of the university of Tübingen. He was enrolled there on the twenty-seventh of November in 1559.<sup>123</sup> In all likelihood, Dorn studied medicine, but nothing is known of a promotion or an ending exam. He was probably already showing an interest in alchemy and the ideas of Johannes Trithemius (1462 – 1516) that would be present in his early work.<sup>124</sup>

Dorn didn't stay in one place, but he moved around. Looking at the alchemist's written and published material can shed some light on his whereabouts. Didier Kahn has found and studied an autograph from 1565 which was found in the archives of Besançon.<sup>125</sup> The autograph entails a handwritten draft of his *Clavis totius philosophiae chymisticae* (1567), which would later be altered and published in Lyon in 1567. The autograph bore a dedication to cardinal de Granvelle (1517 – 1586), who was archbishop of Malines. Kahn expands further on the implications of the dedication, like how it allows us to estimate Dorn's age by the author's statement that he'd been studying alchemy for almost twenty years. It makes it likely for Dorn to be born before 1535.<sup>126</sup> Gerard Dorn was also linked to Guillaume Casenat, a doctor in Besançon and a professor of medicine at the university of Dole. Casenat also knew Girolamo Cardano (1501 – 1576), the Italian mathematician, astrologer and philosopher, whom he met when he was working as a physician in Scotland.<sup>127</sup>

After his stay in Besançon, Dorn most likely moved to Lyon in 1566 where he either met Adam von Bodenstein (1528 - 1577), a fellow alchemist, or became acquainted with the latter's work. Von Bodenstein would prove an influential figure to Dorn's further immersion in the teachings of Paracelsus. This translates into a more pronounced Paracelsian undertone in Dorn's *Clavis*,

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<sup>122</sup> Michael Toxites, *Onomastica II*, (Strasbourg: Iobinus, 1576), 430.

<sup>123</sup> Heinrich Hermelinck, *Die Matrikeln der Universität Tübingen 1477-1817 (1): 1477 – 1600*, (Stuttgart, 1906), 407.

<sup>124</sup> Kahn, "Gerhard Dorn," 112.

<sup>125</sup> Didier Kahn, "Les débuts de Gérard Dorn," in *Analecta Paracelsica*, ed. Joachim Tell, 59-126. (Stuttgart: F. Steiner, 1994).

<sup>126</sup> Kahn, "Les débuts," 67-9.

<sup>127</sup> Kahn, "Les débuts," 77-8.

compared to the autograph in Besançon, which showed a more superficial knowledge of the doctrines of Paracelsus. Gerhard Dorn would dedicate his printed edition of the *Clavis* to von Bodenstein. After the publication of the *Clavis* in 1567, Dorn would move to Basel, where he translated works of Paracelsus to Latin.<sup>128</sup> They were commissioned by the publisher, Peter Perna (1519 – 1582). Dorn dedicated his work to German monarchs (e.g. Karl von Baden, Wilhelm IV von Hessen-Kassel, Egenolph von Rapoltzstein, Friedrich von Bayern of August von Sachsen) as well as to the French ambassador, Pierre de Gantrye.<sup>129</sup> He also enrolled at the university of Basel during the second half of 1567 and April 1568.<sup>130</sup> Dorn's time in Basel was well spent. Aside from his enrolment at the university, he would publish, between 1568 and 1570, no less than eleven works. Most of these are translations of Paracelsian works, but he would write three works of his own, where he further familiarised himself with the Emerald Tablet, deepened his understanding of Trithemius and came into contact with John Dee's work.<sup>131</sup>

After a quarrel with Perna in 1572-3, Dorn temporarily disappeared from the public scene. He would reappear five years later, in 1577, with a translation of the pseudo-Paracelsian *Aurora Philosophorum* (the dawn of the philosophers, 1577).<sup>132</sup> After publishing this work, which Dorn had dedicated to François de Valois, the brother of the French king Henri III (1551 – 1589), Dorn left Basel and move to France.<sup>133</sup> The alchemist was granted the protection of the French court thanks to his contact with the French ambassador, de Gantrye.<sup>134</sup> He would only remain in France for three years before moving to Frankfurt am Mainz, where Dorn's stay is recorded until 1584. After this date, no trace remains. Dorn's time in Frankfurt was very fruitful. He produced no less than ten different works, which mostly contained expansions of previously published work. These publications would bring him into contact with several highly placed noblemen as well as with his then best friend, Samuel Eisenmenger (Siderocrates, 1534 – 1585), who was a follower of the German spiritualist and protestant reformer, Kaspar Schwenckfeld (1489/90 – 1561).<sup>135</sup>

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<sup>128</sup> Kahn, "Gerhard Dorn," 112-3.

<sup>129</sup> Kahn, "Gerhard Dorn," 113.

<sup>130</sup> Didier Kahn, *Alchimie et Paracelsisme en France à la fin de la Renaissance (1567-1625)*, (Geneva: Librairie Droz, 2007), 196.

<sup>131</sup> Kahn, *Alchimie et Paracelsisme*, 196.

<sup>132</sup> Kahn, "Gerhard Dorn," 113.

<sup>133</sup> Kahn, "Gerhard Dorn," 113.

<sup>134</sup> Frank Greiner, "Gerhard Dorn," in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 320.

<sup>135</sup> Kahn, "Gerhard Dorn," 113.



## 4.2. Between Tradition and Innovation: Dorn's influences and Alchemical Corpus

Gerhard Dorn's oeuvre entails a variety of works, influenced by an alchemical tradition. His ideas did not appear out of nowhere, but he borrowed and integrated themes from various alchemists such as Hermes Trismegistus, Pseudo-Geber and Jean de Roquetaillade's (1310 – 1366/70) conceptualisation of the *quinta essentia*, the Neoplatonic and natural magic from Marsilio Ficino (1433 - 1499) and Pantheus as well as the magical theology of Johannes Trithemius and the medical alchemy of Paracelsus (1493 – 1541).<sup>136</sup> In this part, some of influences will be explored, since they contain key elements to understand the intellectual world in which Gerhard Dorn found himself.

### 4.2.1. The Emerald Tablet: an Alchemical Legacy of the Thrice-Great Hermes.

The Emerald Tablet (*Tabula Smaragdina*) is one of the most important sources of medieval alchemy.<sup>137</sup> The actual text is rather short, but for many alchemists it was an authoritative text and for some it even held a quasi-divine status.<sup>138</sup> The Tablet was attributed to the legendary Hermes Trismegistus or the Egyptian God Thoth. Its name is derived from the fact that the text was supposedly inscribed on an Emerald Tablet in Phoenician characters. There are different versions of how it was discovered, yet all of them are mere speculations.<sup>139</sup> Most evidence of the evidence suggests that the text is an original Arabic composition from the eight century. Despite exhaustive searches, so far no earlier Greek precursors or citations have been found. Whatever its origins, once the text appeared, it remained in circulation.<sup>140</sup>

True it is, without falsehood, certain and most true. That which is above is like to that which is below, and that which is below is like to that which is above, to accomplish the miracles of one thing. /And as all things were by contemplation of one, so all things arose from this one thing by a single act of adaptation./ The father thereof is the Sun, the mother the Moon,/The wind carried it in its womb, the earth is the nurse thereof./It is the father of all works of wonder throughout the whole world./The power thereof is perfect./If it be cast on to the earth, it will separate the element of earth from that of fire, the subtle from the gross./With great sagacity it doth ascend gently from earth to heaven./Again it doth descent to earth, and uniteth in itself the force from things superior and things inferior./Thus thou wilt possess the glory of the brightness of the whole word, and all obscurity will fly far from thee./This thing is the strong fortitude of all strength, for it overcometh every subtle thing and doth penetrate hermetic literature every solid substance./Thus was this world created./ Hence will there be marvellous adaptations achieved, of which the manner is this./For this reason I am called Hermes

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<sup>136</sup> Greiner, "Gerhard Dorn," 320.

<sup>137</sup> Lyndy Abraham, *A Dictionary of Alchemical Imagery*, (Cambridge: Cambridge University Press, 1998), 69.

<sup>138</sup> Shumaker, *Occult Sciences*, 178.

<sup>139</sup> Abraham, *Dictionary*, 69.

<sup>140</sup> Principe, *Secrets of Alchemy*, 31.

Trismegistus, because I hold three parts of the wisdom of the whole world. That which I had to say about the operation of Sol is completed.<sup>141</sup>

The text was subject to many interpretations and commentaries and there is no consensus as its precise meaning. In general though, “that which is above is like that which is below” refers to the correspondences in the cosmos. It entails the relation of the terrestrial world (below) and the celestial world (above).<sup>142</sup> Analogies can thus safely be drawn between the macrocosm and the microcosm, the mineral kingdom and the human, animal and vegetative kingdoms.<sup>143</sup> The idea of a monism is also represented<sup>144</sup>. By stating that all things come from the one, all created objects must be produced from a single, primal matter (this could be God).<sup>145</sup>

Further speculations lead to the possibility that the Tablet holds a secret recipe to produce the Philosopher’s Stone and many alchemists will attempt to uncover its meaning. But it is anything but clear. Sun and Moon might refer to the metals gold and silver, but they could just as well mean dry and wet. And what are we to make of the Earth’s belly? The fact remains that the ‘it’ is undefined, so it might mean something else entirely and may not have anything to do with alchemy at all.<sup>146</sup> Despite the obscure meaning and origins, the Tablet will provoke many great minds, and one of them is that of Gerhard Dorn. He would write an exposition on the Emerald Tablet and the *Physica Hermetis Trismegisti*, offering an interpretation of the “enigmatic” text.<sup>147</sup> Dorn’s exposition of the *Tabula Smaragdina* follows the account of Genesis. He parallels the argument in the tablet to the teachings of Moses in Genesis. He then continues to explain the teachings of the spagyric art, covering various pages before coming to the practice of the art. The content of the Emerald Tablet would reappear in Dorn’s oeuvre by way of Trithemius’ commentary, which will be explored in a later section on the influence of Johannes Trithemius on the alchemist.

#### 4.2.2. Jean de Roquetaillade: Alchemy as a Christian Science

Jean de Roquetaillade, or John of Rupescissa, was a Franciscan monk and alchemist. He conceived alchemy as a Christian science that could intervene in cosmic events.<sup>148</sup> De Roquetaillade would turn to alchemy to discover a universal medicine.<sup>149</sup> This medieval

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<sup>141</sup> Abraham, *Dictionary*, 70.

<sup>142</sup> Principe, *Secrets of Alchemy*, 32.

<sup>143</sup> Shumaker, *Occult Sciences*, 179.

<sup>144</sup> Principe, *Secrets of Alchemy*, 32.

<sup>145</sup> Shumaker, *Occult Sciences*, 179.

<sup>146</sup> Principe, *Secrets of Alchemy*, 32.

<sup>147</sup> Dorn, *PHT*, 405.

<sup>148</sup> Leah DeVun, *Prophecy, alchemy, and the end of time: John of Rupescissa in the late Middle Ages*, (New York: Columbia University Press, 2009), 4.

<sup>149</sup> DeVun, *Prophecy, alchemy*, 51.

alchemist's significance lies in two innovations. He would 'invent' the *quinta essentia* as an alchemical, alcohol-based medicine with preternatural powers. It protected the human body from diseases and aging through conferring its incorruptibility by adding a quality to balance the body. The *quinta essentia* is an immortal and immutable element that could not be made from terrestrial materials (the four elements) since these were corruptible.<sup>150</sup> Another innovation is Rupescissa's belief that there existed a vital, heavenly principle that could be extracted from metals, minerals and animal products. This *quinta essentia* was distilled through the spirit of wine.<sup>151</sup>

The innovations in medieval alchemy of Jean de Roquetaillade would be incorporated in Gerhard Dorn's work. The alchemist combined Christianity with naturalism in his search for the universal medicine. The *quinta essentia* would also play an important role in Dorn's alchemy. He would incorporate Rupescissa's alchemical medicines as having transcendent properties that resembled those of the celestial, perfect heaven, although they are made from terrestrial materials.

#### 4.2.3. Marsilio Ficino: Neoplatonism and the *Spiritus Mundi*

As one of the most important propagators of the early Renaissance, Marsilio Ficino contributed to the revival of Neoplatonism. His Platonic revival sought to unite wisdom and faith, revelation and philosophy in a search for a secret, perennial and esoteric wisdom, a *prisca theologia*.<sup>152</sup> Ficino also believed in the unity and universality of human aspiration to the highest good, which could be attained through philosophy and religion. He perceived them both as manifestations of spiritual life.<sup>153</sup>

Ficino's esoteric medicine proved influential for Dorn. Ficino views the spirit as both an image of the soul and as an aethereal body that links soul to body, and intellectual to the corporeal. Because of this link, the health of the spirit relates to the health of the body, which can be amended through different therapies. This idea was further imbedded in the idea that there was a demiurge, a World-Soul that animated the World-Spirit, which in turn, mediated between it and the World-Body. The human spirit was originally attuned to and even united with the World-Spirit. A healer therefore needed to understand the pneumatology in relation to both

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<sup>150</sup> DeVun, *Prophecy, alchemy*, 64-6.

<sup>151</sup> DeVun, *Prophecy, alchemy*, 3.

<sup>152</sup> Michael J.B. Allen, "Marsilio Ficino," in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 361-3.

<sup>153</sup> Petrarca, Francesco, et al., *The Renaissance Philosophy of Man : Petrarca, Valla, Ficino, Pico, Pomponazzi, Vives*, (Chicago (Ill.): University of Chicago press, 1948), 187.

the cosmos and the human being.<sup>154</sup> This idea is reflected in Dorn's conception of the *chymista physica*, who needed to comprehend the relation of the world of man to that of the stars.

#### 4.2.4. Dorn and Paracelsus: Translations and Influence

Paracelsus, or Theophrastus Bombastus von Hohenheim, is a pivotal figure in the further development of alchemy and, more importantly, in that of chymical medicine (iatrochemistry or chemiatra). Some believe him to be a drunk and charlatan, while others praise him for his ingenuity. Paracelsus made as many followers as he made enemies. His critique of the institutionalised medicine and Aristotelian physics was aimed at replacing it with his own system where alchemy, astrology and natural philosophy coalesced to create medicines.<sup>155</sup> Paracelsus' philosophy combines holozoic naturalism with the natural magic of the renaissance and German mysticism. There is thus a confluence of both medieval science and the gothic tradition as well as a revival of primitive superstition and the spirit of the renaissance.<sup>156</sup> He embodies the ambiguous position of alchemy, something between chemistry and mysticism. On the one hand, there is the transition to iatrochemistry, medical alchemy, but on the other hand, Paracelsus' reasoning of the workings of his chymical remedies still had a theological and mystical foundation.<sup>157</sup>

Paracelsus worked as an itinerant physician, which brought him to many places. He wandered from town to town and rarely left without stirring up trouble due to his rather iconoclastic and quick-tempered ways. The man was not afraid to provoke others, including lecturing in German rather than Latin and burning the medical manual of ibn-Sina to show his disagreement and contempt for the standard medical texts.<sup>158</sup> Paracelsus proved to be a rather colourful figure who would gain a following in the decades following his death.

As a reformer, he was sometimes mockingly referred to as the 'Luther of Medicine.' Paracelsus himself believed that he was witnessing a rebirth of knowledge. He conducted his labours with the conviction that he was contributing to a new epoch and an amelioration of humankind and the world.<sup>159</sup> He viewed his work as a religious quest, not only to better the fate of man through medicines, but also to understand the works of creation and to lead humankind to the path of reconciliation with their God.<sup>160</sup> His mission combined philosophy (medicinal and scientific)

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<sup>154</sup> Allen, "Marsilio Ficino," 364.

<sup>155</sup> Koyré, *Mystique, spirituels, alchimistes*, 75-6.

<sup>156</sup> Koyré, *Mystique, spirituels, alchimistes*, 80-1.

<sup>157</sup> Shumaker, *Occult Sciences*, 182.

<sup>158</sup> Principe, *Secrets of Alchemy*, 127.

<sup>159</sup> Webster, *Paracelsus*, 33.

<sup>160</sup> Debus, *Chemical Philosophy*, 124.

with theology (religious, ethical and political), they were mutually supportive and both necessary to succeed.

#### 4.2.4.1. *The Paracelsian System: Life and Nature*

Life and nature are two main themes in the works of Paracelsus. The universe was an “eternal stream of life,” and nature was a “living and magical force.”<sup>161</sup> Everything, all living creatures, originated from nature, they are the natural offspring of one and the same vital and magical force.<sup>162</sup> Paracelsus’ natural philosophy relied on the principle of the two books. This meant that through biblical exegesis on the one hand and through observing and experimenting on nature, on the other hand, one can understand God and the universe, because they are one and the same.<sup>163</sup> God was the one beginning from which everything followed: he was the source of the art of medicine, the virtues of the herbs, of all the wisdom which flowed directly from God; there was no need for an intermediary.<sup>164</sup> Man thus held the power to understand everything within themselves.

This essential unity is reflected in the relation of the macrocosm to the microcosm.<sup>165</sup> Man serves as the centre, the image and the representative of the world, a book which contains the marvellous secrets of the macrocosm.<sup>166</sup> The interrelation between the microcosm and the macrocosm is through astral emanation: every object possess an *astrum*, a virtue, which proved the knowledge of what it ought to do.<sup>167</sup> Human beings hold both a terrestrial part which is subject to the stars as well as a heavenly part which grants them the knowledge and all the powers of nature.<sup>168</sup> Paracelsus identified bonds of sympathy between the two states of being and through these bonds interaction of spirits was possible. The spirits could be benign, but they could also be demonic.<sup>169</sup>

#### 4.2.4.2. *Paracelsian Medicine*

The cosmology where everything was viewed in light of correspondences and analogies served as the foundation for Paracelsus’ conception of disease. He perceived the problems of diseases in a grander scheme, namely the universal contest between good and evil. Diseases then became

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<sup>161</sup> Koyré, *Mystique, spirituels, alchimistes*, 82.

<sup>162</sup> Koyré, *Mystique, spirituels, alchimistes*, 83-4.

<sup>163</sup> Debus, *Chemical Philosophy*, 69-70.

<sup>164</sup> Webster, *Paracelsus*, 130.

<sup>165</sup> Debus, *Chemical Philosophy*, 52.

<sup>166</sup> Koyré, *Mystique, spirituels, alchimistes*, 85.

<sup>167</sup> Walter Pagel, *Paracelsus, An Introduction to Philosophical Medicine In the Era of the Renaissance*, 2nd, rev. ed. (Basel: Karger, 1982), 50-1.

<sup>168</sup> Udo Benzenhöfer, “Paracelsus,” in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 923.

<sup>169</sup> Webster, *Paracelsus*, 142-3.

the result of astral or spiritual corruption, which caused a discord among the principles governing the human body. This loss of concord reflects the menaces that plagued nature, since the human body synthesised all the powers of the universe.<sup>170</sup> Furthermore, disease was viewed as essentially chymical in nature, and something that was local and directly related to bodily malfunctions.<sup>171</sup> Curing illnesses meant battling the root causes of the discord using derivatives. The role of the physician then became something akin to that of the true natural magician. He had to transfer “powers of a celestial field” into a small stone.<sup>172</sup> Paracelsian medicines relied on the correspondence of microcosm and macrocosm through drawing spiritual virtues from places in the greater world which bore a sympathy to the diseased part of the body.<sup>173</sup> Healing was a matter of restoring the virtue and not to counteract a humoral imbalance as traditional medicine prescribed.

The idea of pharmaceutical remedies was disputed and was not immediately accepted by the universities. Paracelsus was not the first to utilise chemical potions to cure illnesses, Jean de Rocquetaillade had already formulated the idea in the fourteenth century. The remedies of Paracelsus would sometimes consist of toxic ingredients, such as mercury, arsenic and antimony. Proper alchemical treatment of the poisonous substances would purge them from their toxicity and would turn them into “health-giving medicines.”<sup>174</sup> To convert the poisonous into the non-poisonous, physicians needed to possess the correct knowledge of the art of separation. The principle of *Scheidung* through different processes such as distillation, sublimation, putrefaction and solution was the key to create powerful medicines. Paracelsus coined the process of separation and reintegration *spagyria* (to separate and recombine). It is derived from the Greek *span* (to draw out) and *ageirein* (to bring together).<sup>175</sup>

The *ars spagyria* would be used to divide the natural constituents of all bodies, the *tria prima*. This is another innovation of Paracelsus. He would expand the Mercury-Sulphur theory by adding Salt. Paracelsus would illustrate the existence of *tria prima* by giving the example of burning a twig. The combustible part is sulfuric, the vaporous is the mercuric and the ashes (solid) is the saltine part.<sup>176</sup> All bodies were products of the three principles, so they could be reduced to the same three principles through the *ars spagyria*. They could reach a higher level of refinements through subjecting them to separation and then extraction of their pure, root

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<sup>170</sup> Webster, *Paracelsus*, 146-7.

<sup>171</sup> Debus, *Chemical Philosophy*, 66.

<sup>172</sup> Debus, *Chemical Philosophy*, 96.

<sup>173</sup> Moran, *Distilling Knowledge*, 77.

<sup>174</sup> Principe, *Secrets of Alchemy*, 130.

<sup>175</sup> Principe, *Secrets of Alchemy*, 130-1.

<sup>176</sup> Pagel, *Paracelsus*, 101.

form, which exhibits its ideal virtues.<sup>177</sup> The conception of three principles offered a Trinitarian perspective: the three chemical principles provided an earthly, material trinity (microcosm) that reflected the celestial, immaterial Trinity (macrocosm). Furthermore, the *tria prima* also reflected the trichotomous division of the bodies into the soul, the spirit and the body, offering a theological significance. The three principles thus make up a perfect body in both the macrocosm and the microcosm.<sup>178</sup>

#### 4.2.4.3. *Paracelsianism*

The Paracelsian system would prove influential in later decades, mainly because followers and commentators collected and edited his works to make it more accessible. Paracelsus' writing was very far from clear or orderly and that is why his immediate impact remained rather local and moderate.<sup>179</sup> This is also due to his choice to write in German, which further limited his public. It was mostly through translations and commentaries of his followers that his works would find their way to the general reader of the Renaissance.<sup>180</sup> Uncovering the real Paracelsus is a difficult enterprise and it is partly through the wealth of commentaries, both of adherents and critics, that Paracelsus could claim an important place in both the history of medicine and alchemy.

It is therefore difficult to construct a clear and complete picture of what Paracelsianism exactly entails. There is no conformity of opinion on the set of ideas that constitute Paracelsianism or the Paracelsian corpus.<sup>181</sup> It could be more fruitful to tackle Paracelsianism as a historical construct. Stephen Pumfrey articulates this approach in an article on the historiographical reconstruction of Paracelsianism. He focusses on how the label of Paracelsianism reflects the "fears and threats to moral order."<sup>182</sup> This historical categorisation relies on the designation of the category "Paracelsian" in the early modern period as denoting the otherness of the practice, which posed a threat to the intellectual order. Paracelsians tended to blur the boundaries between the natural and the supernatural as well as between humane and divine learning.<sup>183</sup> By approaching Paracelsianism as a construct, both in historiography as in the early modern period, it reveals the tensions in the religio-political order and can be used as a focal point to

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<sup>177</sup> Webster, *Paracelsus*, 149.

<sup>178</sup> Principe, *Secrets of Alchemy*, 128.

<sup>179</sup> Principe, *Secrets of Alchemy*, 129.

<sup>180</sup> Thorndike, *Magic and Experimental Science V*, 620.

<sup>181</sup> Bruce T. Moran, "Paracelsianism," in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 915.

<sup>182</sup> Stephen Pumfrey, "The Spagyral Art; or the Impossible Work of Separating Pure from Impure Paracelsianism: a Historiographical Analysis," in *Paracelsus: The Man, his Reputation, His Ideas and Their Transformation*, ed. Ole Peter Grell, (Leiden: E.J. Brill, 1998), 34.

<sup>183</sup> Pumfrey, "Spagyral Art," 31.

address questions and disputes about the proper relation between science and religion.<sup>184</sup> It shows certain concerns during the early modern period about what is proper learning and what is seen as legitimate knowledge. This in turn relates to the idea that there was a certain episteme that regulated production of knowledge, and that those who did not adhere to it, were seen as threats to the religious and political order. Paracelsianism presents itself as an ideology which was perceived as a dangerous innovation.

Regardless of the connotations, there were alchemists who adhered to what they considered to be the doctrines of their master, Paracelsus, and who contributed to the dissemination of his thought. Gerhard Dorn was one of the 'Paracelsians.' "Paracelsian" here denotes an adherence to the belief that there were vital forces penetrating the universe and that to practise medicine, one needed to understand the structure and operations of both the natural and celestial world to comprehend the vital functions of the body. Here, Paracelsianism stands for a subversive cosmology that recognises analogies and correspondences between the microcosm and the macrocosm and as a part of a large episteme of the occult.<sup>185</sup>

#### 4.2.4.4. *Dorn and Paracelsianism: translations and philosophy*

The alchemist's work as a translator of Paracelsus has been highly influential in the spread of his master's ideas. Dorn's dictionary would serve as a model to other alchemical dictionaries such as that of Martin Ruland (1569 – 1611) and William Johnson.<sup>186</sup> Dorn's translations were criticised by the German historian of medicine, Karl Sudhoff, though it didn't take away the influence of Dorn's work in his own time.<sup>187</sup> This influence is illustrated in the presence of Dorn's work in Lazarus Zetzner's *Theatrum Chemicum* (1602). A huge part of the first volume is taken up by Gerhard Dorn's works. Furthermore, Dorn's *Congeries paracelsicae chemiae de transmutationibus metallorum* (Compilation of the Paracelsian chemistry on the conversion of metals, Frankfurt, 1581) proved influential for seventeenth century alchemists because Dorn offered a model of alchemy that combined the medieval alchemy with Paracelsian alchemy.<sup>188</sup>

The alchemist did not always agree with some of his fellow Paracelsians. He engaged in polemics with Jean Gohory, Michael Toxites and Thomas Erastus. The controversy with Gohory started

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<sup>184</sup> Pumfrey, "Spagyric Art," 47-8.

<sup>185</sup> Moran, "Paracelsianism," 916.

<sup>186</sup> Greiner, "Gerhard Dorn," 320.

<sup>187</sup> Lynn Thorndike, *History of Magic and Experimental Science, Vol. V*, (New York: Columbia University Press, 1959), 630.

<sup>188</sup> Kahn, "Gerhard Dorn," 114.



with a critique of Gohory of Dorn's translations and his interpretation of the antimonial and mercurial remedies.<sup>189</sup>

Like most Paracelsians, Dorn proved hostile toward the traditional medicine and education. According to him it was "too pagan, literary and scholastic, nothing but dregs of the arts remained, clothed in ornate language"<sup>190</sup> Gerhard Dorn sought a reformation of education, akin to the reformation in religion. He argued for an education founded on more philosophical and more Christian ways of learning, instead of the contemporary education founded on scholastic Aristotelianism and classical humanism.<sup>191</sup> His attraction to Paracelsus stemmed from both Paracelsus' call for reform, as well the latter's attempt to "build a cosmic philosophy from an amalgamation of hermetic Neoplatonism and chemistry."<sup>192</sup>

Gerhard Dorn picked up on other themes ascribed to Paracelsus. The *Monarchia Physica* (1577) would expand on sidereal mathematics. He examines the power of mystical numerical analyses through investigating creation and generation associated with geometrical figures (also coined sidereal mathematics). He reconciles the correspondence between the triune nature of divinity with the universe and with Paracelsian principles of medicine.<sup>193</sup> Paracelsus understood alchemy as a key to understand the cosmos.<sup>194</sup> He recognised that the principle of all generation was separation and this process of *spagyria* would be given a theological overtone by some commentators.<sup>195</sup> Gerhard Dorn was one of them and he wrote an account of the first six day of Creation.<sup>196</sup> God acted as an alchemist who had initiated the process of separation by the creation of the world.<sup>197</sup> The *ars spagyria* became a divine operation and the alchemist acted in a God-like capacity to ameliorate the natural world. The alchemical process was also a purifying process and could be read as the restoration of humankind to the wholesome, pristine state as God had created men in the beginning. Alchemy also held a redemptive operation.<sup>198</sup> This theme features in Dorn *Artificio Supernaturali*, and will be explored later.

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<sup>189</sup> Partington, *A History of Chemistry*, 162.

<sup>190</sup> Partington, *A History of Chemistry*, 159.

<sup>191</sup> Thorndike, *History of Magic and Experimental Science V*, 631.

<sup>192</sup> Gillispie, *Dictionary of Scientific Biography*, 170

<sup>193</sup> Debus, *Chemical Philosophy*, 74.

<sup>194</sup> Debus, *Chemical Philosophy*, 76.

<sup>195</sup> Principe, *Secrets of Alchemy*, 129.

<sup>196</sup> This exposition, "Physica Genesis," features in the first part of Gerhard Dorn's *Liber de Naturae Luce Physica*.

<sup>197</sup> Debus, *Chemical Philosophy*, 77-8.

<sup>198</sup> Principe, *Secrets of Alchemy*, 129.

#### 4.2.5. The Theosophical Undercurrent: Johannes Trithemius and John Dee

Aside from Paracelsus, Dorn's work relied heavily on the magical theology and spirituality of Johannes Trithemius (1462 – 1516). The abbot Trithemius attempted to recapture the religious origins of magic and harmonise them with a Christian dogma, 'theologia magica Christiana.'<sup>199</sup> This resonates in Dorn's alchemy which is rooted in a mystical-theosophical view, while also remaining closely connected to the practice. The combination of alchemy as both a practice and a way of understanding God through his work in nature would be further expanded by the theosophical alchemists Heinrich Khunrath (1560 – 1605) and Jakob Böhme (1575 – 1624).<sup>200</sup>

##### 4.2.5.1. Johannes Trithemius: life and work

Trithemius was a Benedictine abbot, both in Sponheim (1483 - 1505) and Würzburg (1506 - 1516). His writings cover the fields of ecclesiastical history and monastic instruction to Christian humanism, demonology, mystical theology and magic.<sup>201</sup> The abbot conceived a magical theology, where he attempted to harmonise magic with the Christian faith, thus searching for a theological rationale for magic.<sup>202</sup> The essential part of magic is the process where unity is restored from the diversity: "one must reject the binary to convert the ternary into the unitary."<sup>203</sup> In light of this, Trithemius perceived the idea of alchemy of the *Tabula Smaragdina* as a kind of magic where transmutation of the elements is a reduction to purity and unity through fire.<sup>204</sup> The precepts of the Emerald Tablet are reiterated by Trithemius to support his philosophy and that "the ternary must be completely reduced to unity, for though unity is not a number, every number arises out of it."<sup>205</sup> The *tabula* serves as an alternative form of expression for Trithemius, be it an alchemical one. The abbot further elaborates on the alchemical basis of his own magical theory.

Looking specifically at Trithemius' conception of alchemy, which is expressed in the idea of a true alchemy (as opposed to imposters who wander from the true cause), where metallic

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<sup>199</sup> Noel L. Brann, *Trithemius and Magical Theology: a Chapter in the Controversy over Occult Studies in Early Modern Europe*, (New York: State University Press, 1999), 2-3.

<sup>200</sup> Kahn, "Gerhard Dorn," 113.

<sup>201</sup> Noel L. Brann, "Trithemius, Johannes," *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 1135.

<sup>202</sup> Brann, *Trithemius and magical theology*, 2-3.

<sup>203</sup> "Reiicitatur binaries & ternarius ad unitatem convertibilis erit." Johannes Trithemius, *Epistolarum familiarium libri duo ad diuersos Germaniae principes, episcopos, ac eruditione praestantes uiros, quorum catalogus subiectus est*, 1536, 90.

<sup>204</sup> Nicholas H. Clulee, "John Dee & the Paracelsians," in *Reading the Book of Nature: the other side of the scientific revolution*, eds. Allen G. Debus and Walton, Micheal T., (Kirkville: Sixteenth Century Journal Publishers, 1998), 125.

<sup>205</sup> Brann, *Trithemius and magical theology*, 125.

transmutation serves as a metaphor for the purifying of the soul of the alchemist.<sup>206</sup> This is especially telling for Trithemius, where material concerns are subordinated to spiritual ones. An alchemist needed a pure and clean soul to receive the divine knowledge. His occult theory “geared to direct the soul of the magus from the worldly finite to the divinely infinite realms.”<sup>207</sup> Johannes Trithemius develops a conception of alchemy based on the idea of spiritual ascent, where each purgative step will lead to divine illumination. The alchemist is thus an *alchymicus Christianus*, who is granted the knowledge of nature and of divine things, through divine love and Christian faith.<sup>208</sup>

#### 4.2.5.2. *Trithemian Notions in the Philosophy of Dorn*

“This philosophy of ours is heavenly, not earthly, for it is that highest principle which we call God.”<sup>209</sup> The idea of divine illumination is reprised by Dorn in his *De naturae luce physica* (1583) where he presents an exposition on the “Spagyric Art of Johannes Trithemius,” He too adhered to Trithemius’ belief in a strict esoteric secrecy.<sup>210</sup> Dorn noted that in order to grasp the knowledge of all the arcana, both the natural and the supernatural, one needed to have a pure spirit. The idea of a spiritual, purgative journey, an ascent to illumination is also explored in Dorn’s work, it entails the entire second part of Dorn’s *Clavis totius philosophiae chymisticae* (1567).

Gerhard Dorn’s *Clavis totius philosophiae chymisticae* offers more than just a manual, it’s an entire set of alchemical philosophy.<sup>211</sup> The work is comprised out of two parts. The first part, divided into three books, is concerned with the theoretical, the practical and the medical angle of alchemy.<sup>212</sup> In the theoretical part, Dorn brings together the doctrine of the four elements (air, fire, water, earth), and the *quinta essentia* with the three principles of Paracelsus (mercury, sulphur and salt). Transmutation ought to be perceived as a metaphor, and not as something that can be achieved in the material world. He also includes an exposition on Aristotelian hylomorphism, focussing on the concepts such as form and matter. Diverse sources are used, such as Pantheus’ conception of two elements, fire and water, that carry the other two. He also adheres to the corpuscularianism of pseudo-Geber, which assigns weights to specific metals. In

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<sup>206</sup> Brann, *Trithemius and magical theology*, 181.

<sup>207</sup> Brann, “Trithemius, Johannes,” 1137.

<sup>208</sup> Brann, *Trithemius and magical theology*, 127-8.

<sup>209</sup> “Haec nostra philosophia coelestis est, non terrena, ut summum illud principium quod Deum nuncupamus,” Dorn, *PT*, 445.

<sup>210</sup> Brann, *Trithemius and magical theology*, 183.

<sup>211</sup> Gerhard Dorn, *Clavis totius philosophiae chymisticae*, (Lyon: Giunta Iacopo, 1567).

<sup>212</sup> Kahn, *Alchimie et Paracelsisme*, 144.

his practical alchemy, Dorn offers a treatise on the different vases and furnaces used by the alchemist. The medical angle of alchemy offers different recipes for Paracelsian medicines.<sup>213</sup>

The second part is concerned with the seven grades of the speculative philosophy. Here, Dorn provides a guideline for the aspiring alchemist on how to take care of himself, both physically and spiritually. His alchemical philosophy is accompanied by a philosophy of morals: an alchemist ought to live a virtuous life to be granted the divine wisdom.<sup>214</sup> The seven grades serve as a means to be granted access to the sublimity of the mind. These seven grades were adopted from Trithemius who conceived them as the only way to gain a perfect realisation of magic and the intelligence and understanding of both physical and metaphysical things, which exist in the science of divine and natural characteristics.<sup>215</sup> Furthermore Dorn would derive the Trithemian idea of the return to the one through the reduction of the ternary through a rejection of the binary.<sup>216</sup> This notion is also one of the key themes in Dorn's *Artificio Supernaturali*.

#### 4.2.5.3. John Dee

Trithemius wasn't just a source of inspiration for Dorn, but the figure of John Dee also recaptured elements of Trithemius' magical theology in his works. Gerhard Dorn stated that he had an affinity with Dee. A rather interesting show of this affinity is the incorporation of John Dee's hieroglyphic monad, a mystical-magical sign, on Dorn's title page of his *Chymisticum Artificium Naturae* (1568).

John Dee (1527 – 1609) is one of the most known representatives of the occult philosophy of the Late-Renaissance period. He combined an interest in mathematics with mystical-occult concerns, while also being an astrologer at the court of Queen Elisabeth I, a humanist, an antiquarian, and a geographer. Dee travelled the continent, visiting, working and studying in places such as Louvain, Paris, Prague...<sup>217</sup> Acquiring perfect knowledge was John Dee's principal goal, and he wrote treatises on various subjects.<sup>218</sup> One of these treatises was the *Monas Hieroglyphica* (1564) which offered an exposition on a Dee's hieroglyphic monad. The sign is the product of Dee's imagination and consists of two simple geometrical elements, circles and lines. On top, we find a circle with a point in its centre, with a crescent shaped moon lying horizontally

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<sup>213</sup> Kahn, *Alchimie et Paracelsisme*, 144.

<sup>214</sup> Didier Kahn, *Alchimie et Paracelsisme*, 145.

<sup>215</sup> Kahn, *Alchimie et Paracelsisme*, 146.

<sup>216</sup> Maquet, "Alchimie et philosophie," 215.

<sup>217</sup> György E. Szonyi, "Dee, John," *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 301.

<sup>218</sup> Szonyi, "Dee, John," 304.

crossing the top of the circle. In a right angle under it two straight lines cross each other, and at the bottom there are two touching semi circles (figure 3).

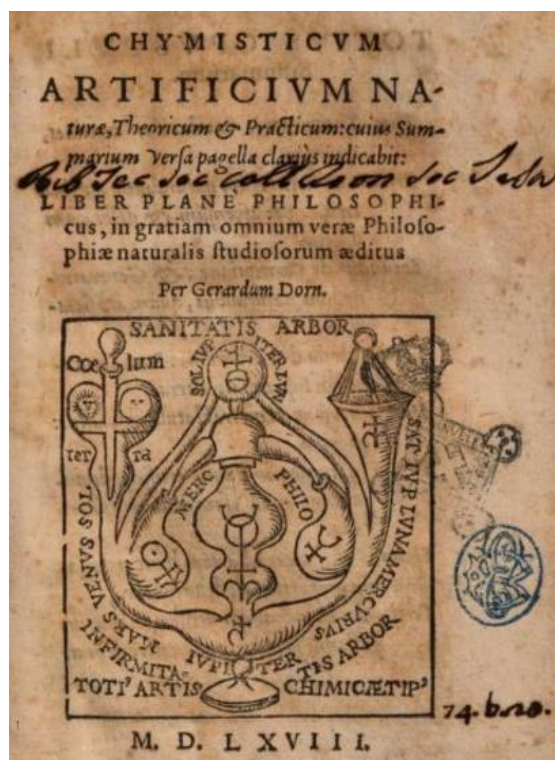


Figure 2 Front page Dorn's *Chymisticum*

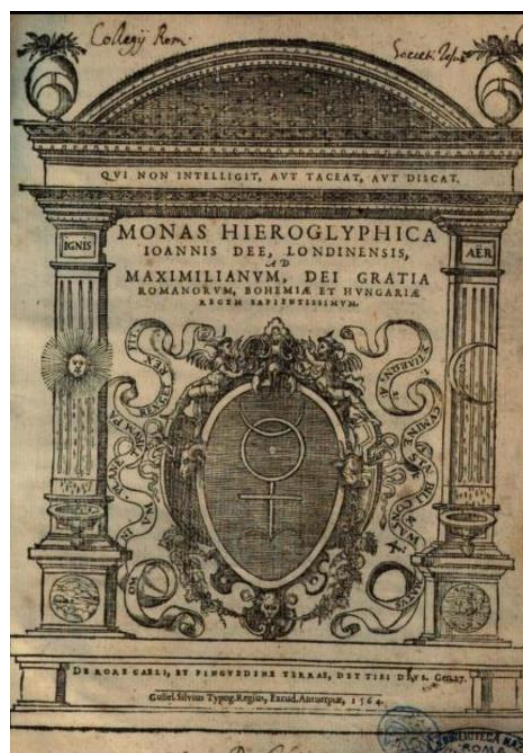


Figure 3 Front page Dee's *Monas*

Dee's goal when constructing the monad was to provide the beholder with one sign to understand the created universe, the monad thus represents the natural and supernatural correspondences of the cosmos.<sup>219</sup> The circular components refer to the heavens (the sun, the moon) and the lines relate to the earth. The interdependence of the terrestrial and the celestial is one of the two themes derived from the Emerald Tablet (that which is below is as that which is above). Another theme is the *una res*, the monadic character of the Philosopher's Stone of which all things are created. The belief that everything is created from the unitary word of God resonates in this representation.<sup>220</sup> It also alludes to the *magus* himself who, through studying the work, has the potential to "recreate the lost unity of existence."<sup>221</sup> This is a reprisal of the idea of esoteric knowledge, it is only through mastering the language that the adept can grasp the secrets of the cosmos.

<sup>219</sup> Szonyi, "Dee, John," 305. For a more complete account of the hieroglyphic monad, see Nicholas H. Clulee, "John Dee and the Paracelsians," in *Reading the Book of Nature: the other side of the scientific revolution*, eds. Allen G. Debus and Walton, Michael T., (Kirkville: Sixteenth Century Journal Publishers, 1998), 121-7.

<sup>220</sup> Clulee, "Dee and the Paracelsians," 121.

<sup>221</sup> Szonyi, "Dee, John," 305.

Neither Dee's name nor the *Monas Hieroglyphica* are mentioned by Dorn, so it might be possible that the only thing which captured the attention of the alchemist was the new symbol. Nicholas Clulee, however, believes that there might be more to it than just the intrigue of the symbol. Looking at how Dorn incorporates the ancient wisdom of the *Tabula Smaragdina* in his chemical philosophy, Clulee argues that Dee's monad might confirm Dorn's foundations. Both draw from the Trithemian notion of reducing multiplicity to unity. The abbot added a crucial component to alchemical thought through interpreting the Emerald Tablet as a cosmic process instead of just viewing it as a veiled recipe. The idea that the hieroglyphic monad of Dee captures the restoration to the oneness and the Trithemian theory of alchemical magic, might have appealed to Dorn.<sup>222</sup> Peter Forshaw also shows the connection between the *Monas* and Dorn by illustrating the alchemist's use of another figure from Dee's *Monas*.<sup>223</sup>

The appearance of figures from Dee's *Monas Hieroglyphica* may be nothing but a logical step for Dorn, but could also have a deeper connection. As Dorn himself indicated, he felt an affinity for John Dee. It might be possible that Dorn was drawn to the symbols John Dee conceived because they supported his own chemical philosophy. The alchemist may not have captured the entire meaning of the *Monas*, since it was rich and multifaceted, also incorporating cabala, but Dorn did understand the relation to the smaragdine/Trithemian alchemical cosmology.<sup>224</sup>

### 4.3. *Theatrum Chemicum*

The *Theatrum Chemicum* is a compilation of alchemical texts which was first printed in 1602 by Lazarus Zetzner (1551 – 1616). Zetzner was an editor and printer active in Strasbourg, from 1582 until his death in 1616. His editions included works on alchemy and medicine as well as texts from humanists and classical authors, editions on history, law and philosophy, often collaborating with the university in Strasbourg. The editor was also an adherent to Raymond Lull (1232 – 1316), a medieval alchemist and supported Paracelsianism.<sup>225</sup>

The publication of the *Theatrum Chemicum* was in line with Zetzner's promotion of alchemy and Paracelsianism. He acquired the rights for publishing the collection from the printer Konrad Waldkirch who had taken over from Peter Perna as a publisher. Perna had planned on a multivolume compilation of alchemical texts as a predecessor of the earlier printed compendia *Verae alchemiae artisque metallicae, citra aenigmata, doctrina*. The printing of compilations was

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<sup>222</sup> Clulee, "Dee and the Paracelsians," 127-9.

<sup>223</sup> Peter Forshaw, "The Early Alchemical Reception of the *Monas Hieroglyphica*," *Ambix*, 52 (2005), 249-51.

<sup>224</sup> Clulee, "Dee and the Paracelsians," 127-31.

<sup>225</sup> Kahn, *Alchimie et Paracelsisme*, 112-4. For a more detailed account on Lazarus Zetzner's life and activities, see Rita Sturlese, "Lazar Zetzner 'Bibliopola Argentensis'. Alchimie und Lullismus in Strasburg," *Sudhoffs Archive* 75 (1991), 140-62.

limited. The earliest compendium was *de Alchemia*, which first appeared in Venice in 1475. It had several later editions, sometimes with varying contents. The linear ancestor of the *Theatrum Chemicum* was a compendium also entitled *de Alchemia*, and was printed by Johannes Petreius in Nuremberg in 1541.<sup>226</sup>

The first edition of the *Theatrum Chemicum* from Zetzner was printed in three volumes in Oberursel in 1602. It bore a dedication to Frederic of Wurtemberg, the count of Montbeliard. The eighty texts featured in the different volumes were from various alchemists, such as Gerhard Dorn, George Ripley (c. 1415 – 1490), John Dee, Roger Bacon (c. 1219/20 – c. 1292), Albertus Magnus (c. 1200 – 1280)... It thus entailed a combination of both medieval alchemists and early modern alchemists. A second edition was printed in 1613, with fifty-four new text added and an additional volume. Zetzner's heirs would publish a fifth volume, which was edited by Isaac Habrecht in 1622. In 1659-1660 the final and definitive edition of the *Theatrum Chemicum* was printed by Eberhard Zetzner. The final version consisted of more than two hundred treatises encompassing six volumes. It was the largest compendium ever printed.

The title of *Theatrum* was in vogue during that period, most likely due to the influence of the metaphor of the *Theatrum mundi*. The metaphor was already used in relation to alchemy by Trithemius, Des Périers and Heinrich Khunrath. It also influenced later compilations of alchemical texts, as the *Theatrum chemicum Britannicum*, edited by Elias Ashmole.<sup>227</sup> The compilation itself became the basis for Isaac Newton's experimentation with alchemy. The *Theatrum chemicum* was one of his possessions with the most correction, annotations and references.<sup>228</sup>

The dedication of the first edition of the *Theatrum chemicum* to Frederic I (1557 – 1608) presents him as a protector of not just the arts and letters, but also of the chemical arts. The duke of Wurtemberg was one of the German princes who was a patron of alchemy, possessing a rich library that included works of the abbot Trithemius. He would also invite several notable alchemists to his court such as Michael Sendivogius (1566 – 1636), a Paracelsian and physician and Johann Andreae (1554 – 1601), the father of a Johann Valentin Andreae (1586 – 1654), who proved to be an important alchemist.<sup>229</sup>

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<sup>226</sup> "Theatrum Chemicum electronicum: A short introduction," *Digital Library of Wielkopolska*, url: < <http://www.wbc.poznan.pl/Content/11637/tc-intro.html> >, consulted on 12.03.2017.

<sup>227</sup> Kahn, *Alchimie et Paracelsisme*, 115-6.

<sup>228</sup> "Theatrum Chemicum electronicum: A short introduction," *Digital Library of Wielkopolska*, url: < <http://www.wbc.poznan.pl/Content/11637/tc-intro.html> >, consulted on 12.03.2017.

<sup>229</sup> Kahn, *Alchimie et Paracelsisme*, 116-7.

Zetzner's dedication presents the reason for assembling different alchemical texts. He describes the contents as a collection of the work of "the grand men of our times as of the past centuries."<sup>230</sup> Lazarus Zetzner's aim with the *Theatrum Chemicum* was to "classify and arrange the texts in one corpus, almost like a theatre."<sup>231</sup> Furthermore Zetzner hopes that his work could serve as a manual for the study of alchemy, through collecting various texts of several authors and authorities of alchemy. Through comparison and elimination, a true doctrine of alchemy can be found and studied.<sup>232</sup>

Several texts of Gerhard Dorn's oeuvre are contained in the first volume of the *Theatrum Chemicum*. Both his *Clavis totius philosophiae chemisticae* and his *Liber de naturae luce physica* are incorporated as well as a treatise on Paracelsian chemistry of mineral transmutation. Together they cover about four hundred pages of the seven hundred. This denotes the importance of Dorn's work. He was considered as an important contributor to the study of alchemy and his texts were deemed worthy to be included in a compilation that wanted to show the veracity of alchemical operations and the Philosopher's Stone.<sup>233</sup> The *Theatrum Chemicum* also includes the *Artificio Supernaturali*. The exposition comes after the *Clavis* and before the *Naturae luce physica*. It covers fifty-six pages, starting at page three hundred and eleven and continues until page three hundred and sixty-six.

As I mentioned in the introduction, I am using the digital reproduction of the *Theatrum Chemicum*. The original is held by the Foundations of the Works of Carl Gustav Jung. The foundation preserves the private collection of Jung and makes them accessible for scientific research. Jung was a collector of alchemical manuscripts and prints; his collection consists of more than two hundred books on alchemy and its adjacent fields such as magic, Kabbalah and mysticism.<sup>234</sup> The study of these treatises has resulted in various books by Jung on the subject. His hunt for rare alchemical books brought him to the antique bookseller, Alfred Ziegler in Zürich where he acquired the *Theatrum Chemicum* somewhere between January and March 1936.<sup>235</sup>

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<sup>230</sup> Kahn, *Alchimie et Paracelsisme*, 117.

<sup>231</sup> Kahn, *Alchimie et Paracelsisme*, 117.

<sup>232</sup> Kahn, *Alchimie et Paracelsisme*, 117.

<sup>233</sup> Kahn, *Alchimie et Paracelsisme*, 117.

<sup>234</sup> Thomas Fisher, "The alchemical rare book collection of C.G. Jung," *International Journal of Jungian Studies*, 3 (2011), 170-1.

<sup>235</sup> Fisher, "Alchemical rare book collection," 172.



## 5. Theo-cosmological Myth in Gerhard Dorn's Alchemical Philosophy.

The theological framework of Gerhard Dorn is an indispensable aspect of his alchemical philosophy, since the alchemist viewed his art as a reprise of Creation. Before looking specifically at the integration of a chemical interpretation of Genesis in *De Artificio*, this chapter will offer a brief overview of the relation between Christianity and natural philosophy. One tool by which scholars organize the study of theological accounts of human nature is the concept of 'theological anthropology'. This relatively new theoretical construct focuses on Christian self-understanding as a human being. It privileges the way in which master narratives of original sin, the meaning of moral evil and bodily misfortune, the meaning and influence of divine grace, the relation between redemption and the body, organise such self-understandings.<sup>236</sup> This theological anthropology in turn serves as a background to interpret questions concerning human nature, epistemological foundations, and to frame Paracelsus' search for a Christian reading of the book of nature. Finally, we will turn to Dorn's own account of Genesis and the Fall of Man, his notion of the foundations of knowledge, and his conception of the cosmos and how it interrelates with his alchemical art.

### 5.1. Foundations of Knowledge

The introduction already pointed to the compatibility of natural philosophy and theology in the early modern period. The two disciplines were mutually inclusive and necessary to come to a proper understanding of the world and God. This notion was further expanded by Paracelsians into the 'two book principle', where nature served as a second revelatory book. A study of the book of divine revelation (Bible) and the book of divine creation (nature) was the key to physical and spiritual knowledge.<sup>237</sup> Key events in sacred history had an impact on the understanding of the world. Particular significance was given to the impact of the Fall (and the original sin) on man's intellectual abilities and the loss of the pristine knowledge of Adam. The belief in the existence of an Adamic knowledge, a pristine philosophy that was given to Adam, led to the perception that human minds had originally been designed to know the truth. With the passing of time, this knowledge has been lost.<sup>238</sup>

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<sup>236</sup> Lluís Oviedo, "Theological Anthropology," in *Encyclopaedia of Science and Religion*, eds.: Anne L.C. Runehov, Oviedo, Lluís and Azari, Nina P., (New York: Springer, 2013), 2244.

<sup>237</sup> Debus, *Chemical Philosophy*, 67.

<sup>238</sup> Peter Harrison, *The Fall of Man and the Foundations of Science* (Cambridge: Cambridge University Press, 2007), 3-4.

Paracelsians sought to uncover a pristine, Adamic knowledge, which they believed lay hidden in the wisdom of the Old Testament and the Emerald Tablet.<sup>239</sup> For Paracelsus himself, Genesis was the source from which knowledge of chemical processes and a theory of matter were best derived. He identified a great chain of knowledge that passed from Adam to Abraham and from there to the Egyptians, who gave it to Moses and then to Hermes Trismegistus. Despite the efforts to preserve this pristine wisdom, it became corrupted through the ages, which is why Paracelsus called for a reform: he wanted to purge the knowledge from errors and corruption and restore it to its original state. The truth could be found in the doctrine of Moses, which led to a proper study of nature and a correct reading of Genesis.<sup>240</sup> Paracelsians were by no means the only philosophers to return to the original revelation of the first book of Moses.

## 5.2. Gerhard Dorn's Account of *Genesis*

Paracelsians had a magical and chemical understanding of nature, founded on a pious and Christian natural philosophy. Gerhard Dorn too would interweave Genesis with Paracelsian texts and create a chemical theology of creation in his Paracelsian Hexameron. This lengthy commentary on the first six days of Creation is offered in *Liber de naturae luce physica, ex Genesisii desumta* (1583). The treatise was based on the *Corpus Hermeticum* and the pseudo-Paracelsian *Philosophia ad Athenienses* (1564). The general outline of the Genesis creation narrative is well known. God created the firmament by dividing the heavens from the elements. In the subsequent days, the earth was dried, thus dividing land from sea. Seeds were also created to become plants. Time and stars were also brought into the world. Then came the animals, starting with those from the sea and next the animals of the earth emerged.<sup>241</sup> This was the inception of the visible world, and chemistry was the principle through which the physical world could be understood.<sup>242</sup> Our alchemist distinguished between two creations: the creation of the intelligible world during the first day, and the creation of the visible or physical world during the other five. The intelligible world was created through the operation of light. Dorn harmonised the doctrines of Paracelsus with the holy writ and proved that they are compatible. This also placed Paracelsianism within the hexaemic tradition, casting it in a theological form.<sup>243</sup>

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<sup>239</sup> Debus, *Chemical Philosophy*, 67.

<sup>240</sup> Walton, *Genesis and the Chemical Philosophy*, 52-4.

<sup>241</sup> Dorn, *PG*, 373-4.

<sup>242</sup> Walton, *Genesis*, 64.

<sup>243</sup> Walton, *Genesis*, 65.

### 5.2.1. *Mysterium Magnum*

According to Dorn, Paracelsian philosophy was founded on the holy writ. The narrative from God was transferred through Moses and served as the physical foundations of the creation of the world.<sup>244</sup> The Genesis narrative confirmed the Paracelsian idea that the first principle of creation was the *Mysterium Magnum*.<sup>245</sup> What was this *Mysterium Magnum*? According to Dorn's Paracelsian dictionary, the *Mysterium* is "the prime matter of all things, the beginning and mother of all corruptible creatures of God."<sup>246</sup> Prime matter was said to be the first matter, the original, pure substance from which the universe was created.<sup>247</sup> All the created things in the visible, corporeal world were created from the *Mysterium Magnum*. It serves as the common matter of all things, and functions as the ultimate substratum for the compounds in the corporeal world.<sup>248</sup> Being completely void of colour and elementary nature, no single essence or prefigured idea could comprehend the *mysterium*, nor could it be identified with any single property thereof. The scope of this *Mysterium Magnum* is as large as the firmament. It is the mother of all perishable things.<sup>249</sup>

Dorn drew this conceptualisation from the *three books of philosophy written to the Athenians*, which also provides an account on the creation. His description of prime matter follows the common conception in natural philosophy of his time. The *prima materia* has no determinate qualities, but holds the potential to have such qualities. It is posited as that which persists through a change, it is something that the original and the later have in common.<sup>250</sup> The existence of prime matter is a prerequisite for change to occur. The essence of the *prima materia* consists in its being *in potential*. It holds the potentiality, the possibility, to become anything and everything during the process of creation.<sup>251</sup>

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<sup>244</sup> "Paracelsus autem ex narratione Geneseos ab Deo per Moysen tradite fidelibus," Dorn, *PG*, 380.

<sup>245</sup> Dorn, *PG*, 380-1.

<sup>246</sup> "Mysterium magnum est omnium rerum materia prima, principium & mater cunctarum corruptibilium creatorum Dei." Dorn, *DTP*, 69.

<sup>247</sup> Abraham, *Dictionary*, 153.

<sup>248</sup> Jeffrey E. Brower, *Aquinas' Ontology of the Material World. Change, Hylomorphism and Material Objects*, (Oxford: Oxford University Press, 2014), 14.

<sup>249</sup> Dorn, *PG*, 379-80.

<sup>250</sup> "Prima Materia," *Oxford Dictionary of Philosophy*, ed. Simon Blackburn, (Oxford: Oxford University Press, 2016), via Oxford Reference Online: <  
<http://www.oxfordreference.com/view/10.1093/acref/9780198735304.001.0001/acref-9780198735304-e-1960?rkey=oPZzJy&result=1>>, consulted on 6.05.2017.

<sup>251</sup> Dennis Des Chenes, *Physiologia. Natural Philosophy in Late Aristotelian and Cartesian Thought*, (Ithaca: Cornell University Press, 1996), 84-5.

The *three books* further stated that the *Mysterium Magnum* is uncreated, and that it was prepared by the great Artificer. This is a peculiar statement, and Dorn will not omit to pick up on it. After citing from the *Three Books*, he offers the following commentary:

“it is from this ‘increated’ *Mysterium Magnum* that God has created heaven and earth. Indeed, Moses does not say that the principle of creation was itself created. Instead, he asserted that *in it* all of creation was done [my italics].”<sup>252</sup>

What should then be made of the role of the *Mysterium Magnum* in Dorn’s theo-cosmological myth? For Paracelsus, creation was a formative movement that began with God’s unity and which continued in the “cosmic natural multiplicity.”<sup>253</sup> Here, Dorn follows the Pythagorean tradition and Paracelsus in believing that, in the absolute beginning, there was a *singularitas absoluta*, a single one, under or above number and multiplicity.<sup>254</sup> But, the author states, nothing can generate something in and by itself; this requires another being, which has come from itself.<sup>255</sup> If Adam and Eve serve as an example of this truth, then the same must be true for the One, for God, who can only create through another One, brought forth from himself.<sup>256</sup> From the undefined, infinite one, which is God, there flows a defined one that reflects the divine centre. It is precisely this that is called the *Mysterium Magnum*, in its capacity of the *unum* or the *matrix*, recalling the abyss or Chaos of the book of Genesis.<sup>257</sup> The *Mysterium Magnum* becomes something akin to the mother of all things, it is the one which has created the *prima materia* and all other things during the process of creation.

According to Dorn’s Hexameron, creation literally proceeded from divine speech or the word of God. The first day was marked by the creation of heaven (*caelum*) and earth (*terra*). The void and empty earth referred to the prime matter from which the elements arose, as well as to the fluids that are the source of all the creatures. The author would also draw from Moses’ words to support the existence of a prime matter: “darkness on the face of the deep.”<sup>258</sup>

Moses concludes, writes Dorn, that the prime matter, heaven, earth and the complete abyss are water. The spirit of God hovered over the prime matter, the deep and the water, which were originally one before they were separated. After this division, light pierced the darkness and God illuminated the emptiness and the void (*fiat lux*).<sup>259</sup> Creation, therefore, cannot be

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<sup>252</sup> “In mysterio magno increato creavit Deus caelum & terram. Non dicit etiam Moyses creationis principium fuisse creatum, sed in eo creationem omnem factam esse asserit.” Dorn, *PG*, 380-381.

<sup>253</sup> Walton, *Genesis*, 55.

<sup>254</sup> Maquet, “Philosophie et alchimie chez Gerhard Dorn,” 215.

<sup>255</sup> “nihil enim in seipso generare potest, sed in alio tantum quod ex se ipso fuerit,” Dorn, *NL*, 389.

<sup>256</sup> Maquet, “Alchimie et philosophie,” 215.

<sup>257</sup> Maquet, “Alchimie et philosophie,” 216.

<sup>258</sup> Walton, *Genesis*, 64.

<sup>259</sup> Dorn, *PG*, 385.

understood differently than the division of the waters from the waters, the higher from the lower, the heaven from the earth, the male from the female.<sup>260</sup>

The biblical account of creation thus bridges the gap between theology and natural thought, lending itself to an alchemical interpretation due to its ambiguous use of the concepts of Chaos and the abyss as well as the notion of separation in order to create heaven and earth.<sup>261</sup>

### 5.2.2. Chaos and the Separation

Once the intelligible world was created, everything was confused and mixed. The prime matter was formless and shapeless, it held no actuality. Dorn likened this situation to the Chaos, which needed to be separated so that the world could be put in order. God divided the heavens from the elements/earth, as recorded in *Genesis*.<sup>262</sup> This was at the same time the creation of the first binary (*unum et unum*). Unlike the relation between God and the *Mysterium Magnum*, where the *Mysterium* is a reflection of the divine centre, heaven and earth relate to one another as opposites, like man and woman, form and matter, *spiritus* and *corpus*, mover and moved. But because water and earth are both an *unum* they are also a fixed idea, a fire or sulphur. The fire or sulphur refers to an abstract principle, it is the essential form of the matter. The celestial sulphur is in the correct place, and thus it is positive, life-giving and form-shaping, whereas the earthly sulphur is exiled and can be destructive and corrupting. Yet, there is still a possibility of making the earthly fire receptive to the superior, higher fire.<sup>263</sup> To fully understand this connection, there is a need for a third element, between heaven and earth. After the separation of Chaos, there remained a memory of what was before the separation, when everything was together in Chaos.<sup>264</sup> This memory of their shared origins also serves as a ternary to facilitate the return to their unity, as they were before Chaos was separated.<sup>265</sup>

The existence of this residue of Chaos is a precondition for generation: the memory of the place where everything was together, and hence of original unity, functions as a primary shackle or *vinculum* for creation. This love relationship is founded on a longing for being together again that facilitates generation.<sup>266</sup> The *tertium* is often referred to as mercury, which ensures the

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<sup>260</sup> Dorn, *PG*, 386.

<sup>261</sup> Walton, *Genesis*, 3.

<sup>262</sup> The separation of the heaven and the elements takes place before the naming of the earth as 'earth.' The naming of earth occurs on the third day, when the second member of the visible world is created. Dorn, *NL*, 390: "hoc die qui dicitur tertius, creatum fuit secundum membrum mundi visibilis, scilicet elementum, sub aridae quae antea terra dicitur."

<sup>263</sup> Maquet, "Alchimie et philosophie," 216.

<sup>264</sup> Dorn, *AS*, 312.

<sup>265</sup> Maquet, "Alchimie et philosophie," 216.

<sup>266</sup> Dorn, *AS*, 312-3.

reunion of the opposites. It is something akin to the *spiritus* that connects the soul and the body, or the way the alchemist conjoins form and matter.<sup>267</sup>

### 5.2.3. Return to the Unitary

The chemical reading of Genesis provides the foundations of Dorn's quest to return to the *singularitas absoluta*. Alchemical separation acts as a vehicle to lead all things created from the *Mysterium Magnum* back to their pristine nature and condition. The return to the one is facilitated by the memory of that which was before the separation. Whereas the *Mysterium* acted as the mother of all created things, all things created cannot return to it.<sup>268</sup> Dorn thus believed that through the alchemical arts he could bring everything back to the undefined, infinite One, namely God. The Trithemian idea of returning to the unitary by converting the binary into a ternary, serves as a guideline to reprising the biblical account of creation. Initially, during Creation, the danger of the binary is overcome through introducing a spirit, a mercury, which acts as a *tertium* which unites the opposites in unity.<sup>269</sup>

The universal process of creation would finalise and transfer into ternary mode through an ultimate creature. In a first instance, this was the angel closest to God, namely Lucifer. As described in the Bible, Lucifer was cast out of heaven for his rebellion. Our alchemist believed that Lucifer's rebellion was the renewal of the binary. The angel's fall expelled him from the spiritual centre: he was excluded from the unity of the eternal heaven and banished beyond the ternary of the incorruptible created heaven, falling into the quaternary and elemental world.<sup>270</sup> Due to the exclusion of Lucifer from the heavenly regions, the influence of the devil is limited to the elementary region. The disjunction of the creation is overcome when God ascribed the function of ultimate creature to Adam. The devil's jealousy would push Adam into sin through seducing Eve to eat from the forbidden fruit. This marks the infection of the creation by hate through the reprisal of Lucifer's mistake by Adam and Eve.<sup>271</sup> Like the devil, Adam too fell into the elementary world, allowing the devil to extend his influence on humankind.

The universe conceived by God was one of harmony and peace, but it was disrupted by the unnatural binary and the malignant will of Satan. The binary resulting from the fall needs to be overcome. It is unnatural, because God never intended for the ultimate creature to be subjected to the elementary world. Furthermore, Dorn adhered to the belief that the fall impacted the

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<sup>267</sup> Maquet, "Alchimie et philosophie," 216-7.

<sup>268</sup> Dorn, *PG*, 380.

<sup>269</sup> Maquet, "Alchimie et philosophie," 217.

<sup>270</sup> "Verum exclusus ab unario caeli aeterni & extra ternarium creati caeli incorruptibilis projectus, quaternariam et elementariam regionem decedit," Dorn, *De duello animi cum corpore*, 545.

<sup>271</sup> Maquet, "Alchimie et philosophie," 218.

abilities of mankind. Adam was perceived as the original, illuminated philosopher of nature. Before the fall, Adam knew and understood the secrets of nature. After the fall, this knowledge was lost. Through the study of both the Scripture and nature this pristine, Adamic knowledge could be found. For our alchemist, however, this also entailed overcoming the binary. Every elementary body consists of both love and hate. It is only through overcoming this hate, that man can be restored to his original, Edenic state. The darkness in the elementary bodies is accidental, masking the pre-lapsarian, Edenic core of Creation. The core resides in the prison of elementary quaternary and needs to be liberated from its prison through a spagyric key.<sup>272</sup> Dorn conceives this core as a celestial substance slumbering deep within humankind which needs to be activated by its likeness so that it can be freed. The liberation of this core can be achieved through the practice of the supernatural art, which creates the universal medicine, the likeness of the celestial power within mankind.<sup>273</sup> The supernatural art entails a process which is like the first division of Chaos, but in reverse. It begins with that which was created by God, namely nature, and goes back to the Chaos which is then transformed into the perfect medicine, a panacea that can cure all the diseases in the microcosm.<sup>274</sup>

One can presume that, because of the reciprocal relation between micro- and macrocosm, this medicine can cure the (macrocosmic) world as well. Dorn would thus be able to reunite heaven and earth and create the *unus mundus*, the One World where everything is together in peace and harmony and where Creator and Creature are reunited. The conception of a relation between the microcosm and the macrocosm serves as a guideline throughout Dorn's conception of the world and his art. The universe is conceived as a vast system where all its parts are interconnected. Humans were a miniature copy of the greater world, and analogies obtained between them and the whole universe.<sup>275</sup>

### 5.3. Cosmos

The chemical reading of *Genesis* provided a starting point for Dorn's enterprise. But this interpretation is not sufficient to gain a full understanding of how Dorn perceived the world and how the art engaged with it.

The traditional cosmological system was founded on the Aristotelian elements (earth, fire, water and air). All bodies exist out of a specific combination of the elements and the elements can be transformed into one another by way of altering the qualities. Elements are composed

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<sup>272</sup> Maquet, "Alchimie et philosophie," 218-9.

<sup>273</sup> Dorn, *PM*, 456.

<sup>274</sup> Dorn, *AS*, 313.

<sup>275</sup> Debus, *Chemical Philosophy*, 87.

of qualities, of which there are two times two opposing qualities: hot and cold, wet and dry. Each element consists out of two: fire is made of hot and dry qualities, air is hot and wet, water is wet and cold, earth is cold and dry. The four Aristotelian elements are the first product of the divine alchemical separation; they serve as the building blocks of all matter. The elements are not conceived as the material air, fire, water or earth, but they are abstract principles emanating from the pure, original substance.<sup>276</sup> In Dorn's alchemy the original, pure substance is the *quinta essentia* which was supernaturally separated by God during the first division which resulted in the creation of heaven and earth. The impure substance remained in the lower four elements, in the sublunary and elementary world. The pure substance, the *quinta essentia*, is eternal, it is the spiritual material present in all living things. and holds itself in complete unity. Furthermore, the *quinta essentia* is able to preserve all sublunary things from corruption and illnesses.<sup>277</sup> Contrary to what was claimed in standard Aristotelian natural philosophy, it is both part of the corruptible lower world and of the superlunary higher world.<sup>278</sup>

### 5.3.1. Trinitary Nature

Dorn's cosmos begins to take form. The first separation resulted in the creation of the lower, elementary region, which was subjected to the duality of the body and the soul. It is also an impure world, where the Aristotelian elements reside. But there is also the *quinta essentia*, which is found in all living bodies. The quintessence is the emanation of the sidereal world, which is the created heaven and home to the stars. Above this celestial world, there is a third region, where the divine resides. This conception follows hermetic philosophers: they tend to divide their world into three regions, the higher, the middle and the lower. The first is the intelligible world, home to the most perfect spirits and pure substances. It is the immortal and unchangeable region. The middle region is the celestial or sidereal world, which holds less perfect bodies and a quantity of spirits. It unites the two extremes, while also establishing communication between the spirits of the higher and the lower realms. This is the astral world which transmits divine activity. The lower or inferior region holds the sublunary bodies. In this region, everything changes, is corrupted and dies. Generation is not possible without corruption, nor is being born possible without the inevitability of death.<sup>279</sup> Elementary bodies are destined to die, but there exists a part in the body that returns to its beginning.<sup>280</sup>

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<sup>276</sup> Abraham, *Dictionary*, 68.

<sup>277</sup> Abraham, *Dictionary*, 75.

<sup>278</sup> Dorn, *AS*, 312.

<sup>279</sup> Pernety, *FE*, 57-9.

<sup>280</sup> Pernety, *FE*, 104.



Mixed beings, that is, everything that is alive in the lower region, consist of a soul, a spirit and a body, reflecting the trinitary division of the macrocosm. Herein also resonates the *tria prima* of Paracelsus. The *tria prima* are the first three principles, namely salt, mercury and sulphur, from which all things are made. The principles are also equated with the concepts of body (salt), spirit (mercury) and soul (sulphur).<sup>281</sup> The mortal body reflects the physical world which was created by God from the slime of the earth. This slime, a mixture of earth and water, is referred to as *limon*, or *limus* in Latin.<sup>282</sup> This *limon*, literally ‘dirt’, is the substance from which God created his creatures.<sup>283</sup> Paracelsus gave the name ‘limbus’ to the biblical dust, clay or mud to denote the basic material constituents of the humans. It referred to the “special transcendent status of the type of ur-matter chosen for the purpose of conferring a unique status on humans.”<sup>284</sup> As a Paracelsian Dorn most likely used the word *limus* in its Paracelsian meaning, where it became something akin to the *prima materia*.<sup>285</sup> The divine in mixed beings is found in the immortal soul, which is the life of God dwelling in man.<sup>286</sup> The soul, according to Dorn, is the “breathing-tube of eternal life.”<sup>287</sup> The spirit reflects the middle region, it is the astral body derived from the stars, consisting of the quintessence.<sup>288</sup> The astral body provides the link between the soul and the body, between the supernatural and the natural, transmitting the divine activity.<sup>289</sup> Dorn perceives an interrelation between the different components of the living things. He believes that the life of the body comes from the natural union of the body and the spirit. The spirit in turn needs to be supernaturally united with the soul to be able to give life to the body.<sup>290</sup> It is through the medium of the spirit that the soul could enter the elementary body.

The spirit is not understood as an immaterial substance; it refers to an extremely subtle and penetrating substance, which is present in everything in nature. This conception of the sidereal spirit echoes a Neoplatonic emanation. It is something akin to a world soul underlining the inherent unity of the cosmos, yet providing every living object with its uniqueness and

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<sup>281</sup> Abraham, *Dictionary*, 176.

<sup>282</sup> Pernety, *FE*, 101.

<sup>283</sup> The word ‘limon,’ translates into mud, slib or dirt. In the Petit Larousse, when you search for the word ‘limon,’ you also find it under the entry of Prometheus. Here it refers specifically to the clay from which Prometheus crafted the humans. Since alchemical language is rich with metaphorical languages, *limon* most likely refers to not just any mud, but the specific mud used to create humans, and therefor gains a different dimension.

<sup>284</sup> Webster, *Paracelsus*, 144.

<sup>285</sup> Paracelsus used the term limbus in an earlier work as an approximate equivalent tot he prime matter. The term was also used to refer tot he foreground of hell, the boundary or edge of hell. Furthemore the term also denotes the zodiac, which relates better to the microcosm-macrocosm analogy. Webster, *Paracelsus*, 280.

<sup>286</sup> Hannaway, *Chemists*, 27.

<sup>287</sup> “Animus igitur noster est spiraculum vitae aeternae,” Dorn, *PM*, 451.

<sup>288</sup> Hannaway, *Chemists*, 27.

<sup>289</sup> Hannaway, *Chemists*, 28.

<sup>290</sup> Dorn, *PM*, 451.

specificity.<sup>291</sup> The sidereal spirit is present in the entire universe and vivifies everything, not just humans and animals, but plants as well as metals.<sup>292</sup> The astral body also marked the essential difference of objects, and Paracelsus considered them to be supernatural: they have neither beginning nor end, deriving directly from God.<sup>293</sup> Paracelsus believes them to be hidden, invisible forces, that impregnate matter and generate the visible things. This is reminiscent of *Arcanum*. “*Arcanum*,” Dorn explains in the relevant entry of his Paracelsian dictionary, “is that which is the most hidden in objects. These hidden things reside in all natural objects and are of an eternal and celestial origin, from which the particular virtue is derived.”<sup>294</sup>

### 5.3.2. Heaven

As far as Dorn is concerned, the potencies of particular virtues are ultimately contained within the universal form which, together with the celestial material, constitutes the “major heaven,” that is the sidereal region.<sup>295</sup> The major heaven consists of the pure element, namely the *quinta essentia*. Dorn discerns two types of forms in the major heaven: a universal form, the quintessence, and the distinct forms which are derived from the quintessence. The particular forms then provide matter with its specific qualities, such as colour, weight and size. The quintessence is thus an *Arcanum*, it is the most hidden in objects, and the particular virtues or forms are derived from it.

Dorn’s natural-philosophical vocabulary clearly relies on Aristotelian and scholastic philosophy, but with notable departures. In the late medieval period, it was generally agreed that the world can be divided into God and creatures. God is a simple, incorporeal substance, a spirit, whereas creatures are a mixture of simple and complex, as well as corporeal and incorporeal beings, including both material substances and spirits.<sup>296</sup> Following peripatetic natural philosophy, physical substances are a particular composite of matter and form (hylomorphism). Generation, or coming to be, occurs when matter gains form.<sup>297</sup> Hylomorphism provided the alchemist with a way of explaining changes in compounds. Matter is a being in potentiality, it is thus the material the alchemist needs to inform, that is give it an actuality, so that it can become a compound, a being in actuality.

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<sup>291</sup> Hannaway, *Chemists*, 28-9.

<sup>292</sup> Pernety, *DMH*, 54.

<sup>293</sup> Pagel, *Paracelsus*, 54, 83.

<sup>294</sup> Dorn, *DTP*, 18.

<sup>295</sup> Dorn, *AS*, 320.

<sup>296</sup> Jeffrey E. Brower, *Aquinas’ Ontology of the Material World. Change, Hylomorphism and Material Objects*, (Oxford: Oxford University Press, 2014), 28.

<sup>297</sup> Brian P. Copenhaver and Charles B. Schmitt. *Renaissance Philosophy*, repr. Oxford: Oxford university press, 2002, 303-4.

Dorn's indebtedness to the Peripatetic tradition is interesting, since he found that the teachings of his time were too pagan, verbose, and scholastic. The alchemist defended the need for educational reform to parallel religious reformation. As a Paracelsian, Dorn's critiques were mostly aimed at Galenic and Hippocratic medicine, which was founded on a different conception of the body. Paracelsians rejected the traditional teachings of humours, preferring to produce pharmaceutical remedies rather than regimens to cure diseases.

Dorn's notion of heaven as 'form-giving' echoes several natural-philosophical traditions. First of all, one can find an echo of the Avicennian "*dator formarum*" here. Secondly, it also appears to connect to a famous passage in Aristotle's *De generatione animalium* where Aristotle posits the existence of a vital heat that is necessary for life.<sup>298</sup> Although firmly anchored to the sublunary realm (which is also how scholastic physicians would develop this notion), this particular passage connected vital heat to the quintessence or celestial element, identifying it as of celestial and divine origin. The Aristotelian aether or the *quinta essentia*, thus comes to provide the faculties of the soul and determines their form. It is now well known that Renaissance natural philosophers and physicians were often fascinated by this notion of vital heat as mediating between the sublunary and the superlunary realms, developing it in unison with various Neoplatonic and Hippocratic passages.<sup>299</sup> Heaven furnishes the matter with its form, bringing out the potencies and the strength into a state of being.<sup>300</sup>

Reflecting the major heaven in the macrocosm, a microcosmic heaven exists as well. Nature was perceived as a living system, animated through its soul. The vitalism was not solely reserved for vegetation and animals; minerals were also animated in an occult way. Dorn would therefore understand heaven as also meaning "the soul of the metals."<sup>301</sup> Dorn's equation of *caelum* with a "soul of metals" is elucidated by a helpful passage in Pernetý's *Dictionnaire*.<sup>302</sup> Once again, we appear to be led back to a Renaissance merger between scholastic medical ideas (in this case, the notion of a *humidum radicale* in the body) and a Neoplatonising uptake of Aristotle's *De*

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<sup>298</sup> Gad Freudenthal, *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul*, (Oxford: Clarendon Press, 1999), 20.

<sup>299</sup> Hiro Hirai, *Medical Humanism and Natural Philosophy. Renaissance Debates on Matter, Life and the Soul*, (Leiden: Brill Publishers, 2011), 69-72.

<sup>300</sup> In Dorn's *artificio*, form is never defined. But he does have an entry in his Paracelsian dictionary, where he writes the following: "formae rerum influxus dicitur coelestium quos a superioribus habent inferiora quaevis, occulta potentia, vis, atque virtus unius cuiusque rei.

<sup>301</sup> "metallorum anima," Dorn, *AS*, 332.

<sup>302</sup> "Les Philosophes Hermétiques ont aussi donné ce nom au feu céleste qui anime les corps élémentés. Les corps sont plus forts ou plus faibles, selon qu'ils contiennent plus ou moins de ce feu; et leur longue durée dépend de la forte union de l'esprit céleste avec l'humide radical. Cette union est ce que les Philosophes appellent le Ciel et la Terre réunis et conjoints, le Frère et la Soeur, Gabritius et Beja, l'Epoux et l'Epouse qui s'embrassent très étroitement; parce que l'esprit volatil ne sert de rien, s'il n'est rendu fixe en la nature duquel il doit passer." Pernetý, *DMH*, 34.

*generatione animalium*. Pernety connects the celestial fire of the former to the radical humidity, with the latter cast in the role of sublunary container of the celestial fire.<sup>303</sup> This relation echoes the link between the soul and the spirit. The spirit, conceived here as the radical humidity, acts as the container through which the soul, the celestial fire, can enter the body.<sup>304</sup> This idea is further expressed in Dorn's conception of the spirit as the instrument of the soul through which it can vivify the body. The soul also provides reason, understanding and memory to the living being, and is a direct emanation from God.<sup>305</sup> Furthermore, the soul gives a form to the mixed bodies, it holds a spark of nature as well as the aforementioned link to creation, the memory to the time before the first separation, due to its faculty of memory.<sup>306</sup>

### 5.3.3. Doctrines of Nature

The art is founded on the belief that there is one part of the world that is unchangeable and eternal which retains a memory of the unity in Chaos. This residue serves as a precondition for generation. The supernatural art operates through generation and corruption within nature. Dorn is mindful of the limitation of human understanding:

[...] our instruments cannot contain all of the elements, therefore we must limit ourselves to the imitation of nature and we must hunt for our doctrine on separation within nature.<sup>307</sup>

We cannot truly grasp the confusion that is Chaos, the site of original union.<sup>308</sup> Dorn therefore proposes to work within the confines of nature, which the human senses *can* perceive. This way of working within the confines of nature does not make metaphysical operations impossible, because there exists an eternal and incorruptible part within nature, namely the quintessence. This pure substance must be extracted during the work since it is the universal form of the metaphysical Chaos. It holds the potentiality to become the panacea, the universal medicine. The alchemist acts as a mediator between Chaos and this perfect medicine.<sup>309</sup> Our alchemist describes the work as a causal chain where potentiality is brought into actuality, which in turn forms a potentiality for another actuality. This causal chain continues until the potentiality of the medicine, present in the original Chaos, is educed into a state of actuality through his operations.

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<sup>303</sup> Pernety, *FE*, 120.

<sup>304</sup> Abraham, *Dictionary*, 162.

<sup>305</sup> Dorn, *PM*, 451-2.

<sup>306</sup> Pernety, *FE*, 101.

<sup>307</sup> "Nostris nec organis elementa cuncta concludere, cogimur ad naturae similitudinem et imitationem, ex naturalibus venari magisterio nostro separationis," Dorn, *AS*, 312.

<sup>308</sup> Dorn, *AS*, 320.

<sup>309</sup> Dorn, *AS*, 320.

The role of the alchemist is thus to bring things into perfection by elucidating potencies into the act.<sup>310</sup> In doing so, the alchemist follows the way of nature and thus mimics the processes found in nature. A thorough study of the workings of nature was therefore necessary to be able to practise the art.



Figure 4 In *Chymicis versanti Natura, Ratio, Experientia & lectio, sint Dus, scipio, perspicilia & lampas.*

In this regard, the doctrine of signatures is indispensable to the reading of nature. Paracelsians and other hermetic philosophers held the belief that every natural object held a mark or 'signature.' God had woven the signatures into the tapestry of nature; the signs were infused with a meaning and intelligibility that could be understood by the alchemist.<sup>311</sup> Nature was thus a book to be read, it showed the harmony of the creation. Following the Paracelsian theory of signatures, these marks were an outward sign of the inner essence and if they were correctly interpreted, it could reveal the virtue of the object.<sup>312</sup> A correct understanding of the signatures provided the hermetic philosopher with a clue to the essence of the object. Exploring nature could unveil the secrets of the creation and help the alchemist in his quest to restore man's original, Edenic state.

The doctrines of the alchemical art are derived from nature, and nature operates by way of alteration and animation.<sup>313</sup> Alteration is understood by Dorn as a conversion of one into the

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<sup>310</sup> Abraham, *Dictionary*, 11.

<sup>311</sup> Abraham, *Dictionary*, 57.

<sup>312</sup> Abraham, *Dictionary*, 57.

<sup>313</sup> Dorn, *AS*, 317.

other.<sup>314</sup> The material the alchemist is working with needs to be transformed into the *prima materia* so that it can then be made into the other extreme, the universal medicine. Alteration is a two-fold operation. In a first step, the material needs be brought back to the *prima materia*, through corruption. The second step entails a generation, where the form and the heaven are converted into the perfect medicine.<sup>315</sup> Animation is the way that the alchemist brings the soul into the body. The process of animation surpasses the operations of nature, because only the alchemist can put it in motion.<sup>316</sup>

#### 5.3.4. The Post-lapsarian World and Restoration

The post-lapsarian world, according to Dorn, is a split world marked by constant tension between the four elements. It is also a confused world, where the impure is mixed with the pure elements, as well as an inversed world where spirit and soul are subjected to the sublunary body.<sup>317</sup> Under these conditions, restoration can only be attained through reduction from the ternary to the unitary. Man, fallen from his original unity, has been subjected to a maleficent duality of the body and the spirit. To return to the good, men must liberate themselves from the prevalence of the body. Harmony and peace must be established within the human body through overcoming the opposition of body and soul through conjoining it with a *tertium*, the spirit. The binary is overcome through the ternary, which can then be brought back to the unitary by uniting the body, spirit and soul into the one human being.<sup>318</sup>

Dorn's theo-cosmological myth provides a blueprint for the restoration to the unity that marked creation before the first separation. Nature is the guide which the alchemist must follow if he wishes to procure the universal medicine. Salvation can be found through a process of restoration. This healing process is threefold, based on the principles of *spiritus*, *animus* and *corpus*. The first part is separation, which entails a reprise of the process of creation. The second part is purification, where the elements are purged from hate and darkness. The last part is a union of *spiritus*, *animus* and *corpus*.<sup>319</sup> The reconverted human holds itself in perfect unity and its celestial power is activated. Dorn will then describe a further union between the reconverted human and the *unus mundus*. The supernatural art aimed at restoring the relation between God and his ultimate creature and bring them together in the One World.

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<sup>314</sup> Dorn, AS, 323.

<sup>315</sup> Dorn, AS, 323.

<sup>316</sup> Dorn, AS, 317.

<sup>317</sup> Maquet, "Alchimie et philosophie," 219-20.

<sup>318</sup> Kahn, *Alchimie et Paracelsisme*, 145.

<sup>319</sup> Maquet, "Alchimie et philosophie," 220.

## 6. Supernatural Art

We will make our heaven from the impure elements that are our Chaos: from these we will begin this admirable work, that must surpass the artistry of nature. Unless I am mistaken, you already understand why we said that our metaphysics surpasses every work of nature. For the separation of the heaven from the elements, or the first division of Chaos, was not a natural art but a divine one.<sup>320</sup>

The chymical interpretation of divine Creation implied that chymistry was the true key to nature. By way of the supernatural art, Dorn aimed to recreate the original Chaos from which the elements were separated. Picking up where the artistry of nature left off, the operations transcend the physical world, moving nature through that which is above nature. Alchemy not only entails a chymical separation of the elements, it also uses metaphysical operations to imitate the relation between the macrocosm and the microcosm. The supernatural art affirms the separation of God, where he separated a pure heaven from the impure. It also transcends it by way of wanting to reunite God and his creation.

Dorn wishes to generate a “small world” from the parts of the same heaven and the same elements, by means of their nature, which is enclosed by our instruments.<sup>321</sup> It is a small world because it is done in the confines of a glass vessel in the laboratory of the alchemist. The *opus* repeats the supernatural separation by God on a microcosmic scale. He must regress nature back to the initial Chaos in order to commence the metaphysical work.<sup>322</sup> Chaos is the first extreme which must become the second extreme, namely the universal medicine, by deducing the potentiality of the Chaos into the actuality of the medicine. The alchemist acts as a mediator between the two extremes and by means of four things, namely form, matter, heaven and the alchemical operations, he can enact the causal chain.<sup>323</sup> The focus of this chapter lies on these four means necessary to effectuate the supernatural art and the role of the alchemist in the *opus*.

### 6.1. The Form: Change, *Actus* and *Potentia*

Form is the *actus* of matter, whereas matter is form in *potentia*. Informing matter is bringing the potentiality of the matter into actuality. Dorn will follow the standard conception that every species has its own form, already present in the matter as a *potentia*.<sup>324</sup> For example: the seed of

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<sup>320</sup> “Nostrum caelum ab impuris elementis nostris, ut Chaos nostrum fabricemus : a quo nobis conandum est opus hoc admirabile, quod naturae magisterium excellere debeat. Iam, ni fallor, intelliges cur dicamus metaphysicam nostram opus omne superare naturae. Nam separatio caeli ab elementis, aut prima divisio Chaos, naturale non fuit artificium, sed mere divinum.” Dorn, AS, 312-3.

<sup>321</sup> “parvus mundus,” Dorn, AS, 313

<sup>322</sup> “a suo chao metaphysicum opus maius exordium sumit.” Dorn, AS, 320.

<sup>323</sup> Dorn, AS, 320.

<sup>324</sup> Dorn, AS, 321.

a cactus already holds the potentiality of becoming a cactus, it has a preferred ontological state of the cactus and can therefore only become a cactus. Certain matter can thus only receive specific forms: a cactus cannot receive the form of a metal. The form is the essential determinant, making the matter a thing of a determinate kind.<sup>325</sup>

#### 6.1.1. Change: Corruption and Generation

This notion that the *actus* of the *potentia* of the matter is caused by the form is linked to the idea that the form holds a mediating role and is thus a cause of generation. It should be noted that all compounds are composed of various forms and thus every material substance holds different forms. Aristotelian hylomorphism differentiates between a substantial and an accidental form. The substantial form enables the matter to subsist, it is unique to the particular matter and thus determines it.<sup>326</sup> It is the substantial form that holds the generative strength and can act as the agent in the work: it moves the potentiality of the medicine into the actuality.<sup>327</sup> The accidental form fashions the matter with its qualities, such as colour, size and weight. Due to this differentiation between forms, there exist two types of changes: accidental and substantial change. Accidental change occurs when matter gains or loses a property, while the essence of the substance remains unchanged. When a substance comes into being or passes out of existence, substantial change has taken place and the substantial form of the object has been altered. Matter can only have one substantial form at the time. Substantial change is always paired with corruption: the old form needs to be destroyed to make the matter ready for a new substantial form.

Corruption and generation are two principles which are clearly present throughout the alchemical work:

Among chemists, nature is called the excitation of the sky with the elements in the generation of all existing things. This art is accomplished by the twofold instrument of disposition and influx. Nature by corruption disposes potential matter to receive form and celestial influx, which at the determined time burst forth into actuality and specific form.<sup>328</sup>

This passage from *Clavis totius philosophiae chymisticae* (1567) illustrates clearly how Dorn's worldview is expressed in a chymical philosophy. Nature works by disposition (alteration) and influx (animation). As seen in section 5.3.3, nature works by means of alteration and animation.

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<sup>325</sup> Abraham, *Dictionary*, 153.

<sup>326</sup> Des Chenes, *Physiologia*, 65.

<sup>327</sup> Dorn, *AS*, 321.

<sup>328</sup> "apud chymistas natura dicitur, coeli cum elementis in generationem omnium quae sunt in excitatio. Quod artificium duplici perficitur instrumento, dispositione videlicet, ac influxu. Natura, materiam corrumpendo, disponit ad potentiam formae receptiva, & coelestium influxum: quae tandem suo determinato tempore prorumpit in actum, & formam specificam." Dorn, *CTPC*, 9.



Dorn links the concept of alteration to matter receiving form, whereas animation entails receiving celestial influx.

### 6.1.2. Alteration and Animation

Alteration is a two-step process and begins with the corruption of matter: the form needs to be released from the matter, and the matter itself is brought back to the prime matter. The *prima materia* is believed to be pure *potentia*: any form can be imprinted upon it. The prime matter is held in the Chaos, which is why the metaphysical work begins with Chaos: “Chaos is said to be the confusion of the particular forms and its material with the universal form and its matter.”<sup>329</sup> The Chaos is the *massa confusa*, the raw material with which the alchemists work. By means of corruption, the alchemist has regressed the material substance to the *prima materia*. Mimicking the macrocosmic creation of the world, the primordial task of the chymical philosopher is to differentiate the undifferentiated chaos into the four elements; here he begins the generation and thus the second step in the alteration. The opposing qualities of the elements need to be reconciled and united so that they can become the quintessence, which holds in itself a complete unity.<sup>330</sup> Here the alchemist reverses the supernatural separation by God. By generating a small world in his glass vessel, Dorn’s aim is to create a perfect microcosm where all the elements are harmonised in the form of the *quinta essentia*.

The work of the philosopher follows the way of natural bodies to bring out the celestial virtues through artificial ones.<sup>331</sup> The alchemist sets out to imitate the processes of nature and in doing so he must first create artificial virtues: through his various operations he creates a likeness of the celestial virtue. This is all done through alteration. It is only when these artificial ones are further manipulated and animated, that they can become the celestial ones. Once the small world is created in the vessel, it still needs to receive the celestial influx. This celestial influx brings us back to the notion of the heaven as form-giving, which has been mentioned in section 5.3.2. It provided the faculties of the soul as well as determining the specific form. Drawing on the analogies and correspondences Dorn perceives in the world, we might say that the specific form acts as the container of the celestial influx, imitating the relation between the spirit and soul and the radical humid and the celestial heat. This notion is further supported by Dorn’s definition of the form: “the form is the act and potentiality of the ethereal region in the elementary.”<sup>332</sup>

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<sup>329</sup> “Chaos ho loco proprie dicitur formarum particularium, & materiarum suarum cum universali forma suaque materia confusio.” Dorn, *AS*, 320.

<sup>330</sup> Abraham, *Dictionary*, 33-4.

<sup>331</sup> Dorn, *AS*, 325.

<sup>332</sup> “Forma est aetherae regionis in elementarem actus & potentia,” Dorn, *CTPC*, 9

### 6.1.3. Form as *Actus* and *Potentia*: the Celestial and Elementary Region

The form becomes something akin to a celestial element within the elementary. Due to it being the *actus*, it must hold a part of the ethereal region in itself, and thus consists of the *quinta essentia*. But it is also the *potentia*: it can become the actuality of the celestial influx. The actuality can be realised by the alchemist through purification. Dorn perceived the role of the chymical philosopher as someone who investigates the relation between the terrestrial and the celestial realms; the relation between the world of man to the world of the stars. His medical theory also relies on the same relation, namely through extracting the *quinta essentia*, the heavenly and astral part which can be found in all of nature, medicines could be made. The chymical arts were essential in the process of purification. Through purification the extracted virtues of the material substances could approach their initial celestial influence and then be effective and potent in battling all infirmities.<sup>333</sup> The alchemist sought to transform the manifest forms into the occult ones, changing the impure into the pure element, the quintessence.

The form holds effect in the elementary region. For Dorn, the whole elementary region is the *materia*.<sup>334</sup> The elementary region was divided in four parts: air, fire, water and earth. He further delineates between two principle elements: water and fire. After the creation of the world, the water was heated and became air, whereas earth is the result of the heat which made the water dry.<sup>335</sup> This clearly illustrates the ability of the elements to change into one another through altering the qualities: the moist quality of water becomes dry through the addition of heat (fire).

Dorn discerns between composited elements, which are placed in a certain arrangement and held together and simple, unmixed elements that are shown through the first form.<sup>336</sup> The simple elements are understood as not being composed or corrupted: they exist in their initial form or water, fire, earth and air. The simple elements are the basis of all material substance, everything in nature is composed of the simple elements. The arranged elements denote the material substances of the elementary region. The arranged elements need to be separated by the alchemist so that they can first return to the simple elements, which can then be purified and be brought back to the pure, original substance from whence they came.<sup>337</sup> This is done by the process of generation and corruption, which will be explored later.

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<sup>333</sup> Thorndike, *History of Magic*, V, 630-2.

<sup>334</sup> "Materia, nobis est elementaris regio tota," Dorn, *CTPC*, 10.

<sup>335</sup> Dorn, *CTPC*, 10.

<sup>336</sup> Dorn, *AS*, 334.

<sup>337</sup> Dorn, *AS*, 323.

#### 6.1.4. The Form as both the Agent and the Artist

So far, Dorn seems to be expressing the idea that the form perfects and determines matter and can thus only produce something like itself. This conception is also found in his treatise on the supernatural art: “the form of things is a generative virtue.”<sup>338</sup> It appears to be a kind of efficient cause that parallels the formal cause of the “major heaven.” It is held to direct and lead to perfection, moving matter towards completion and converting its potencies into act. The form thus becomes an active cause, it is responsible for the generation and persistence of a substance.<sup>339</sup> Dorn however, will consider the form in another way as well. It is the directing cause of the supernatural art by means of the intellect.<sup>340</sup> Our alchemist will therefore say that the form is the artist of the work.<sup>341</sup> The association of the form with the intellect and the artist rests on Aristotelian psychology.

Aristotle discerns three types of soul: namely the vegetative, the sensitive and the intellective. The vegetative soul is present in all living creatures, it has nutritive faculties, formative faculties and faculties of growth. The sensitive soul holds the perceptive faculties as well as the motive faculties. The motive faculties make it possible to produce emotions and physical movements. The perceptual faculties enable the five external senses (vision, hearing, smell, taste and touch) and the internal senses (cogitation, memory, fantasy, imagination and common sense). The intellective soul holds the intellect, the will and the memory.<sup>342</sup> Faculties emanate from a substance, and they are something that a substance employs as a principle for action.<sup>343</sup> The intellective soul is what discerns humans from other animals, which is why the intellect can only come from the artist. The intellectual means lead the form to the perfection by opening them to hold “the greatest union.”<sup>344</sup> Dorn perceives the forms as containers, they need to be “filled,” that is receive a soul.<sup>345</sup> All living being persist by virtue of their vegetative soul, so any form needs to hold a vegetative soul which holds the generative virtue of the form.<sup>346</sup> It is the agent which transmutes the matter into the perfect form of the universal medicine.<sup>347</sup> Once the perfect form is generated through the *opus*, the alchemist can fill it with the intellective soul.

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<sup>338</sup> “Forma rerum, est virtus generativa,” Dorn, AS, 321.

<sup>339</sup> Dorn, AS, 321.

<sup>340</sup> “ut cause dirigens artis istius media per intellectum,” Dorn, AS, 321.

<sup>341</sup> “similis forma dicitur operis huius artifex.” Dorn, AS, 321.

<sup>342</sup> Katharine Park, “The Organic Soul,” in *Cambridge History of Renaissance Philosophy*, eds. Charles B. Schmitt and Skinner, Quentin, (Cambridge: Cambridge University Press, 1988), 466.

<sup>343</sup> Hirai, *Medical Humanism*, 63-4.

<sup>344</sup> “maximam concordiam,” Dorn, AS, 321.

<sup>345</sup> “adimplere,” Dorn, AS, 321.

<sup>346</sup> Gad Freudenthal, *Aristotle’s Theory of Material Substance. Heat and Pneuma, Form and Soul*. 17-8.

<sup>347</sup> Dorn, AS, 321.

## 6.2. The Metaphysical Matter, Mercury and Heaven

The “ingenious artist” must bring forth his matter, form, heaven and elements from “the belly of our Chaos” out of which he prepares the universal medicine.<sup>348</sup> In order to procure the metaphysical matter needed to create the universal medicine Dorn introduces a mediating substance: “*Mercurius*.”<sup>349</sup> Mercury appears as a transformative substance to which Dorn ascribes two functions: *movens* and *extrahens*.<sup>350</sup> The *Mercurius* moves the prime matter to the vegetative: it imprints the *prima materia* with a vegetative form or soul, enabling it to grow. It also extracts from the form; it aids the extraction of the quintessence from the matter.

### 6.2.1. Metaphysical Matter

The metaphysical matter is firstly a “passive subject,” it endures through the required motions of the art.<sup>351</sup> The metaphysical matter is nothing but the result of the alchemical operations and through these, the “heaven of its matter arises.”<sup>352</sup> By means of the *opus*, the spirit is brought forth from the metaphysical matter. This spirit will play a significant part in the work, which will be discussed below. Secondly, the metaphysical matter is also a “sick body,” like elementary objects it endures by virtue of a vegetative soul.<sup>353</sup> This conception illustrates that Dorn believes that the metaphysical matter needs to hold more than just a vegetative soul, it also needs an intellective one. The vegetative soul is a prerequisite in the alchemical work, it is a first step in the creation of the universal medicine. Lastly, Dorn states that before the metaphysical material can gain the intellective form, it must be “subjected through the actions of the heaven.”<sup>354</sup> There must first arise a metaphysical heaven which can hold the *ratio*: the metaphysical matter must hold an astral body that can receive the celestial influx.<sup>355</sup>

### 6.2.2. *Mercurius*: the Volatile Spirit and the Activating Spirit

Our alchemist will equate the heaven with “our *Mercurius*.”<sup>356</sup> “*Noster*” is used to signify a substance or material which itself performs metaphysical rather than mere physical operations.<sup>357</sup> “Our mercury”, in other words, is the philosophical mercury which not only

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<sup>348</sup> “chaos nostrum [...] a cuius ventre debet ingeniosus artifex elicere materiam suam formam, caelum & elementa, ut ex his medicinas conficiat,” Dorn, AS, 320.

<sup>349</sup> Dorn, AS, 320.

<sup>350</sup> “*Mercurius ad vegetationem movens & particularem formae materiam primam extrahens a forma.*” Dorn, AS, 321.

<sup>351</sup> “subjectum passivum, quod sub artificis excitatione per media requisita motum patitur,” Dorn, AS, 321.

<sup>352</sup> “*oritur caelum de sua materia,*” Dorn, AS, 321.

<sup>353</sup> “*corpus aegrum,*” Dorn, AS, 321.

<sup>354</sup> “*materia subiecta caeli actionibus,*” Dorn, AS, 321.

<sup>355</sup> Dorn, AS, 321.

<sup>356</sup> “*Caelum est Mercurius noster,*” Dorn, AS, 322.

<sup>357</sup> Abraham, *Dictionary*, 139.

enables the process in the laboratory and the alteration, but it also aids in the formation of the universal medicine and the process of animation. It appears as an activating spirit, the agent through which the work is effectuated.<sup>358</sup> As shown in section 5.3.2, Dorn discerns a major heaven as well as a heaven which signifies the soul of the metals. The philosophical *Mercurius* can be related to the soul of the metals. The soul of the metals entailed the radical humid, which contained the celestial fire, the animating soul of the metallic body. The radical humid serves as a vehicle for the celestial fire to enter the metallic body. Our mercury will fulfil a similar function as that of the radical humid, aiding the celestial influx into entering the elementary body.

In alchemical terminology, the radical humid is often equated with the quicksilver or argent vive. It is the cold and moist principle, associated with the moon and the female. It is also used to signify the mercury in its volatile and slippery state which the alchemist must tame and fixate so that he can use it to create the Philosopher's Stone.<sup>359</sup> This notion of the volatile spirit is expressed by the association with 'argent vive' which is present in Dorn's Latin term for quicksilver: *argentum vivum*.<sup>360</sup> The quicksilver is the spirit trapped in the matter, it must be released and transformed by means of corruption, so that the activating spirit can be generated. Dorn describes this as the liberation of our mercury, which is a two-fold process.<sup>361</sup> Firstly, the alchemist must generate the vegetative mercury, through the union of two opposing principles, namely sulphur and quicksilver, the active, hot, dry and male principle and the passive, cold, moist and female principle. This signifies the arising of the "heaven of the metaphysical matter," as mentioned above. This vegetative mercury appears as a *tertium*, holding both hot and cold as well as dry and moist qualities, uniting the sulphur and quicksilver. Because of this, it becomes a mediating principle as well as the agent in the matter, guiding the form to the perfect form of the universal medicine which can receive the celestial influx. The process is only completed when the intellectual soul can enter the body, and thus animates the matter. Our mercury becomes the metaphysical heaven, from which the incorruptible and eternal spirit can enter the body and create the Philosopher's Stone. Dorn will call this the *mercurius intellectualis*,<sup>362</sup> Our mercury is cast as the mediating spirit through which the celestial influx, the quintessence, can enter the metaphysical matter, which can become the *ultima materia* of the Philosopher's Stone.

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<sup>358</sup> Abraham, *Dictionary*, 125.

<sup>359</sup> Abraham, *Dictionary*, 162.

<sup>360</sup> "argentum vivum," Dorn, *AS*, 330.

<sup>361</sup> Dorn, *AS*, 347.

<sup>362</sup> Dorn, *AS*, 322.

Mercury becomes a highly ambiguous term, serving as the process of the work, the agent through which the work is effected and the matter of the work.<sup>363</sup> Our mercury then denotes the activating spirit, imitating the spirit of God which had created and shaped the originals Chaos.<sup>364</sup> Like the spirit of God, it also holds dominion of the mineral, vegetative and animal kingdom.<sup>365</sup> Our mercury is present in all elemental things, it is a universal substance found in metals, vegetation and animals.<sup>366</sup> As a reflection of the spirit of God, of the *anima mundi* it imparts motion and vital power to the whole material world. Because of its omnipresence it came to symbolise the alchemists' *Arcanum*. Instead of it solely signifying the quicksilver, it gained an extra dimension as a transformative substance through which universal medicine can be accomplished. Our mercury becomes the goal of its own transformation. It is present from the very beginning of the work, where it is dissolved into the *prima materia*, and continues to persist, until it arises again in the *ultima materia* of the Philosopher's Stone.

The Philosopher's Stone contains the "powers of the celestial field."<sup>367</sup> Its healing power exists in transferring the celestial virtue to the sick body of the human. This is clearly modelled after Paracelsus' conception of disease: illness was the result of astral or spiritual corruption. In turn, the corruption resulted in a loss of the concord of the principles governing the human body. Healing then became a work of restoring unity through infusing the body with a celestial virtue to overcome the corruption and heal the astral body.<sup>368</sup> The Philosopher's Stone can confer its incorruptible nature through transferring some of its celestial and incorruptible nature.

### 6.3. The Alchemical Operations

The work begins with several mixings of materials. Heaven with form, air with water, water with fire, and air with water and heaven.<sup>369</sup> This is a precondition to create the most perfect form of the universal medicine. Once the stone is created, the virtues need to be extracted. The alchemist calls this operation the separation. Virtues are retained in the third form. The alchemist will create three forms through his operations. The first form is the result of the dissolution. Dissolution entails a knowledge of the metaphysical union so that the particular creation can commence. The result of the metaphysical union is the creation of the vegetative mercury. Before dissolution, however, comes calcination, which is described as the 'death of the

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<sup>363</sup> Abraham, *Dictionary*, 125.

<sup>364</sup> Betty Jo Teeter Dobbs, *The Janus Face of Genius: the Role of Alchemy in Newton's Thought*, (Cambridge: Cambridge University Press, 1991), 79.

<sup>365</sup> Dobbs, *Janus Face*, 72.

<sup>366</sup> Dorn, *AS*, 346.

<sup>367</sup> Debus, *Chemical Philosophy*, 96.

<sup>368</sup> DeVun, *Prophecy, alchemy*, 67.

<sup>369</sup> Dorn, *AS*, 332.

mixed,' through fire.<sup>370</sup> By heating the mixture in the fire, it is reduced to ashes, or earthly seeds.<sup>371</sup> The earthly seeds are then mixed with the philosophical key, heaven, in order to dissolve the material into the mercurial waters.<sup>372</sup> The alchemist first needs to dissolve the material into the prime matter to separate the *Mercurius*, the spirit, from the form. The philosopher can then begin the generation of the minor perfection. The philosophical Mercury is prepared and then altered into the minor perfection through a dissolution of the first manifest form.

Dorn will also write that to create, liberate and separate the form, blood is needed, to both nourish and arouse. It aids the alteration, and holds a similar effect as the menstrual blood: it helps to grow and nourish the embryo as well as cleansing it from its impurities. The blood kindles the various likenesses and forms into one body, soul and spirit. This is the metaphysical stone, which can only be created by a heaven which holds vegetative properties.<sup>373</sup> Here the vegetative mercury is likened to the function Dorn ascribes to the blood. Furthermore, blood is often equated to the transformative substance that is our mercury: it acts as both the solvent and the coagulator.<sup>374</sup> The vegetative mercury holds properties that can transfer the likeness into the completed medicine, akin to the vegetative mother which conceives the son. The author further mentions that the foetus retains the properties of the parent.<sup>375</sup> Due to the parallel drawn above, it is safe to say that the metaphysical stone will retain the properties of the vegetative mercury and can thus grow and move to perfection. Once the minor perfection is created, through the vegetative mercury, it can then aid to move the likeness into the more perfect form.

Once the minor perfection, or the white elixir, is generated, the substances are then separated and purified to evacuate the hidden spirit from the body. The hidden spirit is the quicksilver or argent-vif. The quicksilver is the most volatile and malleable, because it is abundant with spirits and once it is joined with the substance, it can more easily tear the quintessence from its material prison.<sup>376</sup> After the evacuation comes the sublimation where the middle spirits are converted into the sulphur of nature, which creates the son from the imperfection.<sup>377</sup> This is followed by a process of multiplication, inceration and fermentation to create the perfect form.

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<sup>370</sup> Pernety, *FE*, 178.

<sup>371</sup> Pernety, *FE*, 173.

<sup>372</sup> Dorn, *AS*, 332.

<sup>373</sup> Dorn, *AS*, 322.

<sup>374</sup> Abraham, *Dictionary*, 28.

<sup>375</sup> Dorn, *AS*, 322.

<sup>376</sup> Pernety, *FE*, 134.

<sup>377</sup> Dorn, *AS*, 330.

Multiplication is the reiteration and continuation of the evacuation. Inceration makes the created substance appear soft like wax through adding water and heat. Fermentation is the union and the fixation of the spirits in the body of the most perfect matter.<sup>378</sup> It entails a threefold union: the virtue with the quantity and the likeness.<sup>379</sup>

Three stages can be discerned in the *magnum opus*: the separation of the elements into simple forms where the *quinta essentia* can be extracted. This process of corruption aims at making a metaphysical chaos to then transform into the minor perfection, which ends with the creation of the white elixir. Finally, once this is formed, the major perfection or the red elixir can be made. In order to do so, the philosopher needs to bring together the artificial virtues produced through alteration with the philosophical key, our mercury, to animate the bodies and created the Philosopher's Stone. The major perfection is the ultimate perfection of the stone: it thus goes from the metaphysical stone created from the vegetative mercury to the ultimate stone, containing the intellectual mercury which can cure all infirmities.<sup>380</sup> Throughout the *opus*, the form by virtue of it being the activating spirit, acts as a guide throughout the work: it aids in educating the potencies into manifest acts, due to it being an agent in the matter. It also enables the extraction of the quintessence. Dorn also notes the indispensability of the intellect of the alchemist: the alchemical work cannot be accomplished without it.

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<sup>378</sup> Dorn, AS, 330-1.

<sup>379</sup> Dorn, AS, 332.

<sup>380</sup> Dorn, AS, 328.



## 7. The Praxis of the Supernatural Art: the Generation of the Philosopher's Stone

Having set out the essential principles and components of the Great Work, Gerhard Dorn explains the laboratory procedures of the *magnum opus*. A large portion of the *Artificium* is dedicated to the creation of the physical Philosopher's Stone. This section focuses on this praxis. I will begin by covering the overall early modern practice of generating the stone, on which some measure of general agreement existed. Two main principles of the *opus* will be explained as well, namely the alchemical wedding and the axiom of *solve et coagula* (dissolve and coagulate). Thereafter I will go back to the source material and analyse the laboratory praxis of Dorn. The operations are manifold, and I simply highlight the main practices and ideas behind them. The actual source provides many more detailed instructions, down to the measurements of the ingredients. The goal of this chapter is to examine the practice of transmutation in the laboratory so that it can later be related to the alchemist's experience and interpretation of transmutation.

### 7.1. The General Praxis

The *Artificium* offers a series of instructions on how to make the *lapis philosophorum*. The process of the alchemical *opus* described by Dorn followed the general practice of his time. The work begins with placing the substance or mixture in a glass vessel. This substance is the starting material, on which there is no general agreement.<sup>381</sup> It usually entailed metals or metallic minerals since the goal of the *opus* was to transmute base metals into gold. The liquidity of mercury marked it as a curiosity and was therefore often preferred as starting material. Gold was also preferred, but since it was not the cheapest and easiest to find, as well as it not being reactive to the addition of other metals it was not the most practical metal to use.<sup>382</sup> Identifying the starting material was further complicated by the tendency of alchemists to hide the particular material they used, preferring to use of *Decknamen*, code words, or simply by talking about the properties and qualities of a general, undefined material.<sup>383</sup> Gerhard Dorn is rather straightforward, he simply refers to the metals by their related planet: Venus, for example signifies copper. The link, in Dorn's case, is most likely founded on the Hermetic precept of as above, so below. The astronomer, Tycho Brahe (1546 – 1601) referred to alchemy as “terrestrial astronomy” or “astronomy below.”<sup>384</sup> It was about more than just a simple analogy between the

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<sup>381</sup> Principe, *Secrets of Alchemy*, 123.

<sup>382</sup> Principe, *Secrets of Alchemy*, 118.

<sup>383</sup> Pernety, *FE*, 133.

<sup>384</sup> Principe, *Secrets of Alchemy*, 111.

metals and the planets, but planetary influence played a role in the formation of the metals on earth.<sup>385</sup> As seen in chapter three, Dorn conceived the existence of an astral body within the elementary region. The influence and interconnectedness of the sidereal region to that of nature is further expressed in the correlation between the planets and the metals. Gold becomes equated with the sun, silver with the moon, copper with Venus, iron with Mars, tin with Jupiter, lead with Saturn and mercury (the metal, as differentiated from the philosophical mercury) with Mercury.<sup>386</sup>

Once the alchemist has decided which material or mixture of materials to use, he places them in a glass vessel. The vessel had a long neck and an oval body. The neck of the flask was hermetically sealed, to ensure that none of the vapours or volatile spirits could escape. The vessel was then heated. After a period of about thirty to forty days, the substance would turn black. This is the actual beginning of the process. This stage is often referred to as the *nigredo*, the blackening. The alchemist needed to continue heating the flask, in order to make the blackness disappear. Usually this would be replaced by a multitude of fast-changing colours, often called the 'peacock's tail.' Thereafter, the mixture would grow lighter until it would become white. The white colour marks the completion of the white elixir, which is necessary to create the Philosopher's Stone. After the *albedo*, silver was usually added and the heating continued until yellow arose. This was sometimes seen as the *citrinitas*, the yellow stage between the white and the red.<sup>387</sup> The yellow stage rarely featured in alchemical works during the early modern period. It would be mentioned but rarely be elaborated upon.<sup>388</sup> It then darkened and turned red, which marks the *rubedo* and final stage of the *opus*. The red elixir then needed to be fermented, that is mixed with gold, and incrated, making the elixir fusible as wax.<sup>389</sup>

### 7.1.1. Alchemical Wedding

Dorn, like many other alchemists, will liken the process to that of the creation of a foetus in the mother.<sup>390</sup> During the *nigredo*, the embryo is conceived, which will then grow throughout the *opus* until it is 'born' during the *rubedo*. This metaphor is reflected in the employed terminology. The vase is often called the 'egg of the philosopher', due to its size and the shape of its belly as well as the fact that it 'gives birth' to the stone.<sup>391</sup> This metaphor is further supported by the fourth precept in the Emerald Table: "its father is the Sun, its mother the Moon; the wind carries

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<sup>385</sup> Principe, *Secrets of Alchemy*, 111.

<sup>386</sup> Principe, *Secrets of Alchemy*, 111.

<sup>387</sup> Principe, *Secrets of Alchemy*, 123-4.

<sup>388</sup> Abraham, *Dictionary*, 42.

<sup>389</sup> Principe, *Secrets of Alchemy*, 123-5.

<sup>390</sup> Dorn, *AS*, 324.

<sup>391</sup> Principe, *Secrets of Alchemy*, 123.

it in its belly, its nurse is the earth.” This aphorism is a complex one with many possible interpretations. First, there is the association of the astrological symbols for sun and moon with the alchemical symbols for gold and silver, two important metals in the *opus*.<sup>392</sup> Secondly, the qualities ascribed to the sun and the moon make it possible to link them to the elements. Sun becomes fire, Moon becomes water.<sup>393</sup> During the alchemical work, the fire generates the *prima materia*, born from water, which has been brought down by the air (wind) and must be nourished by the earth.<sup>394</sup> Finally, as mentioned in chapter two, some alchemists believed that the Tablet held the secret of making the Philosopher’s Stone. Interpreting the precept as an instruction on making the elixir, it could very well mean that the Sun and the Moon must come together to create the philosophical child, the Stone. The Sun is the king, the hot and dry principle that is joined with the Moon, the queen and the moist, cold, receptive principle.<sup>395</sup> Further support for this is found in the notion of a chymical wedding. The metaphysical work is said to unite opposites, such as the male and female, form and matter, spirit and body.<sup>396</sup> The union of opposing principles fits nicely in Dorn’s theo-cosmological myth. The goal of our alchemist was to return to the unitary, by means of uniting the binary of heaven and earth, by means of a third mediating principle which can aid them in returning to the one. As seen in section 6.2.2, this mediating principle is our mercury, which is brought forth from the union of the sulphur and quicksilver. The union of sulphur and quicksilver can, in turn, be related to the union of the Sun and the Moon, since their principles are the same and is also present in alchemical imagery.

The idea of an alchemical marriage is also present in Dorn’s description of the *magnum opus*. He understands the union of matter and form as taking place in “the uterus of our philosophical heaven.”<sup>397</sup> This metaphor is used to note the glass vessel in which the operations occur: the philosophical heaven is the top, the long neck, of the vessel, whereas the uterus notes the bottom, which is the round bottom of the matter.<sup>398</sup> Matter and form are the two opposites that need to be united. This union thus occurs in the glass vessel, the egg of the philosopher. The philosophical heaven, the top of the alembic can in turn be linked to the element of air, whereas the uterus, the bottom where the sediments remain, serves as the earth that nourishes the foetus. Herein lies the connection with the fourth Hermetic principle, where the air carries it in its belly and the earth nourishes it.

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<sup>392</sup> Shumaker, *Occult Sciences*, 179.

<sup>393</sup> Abraham, *Dictionary*, 34-5.

<sup>394</sup> Shumaker, *Occult Sciences*, 179.

<sup>395</sup> Abraham, *Dictionary*, 120.

<sup>396</sup> Abraham, *Dictionary*, 35-9.

<sup>397</sup> “utero caeli nostril philosophici,” Dorn, *AS*, 324.

<sup>398</sup> Dorn, *DTP*, 30.



Figure 5 Nutrix ejus terra est.

### 7.1.2. Solve et Coagula

The chymical wedding is only one aspect of the alchemical *opus*, and usually follows the dissolution. Indeed, before a union can take place, the starting material first needs to be dissolved into the *prima materia*. It can then coagulate with a new and purer form. During the process, which consists of a repeated cycle of *solve et coagula*, a solid body is dissolved in a liquid (spirit), after which the fluid substance is once more coagulated into a solid.<sup>399</sup> The aim of the repeated cycles is to create the most pure and potent form, which is the *ultima materia* or most perfect medicine. Processes of separation and conjunction are often associated with dissolution and coagulation. The separation of the soul and spirits from the body corresponds to the solution, where the body is cleansed from its impurities. The reunion of body and soul takes place when it coagulates.<sup>400</sup> During this process our mercury is refined. It is first separated from the matter, and becomes a spirit, where it can further enable the process to create the *ultima materia*, and become the most purified and approach its original celestial influence as the intellectual mercury that holds the quintessence.

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<sup>399</sup> Abraham, *Dictionary*, 186-7.

<sup>400</sup> Abraham, *Dictionary*, 187.

The axiom of *solve et coagula* also features in Dorn's supernatural art. He figures them as two wheels, namely the *rota corruptionis* and the *rota generationis*. These wheels entail the two-step process of alteration as seen in section 6.1.2. By means of corruption the alchemist dissolves the starting materials in the *prima materia*. The wheel of generation, in turn, begins from the prime matter and generates the perfect microcosm in the glass vessel.<sup>401</sup> During the rotations the spirit is separated from the body and flees to the top of the alembic. This occurs during the putrefaction by means of calcination, where the starting material is heated and then dissolved: the form is separated from the matter.<sup>402</sup> The matter remains at the bottom, whereas the spirit (the form) is at the top of the alembic. Before the alchemist can commence the wheel of generation, the spirit and matter need to be purified. In a first stage of the *rota generationis*, the spirit is purified and joined with the soul. In a later stage, the united spirit and soul are joined with the purified body where the supreme union takes place and the elixir is created. The purification of the body occurs during the *albedo*, where the blackened matter, also called excrement or faeces, is purified into the *prima materia*.<sup>403</sup>

Interestingly, Dorn claims that a further union may occur, this one between the restored and reunited body, spirit and soul on the one hand, and the *unus mundus* on the other.<sup>404</sup> The alchemist's ultimate goal with his supernatural art thus goes beyond curing the illnesses in the microcosm; he wishes to reunite the microcosm and the macrocosm. This union with the *unus mundus* will be fully explored in a later chapter.

## 7.2. *Rota Corruptionis*

The notion that the material must first be destroyed to arise anew is founded on the belief that nature can only be renewed after dying away.<sup>405</sup> Only once the old has been dissolved, something new can be resurrected from its remains and that is where the generation begins. The corruptive wheel therefore begins with the annihilation of the impure matter. It coincides with the *nigredo* phase of the work.

"The colour first signifies that heaven has its own action and operation in the forms, or in the less perfect and the form."<sup>406</sup> Our alchemist refers here to the role of our mercury as the guide through which the *opus* is enacted. It is present in the form, aiding the volatilisation of the spirit

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<sup>401</sup> Dorn, AS, 331.

<sup>402</sup> Dorn, AS, 332.

<sup>403</sup> Dorn calls it "fimum."

<sup>404</sup> Abraham, *Dictionary*, 38.

<sup>405</sup> Abraham, *Dictionary*, 160.

<sup>406</sup> "Primus color denotat caelum in formas actionem suam et operationem habere vel in minus perfectum et formam." Dorn, AS, 326.

and the separation of the form from the matter, as well as its role in moving the potentiality to the minor perfection, that is the white elixir or the vegetative mercury. Our mercury is not the only aid in the *opus*. Dorn also reminds the philosophers of this art that, like the moving visible heavens, the forms holds in itself natural inclinations and desires.<sup>407</sup> Once again, Dorn thus emphasizes the given longing of living things to return to the one, the Chaos from whence they came. This desire for the union, strengthened by the memory of Chaos, of the harmony when everything was together, provides an extra push to the *opus* - the philosopher only needs to help the forms along by imitating the natural process of alteration.

This notion is very similar to the theory explaining why transmutation of metals is possible. The theory of transmutation relies on the belief that metals automatically strive to reach perfection (i.e. gold), and that alchemists were simply speeding up the natural process.<sup>408</sup> Although the overt goal of Dorn's art is not to transmute base metals into gold, but to create the universal medicine, it is founded on a similar principle: the forms want to go back to their initial state of Chaos where everything was together in the one. By breaking down mater, the form is separated from it and it thus results in the excrement, which holds no form. The form, which entails the spirit, rises to the top where the alchemist can alter it into another form through purification. This is what is done during the corruptive rotations: the impure, mixed matter dies and is dissolved, whereas the spirit has fled to the top of the vessel where it is further manipulated by the alchemist and turned into a purer form. The operations of the alchemist can alter the form, purifying it until it approaches its celestial state: Dorn describes this as the lying together of the heaven and form to conceive the embryo in the uterus.<sup>409</sup> This is understood as the union of the soul and spirit which then later descends into the *prima materia*, lying on the bottom of the vessel, the uterus. The embryo is the vegetative child; it is the creation of the vegetative mercury, which is the universal transformative substance needed to guide the rest of the work.

### 7.2.1. Calcination and Dissolution

Calcination entails a purification and pulverisation of the bodies through an external fire.<sup>410</sup> The addition of a gentle heat returns the body to its *prima materia* and makes it more susceptible for the influx of the spirit in a later phase of coagulation.<sup>411</sup> Calcination separates the spirit or

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<sup>407</sup> Dorn, *AS*, 333.

<sup>408</sup> Principe, *The Secrets of Alchemy*, 109-10.

<sup>409</sup> "formas cum caelo concubuiss, nec non hoc embryonem in utero suo concepisse," Dorn, *AS*, 325.

<sup>410</sup> Pernety, *DMH*, 28.

<sup>411</sup> Abraham, *Dictionary*, 31.

humid that keeps the material together so that the escaped substance can be altered and corrupted.<sup>412</sup>

In the *opus* Dorn calcinates three metals. The first is the calcination of the vulgar mercury.<sup>413</sup> The vulgar *Mercurius* is different from the *Mercurius* mentioned before. The vulgar mercury is 'dead', because its internal fire is sleeping.<sup>414</sup> It is opposed to the quicksilver, which is alive and abundant with spirits.<sup>415</sup> Through calcination, the alchemist can bring out the *Sol* and *Luna*, because Dorn believes that they have suffered under the vulgar mercury.<sup>416</sup> *Sol* is the sulphur of the philosophers and *Luna* the quicksilver.<sup>417</sup> Bringing out the Sun and the Moon is an important part of the alchemical *opus*, since they are often associated with the two opposites that need to be joined in a later stage. Due to the ambiguity of the terms, it is not always clear to what the alchemist denotes. Nevertheless, sulphur and quicksilver return throughout the *opus*, making our proposed identification most likely. Furthermore, quicksilver is associated with the moist, cold and female principle, whereas sulphur is associated with the hot, dry and male principle and can be related to the union of opposites. Freeing the quicksilver and sulphur from the vulgar mercury makes it possible for the alchemist to produce our mercury, the activating spirit guiding the work.

A second metal that Dorn calcinates is Mars, or iron, to bring forward the stronger, yellowish acid. This might already refer to a later stage, the *citrititas*. But it might also refer to a tincture, a colouring agent added to the work. Dorn states that the sulphur of nature must go through the yellow and green to become sublimated.<sup>418</sup> The sulphur of nature is used to differentiate it from the philosophical sulphur. The philosophical sulphur is the abstract principle, it is a constitutive element of the matter, it is the internal fire residing in the metals.<sup>419</sup> The colour green is associated with Venus, which is the third metal Dorn calcinates, with sulphur and gold pigment.<sup>420</sup> Venus symbolises the metal copper. Dorn implies that, in this case, the copper is calcinated, and thus becomes a liquid through the addition of sulphur and a gold pigment from nature.

Copper is considered as the most perfectible of all the base metals, because it consists of a large proportion of mercury. Through calcinating the copper, the impure and corrupted matter

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<sup>412</sup> Pernety, *FE*, 178.

<sup>413</sup> Dorn, *AS*, 329.

<sup>414</sup> Pernety, *DMH*, 106.

<sup>415</sup> Dorn, *AS*, 330.

<sup>416</sup> Dorn, *AS*, 329.

<sup>417</sup> Pernety, *DMH*, 163.

<sup>418</sup> Dorn, *AS*, 330.

<sup>419</sup> Abraham, *Dictionary*, 193.

<sup>420</sup> Dorn, *AS*, 329.

dissolves and the philosophical mercury can be easily drawn out. Furthermore, Venus is often associated with the colour green, which usually arises after the *nigredo*.<sup>421</sup> The succession of the addition of Mars and Venus is also meaningful, for Venus can function as the receptive substance, the argent-vif, while Mars serves as the active substance: sulphur must be united to these two.<sup>422</sup> Once more, a chemical union takes place, and this is the creation of the oil, which is the form holding the colour green and the yellow colour.<sup>423</sup> The oil will be used during the *rubedo* phase of the work.

The last calcination mentioned by Dorn is that of the philosophical key and all the bodies of metal.<sup>424</sup> Our alchemist equates the philosophical key with heaven.<sup>425</sup> Dorn earlier equated the heaven with our mercury, so the philosophical key should be understood as the transformative substance guiding the work. By means of our mercury, the bodies of the metal are dissolved and altered into the prime matter. The aim of this calcination is to create the *menstruum*, the mercurial solvent of the philosophers. It volatilises and spermatises the bodies by releasing the seeds from the metals.<sup>426</sup> The seeds were something akin to the soul of the metals. Section 7.3.1. will delve further into the notion of seed. Our mercury thus volatilises the spirits of the metals, aiding them in fleeing from the matter. Once the spirit leaves the body, the body can no longer subsist since it no longer holds the substantial form. The *menstruum* will come back in a later stage of the *opus*, namely the *rubedo*.

### 7.2.2. Putrefaction

Calcination makes for the separation of the spirits of the bodies, dissolution makes for the liquefying of the bodies. Since water, in Dorn's opinion, served as the material from which the heaven, the earth, the prime matter and the abyss were made, it follows that everything needs to be dissolved in it before a new material can arise. The sediments remaining at the bottom of the alembic need to be dissolved and returned to their initial watery state. Once the alchemist has dissolved the bodies, he can commence the "repetition of the founding with the heaven above the earth."<sup>427</sup> The latter work is also likened to the destruction of the water to create the heaven and then the earth, which is what the alchemist must do on a microcosmic scale in his alembic.

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<sup>421</sup> Abraham, *Dictionary*, 208-9.

<sup>422</sup> Abraham, *Dictionary*, 209.

<sup>423</sup> Dorn, *AS*, 331.

<sup>424</sup> Dorn, *AS*, 329.

<sup>425</sup> "clavis philosophica hoc loco, non aliter quam caelum ipsum in opere maiore consideratur," Dorn, *AS*, 329.

<sup>426</sup> Abraham, *Dictionary*, 124.

<sup>427</sup> "Iteratio caelo fusionis super terram," Dorn, *AS*, 335.



Through gentle fire, the water is distilled until only air and the sediments (excrements) remain. From then, the alchemist can bring forth the souls of air and fire. The soul is held in the spirit: it holds the internal fire, the spark of life. The external fire needed to corrupt the material, is said to also activate this internal fire so that it can be released from the matter. The liberation of the spirit and the soul can thus only occur by activating the internal fire which holds the substance together.<sup>428</sup> Once the souls of air and fire are brought out, the sulphur of nature, that is the chymical compound, sulphur, can be converted and the soul of earth emerges.<sup>429</sup> The soul of the earth is the essential form of earth.

This process coincides with the putrefaction. The bodies of the lovers, the red male and the white female, the Sun and the Moon, the quicksilver and the sulphur need to lie dead in the grave (putrefaction) to free the soul.<sup>430</sup> This part of the *opus* begins with the released Sol and Luna from the vulgar mercury. During the calcination Dorn has reduced the vulgar mercury into the faeces, whereas the soul has been released and the spirits have risen as volatile vapours. Putrefaction thus entails a decomposition of matter, “the dead of the matter,” where it is reduced into its initial form and the *terra damnata*, the excrement. The male, sulphur, and the female, quicksilver, come together and commence the particular creation: the conception of the philosophical child.<sup>431</sup> The souls of the sulphur and quicksilver, which were brought forth from the vulgar mercury, have fled to the top of the alembic while their bodies lie dead. Following the axiom of *solve et coagula*, a wedding takes place where the blackened putrefying bodies are washed of the impurities and whitened to the *albedo*. This water comes from the spirit that condenses and descends again on the dead below. This descent is sometimes described as the ‘tears from heaven’ that cleanse the blackened bodies.<sup>432</sup> Here begins the purification and the whitening, it is thus the start of the *albedo* phase of the work.

### 7.3. *Rota Generationis*

You will judge by this sign that the form, or form and heaven together, are transiting through alteration, generation, operations, and the joining through love, or that a bond has been made between the form converted into the heaven, and heaven into the form.<sup>433</sup>

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<sup>428</sup> Pernetý, *DMH*, 146.

<sup>429</sup> Dorn, *AS*, 336-7.

<sup>430</sup> Abraham, *Dictionary*, 68.

<sup>431</sup> Dorn, *AS*, 323.

<sup>432</sup> Abraham, *Dictionary*, 1.

<sup>433</sup> “Hoc signo iudicabis formam vel formam & caelum transire per alterationem, generationem & operationem, ac amoris colligantiam, aut vinculum esse factum inter formam in caelum conversam & hoc in illam.” Dorn, *AS*, 340.

The wheel of corruption has dissolved the starting material in sediments as well as separated the spirit and soul from the matter of the Stone. The form described above, is the spirit, whereas the heaven should be understood as the soul. Dorn describes the union of the spirit and the soul: converting into one another refers to the fact that they become one and the same, they are indiscernible from one another. We should also take note on the use of the notions *amor* and *vinculum* when he describes the process of transmutation. Herein resonates the alchemical imagery of the chymical wedding, the idea that the Stone can only be created from a union of the male and the female.

### 7.3.1. The Albedo: Generation of the White Elixir

Before the spirit or the united spirit and soul can animate the body, the faeces need to be purified into the *prima materia*. The mercurial waters, which come from the condensed spirit, infuse the excrement and cleanse it from the impurities until only the purest earth remains.<sup>434</sup> The blackened, putrefied body is thus purified into the *limus*. As mentioned in section 5.3.1, the *limus* is the slime, the dirt, from which God has created his creatures. It thus constitutes the *prima materia*, the first matter from which everything was created. The *limus* in the glass vessel is the artificially made elevated earth, the primal ooze, the water and earth from which the matter of the Philosopher's Stone is made. During the purification, the matter is whitened and it is called the white foliated earth. The white foliated earth is opposed to the *terra damnata*, the impure dregs or excrement from which the alchemist separates the pure matter of the stone.<sup>435</sup> The purified earth now awaits animation: the spirit and soul can now descend into the purified matter. Due to the *prima materia* being pure *potentia*, it can thus receive any form and become the actuality of everything.

In alchemical imagery (figure 6), the process of reanimation is likened to sowing the seed in the earth. The notion of seed is a common feature of alchemical works. For Dorn, the process of whitening is associated with the diffusion of the seed “throughout the substance of our philosophical heaven.”<sup>436</sup> This seed is often likened to an interior heat, which in turn can be related to the vital heat providing the body with an animating soul. This idea is also present in seminal theory, which was fully developed by the Danish Paracelsian, Petrus Severinus (1542–1602) in his *Idea medicinae philosophicae* (1571). Severinus' *Idea* proved to be highly influential, providing a common key to Paracelsian medicine.<sup>437</sup> The *semina* in Severinus' theory served as a central concept in explaining causation in the material world. Seeds are “discrete, individual

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<sup>434</sup> Dorn, AS, 333.

<sup>435</sup> Abraham, *Dictionary*, 73.

<sup>436</sup> “sperma diffusum est per totam substantiam nostri caeli philosophici.” Dorn, AS, 325.

<sup>437</sup> Debus, *Chemical Philosophy*, 131.

centres of actualisation in the world, centres of divinely predestined activity.”<sup>438</sup> The *semina* are present in all parts of a given body. They hold a magisterial power of life, are of an astral nature, they do hold an astral body with the quintessence, and cannot be destroyed during the alchemical *opus*.<sup>439</sup> It is thus something of an *Arcanum*, transcending the celestial realm and constituting the divine element in all terrestrial bodies. *Semina* are a vital principle of nature and they are given various names, including “balsam of life”, quintessence and mercury.<sup>440</sup> They are also associated with the soul of the metals, because it is said to be a life spark, consisting of both an interior heat, the sulphur of the philosopher and a moist spirit, the argent-vif, the quicksilver.<sup>441</sup> The spreading of the seed is referred to by Dorn as the yellow stage, where the senses and the membrane of the child are formed.<sup>442</sup>

During digestion, heat is applied to nourish the seed for it to grow into white and minor perfection.<sup>443</sup> The exterior heat is said to kindle the interior heat, to generate the soul. The alchemist can follow the process of reanimation through the various colours. Firstly, there is green and red, then yellow and splendid red appear, noting the conjoining of the part and the whole. Then there is the white and the splendid which marks the termination of the body of the infant.<sup>444</sup> The body is now ready to receive the soul, and once the true, snowy white arises with the metallic colour, the soul is in the body.<sup>445</sup> The pure and amorphous matter has received its form by way of the seed spreading itself through the body, which is that of a female and it is the minor perfection. The association of the minor perfection with the feminine is based on Aristotle’s vital heat. According to the Greek philosopher, the offspring receives its form from the male parent. The male seed thus holds an informing ability through its vital heat. The female form was said to be the result of semen that is deficient in its vital heat and fails to impose its male form on the matter.<sup>446</sup> The white is deficient and does not hold the true form of the human, namely the intellectual. It only holds the vegetative mercury and must be further manipulated so that it can receive the intellectual mercury.

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<sup>438</sup> Jole Shackelford, *A Philosophical Path for Paracelsian Medicine: the Ideas, Intellectual Context, and Influence of Petrus Severinus (1540/2-1602)*, (Kopenhagen: Museum Tusulanum Press, 2004), 168.

<sup>439</sup> Debus, *Chemical Philosophy*, 130.

<sup>440</sup> Shackelford, *A Philosophical Path*, 167.

<sup>441</sup> Abraham, *Dictionary*, 180.

<sup>442</sup> Dorn, *AS*, 325.

<sup>443</sup> Dorn, *AS*, 324.

<sup>444</sup> Dorn, *AS*, 341.

<sup>445</sup> Dorn, *AS*, 341.

<sup>446</sup> Freudenthal, *Aristotle’s Theory of Material Substance*, 24-5.



Figure 6 *Seminate aurum vestrum in terram albam foliatam*

### 7.3.2. The *Rubedo*: Generation of the Red Elixir

The wheel of generation first produces the minor perfection or the white elixir. The white elixir only holds the potentiality to become the universal medicine. The creation of the white stone is thus a prerequisite to create the red stone, or the Philosopher's Stone. The white stone holds the vegetative mercury, it can thus grow and nourish, but it cannot cure all infirmities because it does not hold the intellective mercury. The major perfection is attained through fermentation and multiplication, which educes the potentiality existing in the white stone in the actuality of the universal medicine.<sup>447</sup>

The alchemist continues with the addition of heat, enabling the process of sublimation. Sublimation entails a vaporisation and distillation where the soul of the Stone is driven up and down from the matter.<sup>448</sup> The soul thus holds the liberty to freely go in and out of the material body. The goal of the sublimation is for the refinement of the soul, advancing it to "its most general origin."<sup>449</sup> This general origin is the *quinta essentia*, or the heaven, which should be understood as the intellectual mercury that is incorruptible and eternal.<sup>450</sup> Because the soul is not fixed, another union will occur to permanently fix the soul into the body. But before that, our alchemist adds the oil, "drop after drop", which he has created during the calcination of

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<sup>447</sup> Dorn, AS, 327.

<sup>448</sup> Abraham, *Dictionary*, 74.

<sup>449</sup> "ad genus generalissimum suum proxime accedens," Dorn, AS, 350

<sup>450</sup> Dorn, AS, 350.

Mars (iron) and Venus (copper) as seen in section 7.2.2. The oil is added to the mixture so that the material can gain a wax-like consistency.<sup>451</sup> This is also referred to as the process of (in)ceration or congelation. The pulverised matter is made soft and fusible, by adding a liquid to it. The inceration is also associated with the mixing of gold.<sup>452</sup> Dorn does not mention anything about adding gold, but it is quite possible that it is implied in the use of the word “inceratio.” The conjunction of the vegetative mercury and the *limus*, the first matter from which all creatures were created, and with the addition of the oil resulted in what our alchemist calls the philosophical gum.<sup>453</sup> The gum is the *prima materia* containing the seeds of the metal.<sup>454</sup> Due to the association of the inceration with the addition of gold, this might be the seeds of gold. This can further be supported by the general belief that gold was the only metal that could endure the constant heating and the reiterated cycles of *solve et coagula*. Gold was further likened to the Sun, the physical equivalent of the eternal spirit. The constant refinement of the metal through the fire resulted in the fixation of the eternal spirit.<sup>455</sup>

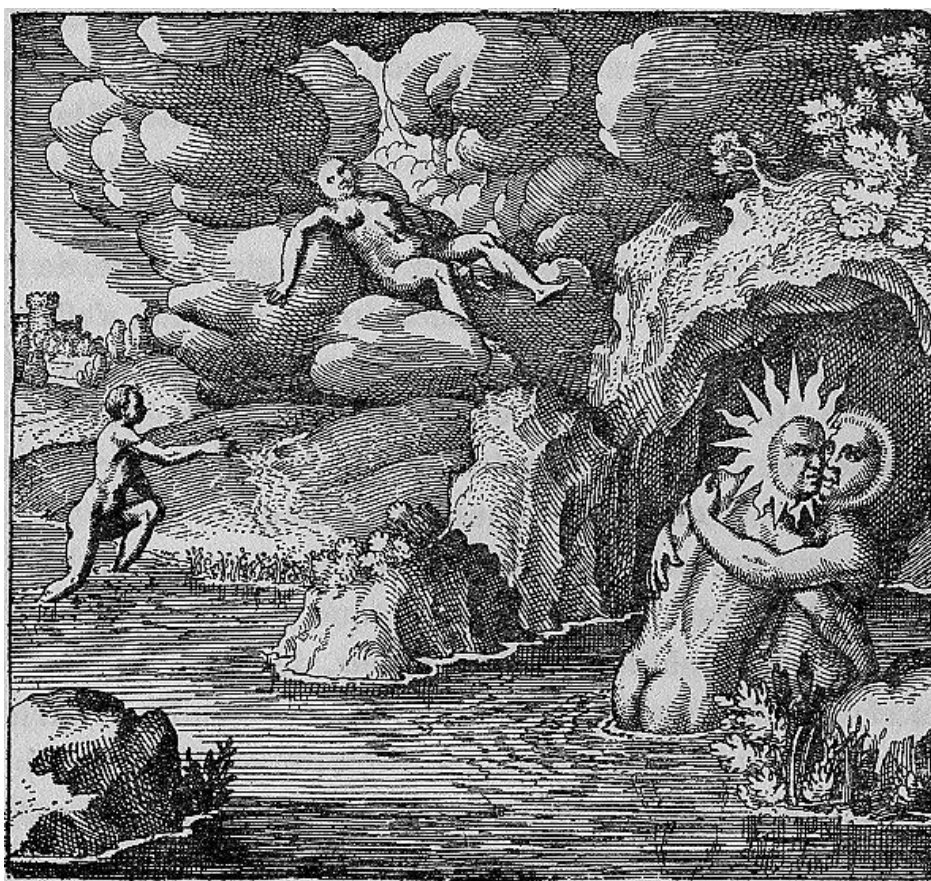


Figure 7 In balneis concipitur, & in aere nascitur, rubeus verò factus graditur super aquas

<sup>451</sup> “gutta post guttam,” Dorn, AS, 350.

<sup>452</sup> Pernetty, DMH, 79.

<sup>453</sup> “gumma philosophicum,” Dorn, AS, 350.

<sup>454</sup> Abraham, Dictionary, 94.

<sup>455</sup> Abraham, Dictionary, 170.

The fixation of the eternal spirit is what occurs during the following stage of the work: the fermentation. Fermentation is sometimes also associated with the addition of gold, and Dorn instructs his reader to dissolve gold, so we can presume that sometime between the inceration and the fermentation, the alchemist has added some gold to the material.<sup>456</sup> Fermentation entails another chymical wedding, a permanent union between the soul and the body. The philosophical gum acts as a mercurial medium, aiding the conjunction of the body and soul.<sup>457</sup> The process of fermentation is likened to the germination of the seed. The philosophical menstruum, the mercurial waters, created during the calcination of our mercury with the metals, is added and aids the growth of the seeds, which were present in the philosophical gum. Through the fermentation, the seeds are nourished and can grow into the Philosopher's Stone. The addition of the mercurial waters also commences the process of multiplication. The mercurial waters can be associated with the blood mentioned in section 6.3. Blood is the nourishing substance, helping the Stone grow into maturity, as well as it being used to clean the matter from its impurities. The role of cleansing ascribed to blood is founded on the belief that the shedding of blood from a pure being would wash away the sins of the impure thing.<sup>458</sup> It is thus through the dissolution of the white elixir that the blood is released and it can take up its role as transformative substance as well as its function as cleanser. Dorn defines this process of multiplication as the "reduction of the evacuated thing above its earth so the spirit of cleanliness can emerge."<sup>459</sup> This process entails a constant addition of the mercurial waters where the red stone is cleaned and refined through a repeated cycle of dissolution and coagulation: it is turned into a liquid and then back into a solid matter. The goal is to augment the weight, the volume and the potentiality of the red stone.<sup>460</sup>

#### 7.4. The Philosopher's Stone

The fire of the stone exists from the essential fire of the body and from the coessential fire of the vegetative *menstruum*, from which the one is composed, which can instantaneously transmute all metals, with the aid of the aforementioned fire by its vegetative potentiality. The elemental bodies must be distilled with their own *menstruum* into the major stone, until they are fixed and no actual *menstruum* is apparent *actualiter* in them.<sup>461</sup>

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<sup>456</sup> "solveris aurum," Dorn, AS, 353.

<sup>457</sup> Abraham, *Dictionary*, 94.

<sup>458</sup> Abraham, *Dictionary*, 28.

<sup>459</sup> *Evacuatae rei super terram suam est reductio, ut munditiae spiritus oriatur,*" Dorn, AS, 351.

<sup>460</sup> Abraham, *Dictionary*, 132.

<sup>461</sup> "ignis lapidis constat ex essentia corporis igne & ex coessentiali menstrui vegetabilis igne, ex quibus unicus componitur, qui mementaenee metalla transmutat omnia : iuvante quidem igne praedicto vegetativa sua potentia. Elementa corporum toties destillari debent cum ipso menstruo ad magnum lapidem, quousque sint fixa & menstrui nihil appareat cum eis actualiter." Dorn, AS, 352.

Fire was described by Paracelsus as the “great Arcanum of the art.”<sup>462</sup> It is present throughout the work, from the very beginning of the *nigredo*, to the increasing fire to make the white stone arise, which is then calcined and dried up until the red arises.<sup>463</sup> But fire is more than just the external heat, enabling the process of transmutation; it is also the interior heat, the celestial fire animating the body. This celestial fire is sometimes equated by Dorn with the philosophical mercury, as well as with the essence of a metal.<sup>464</sup>

The fire of the stone designates both the essence and the vital principle of the stone. One stone is composed of the “fire of the vegetative *menstruum*,” by which Dorn refers to the white elixir holding the vegetative mercury. The vegetative *menstruum* is the medium which conjoins the matter and form of the minor perfection. It is not the major perfection, it can only hold the potentiality of moving to perfection. Through fermentation and multiplication, it can become the major stone, precisely out of the *menstruum*. The latter is the material from which the philosophical mercury can be extracted, from which –as Dorn puts it elsewhere– the seeds can be taken and planted into the earth.<sup>465</sup> The *quinta essentia* can then be brought into the stone and be fixed, so the spirit cannot flee from the body. For the boundary between potentiality and act is endangered by the possibility of the fleeing of the spirit during the washing: the restoration and unification of the soul, spirit and body.<sup>466</sup>

Dorn will discern three stones, each having a different gradation of curing. The author follows the different reigns of nature. The first is the mineral stone, in which the *quinta essentia* is present as a spirit of life and death.<sup>467</sup> These denote the vulgar precious stones created throughout the *opus*, Dorn also calls them transitory stone, aiding in the creation of the Philosopher’s Stone. Because the alchemist is to follow the way of nature, through alteration, he can only create the vulgar precious stones, such as coal and steel, as well as sapphires, emerald, rubies, topaz. Being vulgar, these do not capture the virtue of the Philosopher’s Stone, namely the *quinta essentia* of the philosophical mercury.<sup>468</sup> They are not able to heal, they only hold within themselves life and death which cannot be transferred to other beings. By means of animation, the alchemist can first create the vegetative stone, which holds the vegetative mercury. The spirit of the quintessence can restore youth and conserve the human body from corruption. The last is the animal stone, which follows from the vegetative stone, but it can do

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<sup>462</sup> Abraham, *Dictionary*, 76.

<sup>463</sup> Abraham, *Dictionary*, 76.

<sup>464</sup> Pernety, *DMH*, 60-1.

<sup>465</sup> Pernety, *DMH*, 105.

<sup>466</sup> Dorn, *AS*, 352.

<sup>467</sup> Dorn, *AS*, 352.

<sup>468</sup> Dorn, *AS*, 356.

more than just restore youth and conserve the body from corruption: it holds the greatest medicine.<sup>469</sup>

## 7.5. Paracelsus' Conception of Human Creation and Dorn's Generation of the Philosopher's Stone

Recognise that the hand of God made the first humans and he made them in his likeness in blood and flesh, and it became a human. After that the first human and his wife were subject to nature, and never again did the hand of God create a miracle, rather it all happens through nature, and therefore nature commands the creation of humans and it comes from a particular *massa*. The *massa* is called the seed in nature. But it is not man and woman alone that make a human, rather the elements and the spirits of the stars.<sup>470</sup>

This passage comes from Paracelsus, but it resonates in Dorn's philosophy as well as in the creation of the Philosopher's Stone. The first part can be related to Dorn's theo-cosmological myth, where God created Adam as the ultimate creature. But, because they took a bite of the forbidden fruit, Adam and Eve were cast out of Eden and thrown into the elementary world; which is the natural world. Furthermore, Dorn believed that humans could only perceive the natural world, they could not see the hidden powers at work in the natural world. The alchemist was to follow the way of nature in order to accomplish the miracle; simply speeding up the processes already occurring in nature. The notion of seeds is also present in Dorn's alchemy: seeds were seen as the centres of predestined divine activity. They held a certain *potentia* to grow into the actuality of whatever God ordained them to become. Lastly, Paracelsus states that man and woman alone that conceive a child, it is also through the elements and the spirits of the stars. The four elements, earth, air, water and fire, constitute all of nature, they are the abstract principles, the building blocks of nature. But the life of nature, the vital power, comes from the spirits of the stars, which in Dorn's philosophy relates to the *quinta essentia*.

In the laboratory, the alchemist generates the Philosopher's Stone through a union of opposites. These are usually imagined as a man and woman who lay together to conceive a child. As we have seen in chapter seven, there is often a *tertium*, our mercury, guiding the consummation. All this happens in the glass vessel where the sulphur and the quicksilver were mixed. During the process of creating the Stone, the alchemist returns the staring material to the *limus*, the *prima materia* from which God created his creatures. Once the *limus* has been produced the alchemist had to inform it, educating the pure *potentia* in the actuality of the Stone. This process entailed sowing the seeds into the matter so that they could then be nourished and grow into the elixir.

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<sup>469</sup> Dorn, AS, 352.

<sup>470</sup> Amy Eisen Cislo, *Paracelsus's Theory of Embodiment*, (New York: Routledge, 2016), 74.



In the production of the Philosopher's Stone, the seeds are placed in the philosophical gum which nurtures them. In Paracelsus' account of the growth of the foetus, he states that the "seeds lie in the mother."<sup>471</sup> Paracelsus relates the mother's womb to the natural world, it is the microcosm lacking divine influence.<sup>472</sup> The womb is separate from the divine world and Paracelsus will explain that the child holds no spirit until the moment of birth. This separation of the body and the spirit is further expressed in Paracelsus' belief that humans have two bodies: a spiritual and elemental. The elemental body comes from the earth, whereas the spiritual body comes from the stars.<sup>473</sup> Expanding on the notion of two bodies, Paracelsus delineates between the workings of nature and the workings of God: "nature dissipates and the grace of God completes the creation of humans."<sup>474</sup>

Dorn makes a similar separation. Alteration, by means of corruption and generation, entail mere physical operations, they all occur within the elementary realm. The moment that the alchemist has produced the white foliated earth, the process of animation begins. Animation was the process through which the spirit and soul were brought into the purified matter of the Stone. In the same way that God is present during the completion of the creation of humans, so also has the alchemist a hand in the production of the Philosopher's Stone. This can also be related to the notion that the alchemist generates the egg from his intellect.<sup>475</sup> The alchemist, as a human, holds an intellective soul, which can be likened to the divine element that God inserts in the humans in Paracelsus' account of creation. Likewise, the alchemist thus brings a piece of the intellective soul into the Stone.

The notion that humans have two bodies, namely a spiritual and an elemental is also expressed by Paracelsus' conception of a corporeal birth and a spiritual birth. Paracelsus stated that "a human is twice created: first from the earth and then the other way, from God's inspiration."<sup>476</sup> This also holds true for the Philosopher's Stone in Dorn's work. The alchemist must first create the matter of the stone from the *limus* and then, from the alchemist's intellect, the spirit and soul are breathed into the matter. The Stone has both earthly, elementary ties as well as a connection to the divine. It thus holds within itself both the lower world and the higher world: it holds the elementary and the divine. In turn, the Stone becomes a *tertium*, linking the heavenly fire with the elementary fire, providing the possibility for the elementary fire to fix itself and regain its incorruptible nature. This ability of the Stone is what makes it a panacea, a

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<sup>471</sup> Cislo, *Paracelsus*, 114.

<sup>472</sup> Cislo, *Paracelsus*, 61.

<sup>473</sup> Cislo, *Paracelsus*, 63.

<sup>474</sup> Cislo, *Paracelsus*, 114.

<sup>475</sup> "generat ovum ex intellectu," Dorn, *AS*, 339.

<sup>476</sup> Cislo, *Paracelsus*, 53.

universal medicine. The internal, celestial fire of the Stone can kindle the elementary fire present in all of nature and enable the process of restoration. It can help the human being in liberating the Edenic core of Creation, providing the spagyric key to awaken the slumbering celestial fire.

Dorn himself believed that the “egg was generated from the intellect” of the philosopher.<sup>477</sup> The author indicated that the truth of the panacea could only be found in men.<sup>478</sup> The truth of the panacea should be understood as the recipe and the working of the universal medicine. Dorn believed that the supernatural art could only be realised by the grace of God; but humans can gain access to this truth by way of a spiritual process.

For Dorn, production of the elixir was never about the transmutation of metals, it was about finding the universal medicine that could cure all illnesses. Because the truth could only be found within men, the alchemist was a central element within the *opus*. He had to insert the intellectual form in the major perfection to educe the potentiality of the stone into act. Furthermore, the conception of the stone as stemming from the philosopher’s own intellectual soul adds a spiritual dimension to Dorn’s alchemical goals. The alchemist needed to have a pure soul to accomplish the marvellous and to receive the truth. Gerhard Dorn therefore describes a process of how this could be achieved, to which the following chapter will now turn.

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<sup>477</sup> “generat ovum ex intellectu,” Dorn, *AS*, 339.

<sup>478</sup> Abraham, *Dictionary*, 147.

## 8. Soteriological Praxis: Spiritual Salvation and the Supernatural Art

The *Artificio Supernaturali* holds the promise of granting access to the hidden. One can uncover a higher or perfect knowledge, and gain an understanding of the secrets of nature.<sup>479</sup> The aim of the metaphysical work is about more than the creation of the universal medicine. Dorn holds the belief that the medicine can cure all *moral* vices and *corporeal* illnesses in the sublunary world. In other words, salvation can be found through the *magnum opus*.

How does Dorn imagine the restoration of the pre-lapsarian symbiotic relation with God to occur? Can it be attained by everyone? This chapter will first look at the socio-epistemic imaginary of Dorn's supernatural art. Focusing on John Dee's alchemical *Monas Hieroglyphica* (1564), this term was recently proposed by Steven Vanden Broecke for describing the "mental map" specifying "the various relations that organize and determine the individual pursuit of knowledge and wisdom, and which are practiced and essayed in human gestures and identities."<sup>480</sup> Not unlike Dee's *Monas*, Gerhard Dorn's conception of a supernatural art included an arcane discourse that restricts access to the truth to the worthy. He demarcates a society of privileged knowers, the adepts, from vulgar and unworthy seekers of the truth. Secondly, the author provides a manual on how an aspiring adept can gain access to the truth and understand the secrets of nature. Our alchemist defines seven steps, derived from the abbot Johannes Trithemius, which are paralleled with the alchemical work. These steps will be analysed, one by one and in turn be likened to their chymical counterpart.

Interestingly, this project also harboured a theosophical dimension. Dorn will provide a means of gaining access to the highest truth, coming from God himself. Humans hold within themselves a faculty that allows them to contemplate the wisdom and the working of God, and the alchemist offers a way to attain this divine illumination by purifying the lower mind. The last part of this chapter will examine the concept of divine illumination in relation to the operation of light. The *Artificium* further provides the means of restoring an original unity in both men and nature. In this enterprise lies the soteriological undertone of the alchemist's work; herein lies the ultimate union of soul, body and spirit with the *unus mundus*.

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<sup>479</sup> Dorn, AS, 365.

<sup>480</sup> Steven Vanden Broecke, "Imagining a knowledge society: a comparative look at the socio-epistemic ideals of John Dee's *Monas Hieroglyphica* (1564)," 2-3 (forthcoming in *Ambix* 2017).

## 8.1. Socio-epistemic Imagination in Gerhard Dorn's *Artificio Supernaturali*.

Alchemy, indeed, constructs itself on the difference between the visible and the readable; it articulates esoteric signs (visible but unreadable) on a knowledge that is “carefully hidden”; it thereby separates a knowing-how-to-read from a not-knowing. Alchemy is thus privileged by commentaries. The discourse of the arcane answers directly to the situation of the exegetes, who assume they must decipher iconic “signs” based on a knowledge that is reserved for the “sons of science.”<sup>481</sup>

The following conception of alchemy is formulated by Michel de Certeau in his *Fable Mystique* (1982). It was offered during his reading of a painting of Hieronymus Bosch, where alchemical allusions can be seen as a meta-language of Bosch. De Certeau's *Fable Mystique* offers a study of aspects of mysticism in the sixteenth and seventeenth centuries, one of these being secrecy as a social practice. By perceiving alchemy as a “discourse of the arcane”, de Certeau conceives the art as a type of esoteric knowledge that is suffused by a rhetoric of secrecy. Secrecy, as defined by de Certeau, entails not only “the state of a thing that escapes or reveals itself to knowledge,” but “designates a play between actors.”<sup>482</sup> Secrecy can thus be viewed not in terms of its content, but as a “terrain of strategic relations,” where social agents shape relations on the pretext of concealing or revealing valued information.<sup>483</sup> A delineation is made between the knowers, able to correctly read the signs, and the not-knowers, who are not able to grasp meaning ‘correctly’.

The mystic's discourse should be viewed within the late medieval breakdown of religious unity. In this period of generalised fragmentation, mystics try to make sense of the world and engage with Christian tradition in a different way.<sup>484</sup> Mystics tended to go beyond the theological knowledge of the holy writ and the patristic works in their effort to reinterpret tradition and overcome their sense of loss.<sup>485</sup> They expressed themselves by way of methods and practices, defining a *modus loquendi* or a *modus operandi*.<sup>486</sup> For the historian, this means that the analysis of arcane discourse should focus at least as much on the underlying “truth games” and authorial strategies of credibility, as on uncovering the ‘real’ content of the secret.<sup>487</sup>

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<sup>481</sup> “L’alchimie, en effet, se construit sur la différence entre le visible et le lisible ; elle articule des signes ésotériques (visible mais illisibles) sur des connaissances « soigneusement cachées » ; elle sépare ainsi d’un non-savoir un savoir lire. L’alchimie sera donc privilégiée par les commentaires. [...], le discours de l’arcane répond exactement à la situation des exégètes, qui supposent avoir à décrypter des « signes » iconiques à partir d’un savoir réservé aux « fils de la science.” Michel de Certeau, *Fable mystique*, 81.

<sup>482</sup> Michel de Certeau, *The Mystic Fable, Volume One. The Sixteenth and Seventeenth Centuries*, trans. Michael B. Smith, (Chicago: Chicago U.P., 1992), 97.

<sup>483</sup> De Certeau, *Mystic Fable*, 97.

<sup>484</sup> *De Certeau Reader*, 188.

<sup>485</sup> *De Certeau Reader*, 189.

<sup>486</sup> *De Certeau Reader*, 188.

<sup>487</sup> Hugh B. Urban, “The Torment of Secrecy: Ethical and Epistemological Problems in the Study of Esoteric Traditions,” *History of Religions*, (37: 1998), 219.

### 8.1.1. The Adepts and the Vain

The aspiring adept reading Dorn's *Artificium* will not succeed by simply following the operations described. He needs to work for it, be patient and have specific capacities that can be deployed during the work, such as understanding nature in order to be able to imitate it. Aspiring alchemists cannot find easy satisfaction; they must persevere, otherwise mistakes will be made and failure is inevitable.<sup>488</sup> Gerhard Dorn does offer the alchemists a guide on how to approach the "good work."<sup>489</sup> This knowledge, Dorn states, is most profound and it comes from the omnipotent God.<sup>490</sup> Like other alchemists of his time, Dorn believes in the necessity of divine illumination. Herein lies an element of his strategy. Knowledge of the supernatural art does not only come from books and learning; it comes also from God himself. God acts as the judge, he decides whether you are granted access to the truth, or not. Although it is only by the grace of God that the alchemist can succeed, Dorn believes that to receive this knowledge, one also needs to be worthy of it.<sup>491</sup> By introducing the aspect of worthiness, the alchemist also delineates between the worthy and the unworthy: the adepts, who are able to see the workings of nature, and those who have laboured in vain and whose operations were unprofitable.<sup>492</sup>

He reproached the sages who mislead the aspiring adepts, for they obscured the truth from them by saying nothing of the inward operations. The author further states that while God wishes to illuminate his disciples, he will only reward those who are humble and diligent in their labour. The vulgar are too proud to recognise that the fruits of their labours could only be attained by the mercy of the Creator. Furthermore, Dorn also believes them to be sloths because they do not work hard enough to gain the favour of the Lord. There are also others, who cast the evil eye on the students of this art because they believe that the supernatural art is contrary to the Christian religion. The alchemist further advises the reader to truly desire the knowledge and confess to God that you wish for it. The aspiring adept needs to long for the truth.<sup>493</sup>

### 8.1.2. Terms and Condition for the Aspiring Adept

Gerhard Dorn considers three conditions that one must meet to practise this art and uncover the truth. The first condition is that the alchemist has a good understanding of the materials he is working with, and what qualities and forms can be extracted for his goal.<sup>494</sup> Secondly, the true

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<sup>488</sup> Dorn, AS, 334.

<sup>489</sup> Dorn, AS, 365.

<sup>490</sup> Dorn, AS, 366.

<sup>491</sup> Dorn, AS, 365.

<sup>492</sup> Dorn, AS, 364.

<sup>493</sup> Dorn, AS, 365.

<sup>494</sup> Dorn, AS, 359

philosophers are to be in possession of the philosophical key, gained through the marvellous art. This philosophical key is needed to open the gates to the fortress. This fortress holds the minerals and virtues of nature, so that they can be protected and hidden away from thieves who wish to pillage it.<sup>495</sup> This description shows the rhetoric of secrecy at work in Dorn's *Artificio*. He believes that the secrets need to be kept safe and hidden, so that thieves, meaning the unworthy and vulgar, cannot steal them away. The aspiring adept thus needs to understand the matter and the key. When these two conditions are met, the aspiring adept also needs to gain divine favour. The acquired virtues are prepared by a metaphysical superintendence. The aspect of divine illumination is also mentioned by Dorn. It is only through God's sanctioning that the virtues can become worthy of the celestial power.<sup>496</sup> The access to the fortress remains closed without these.

Dorn's choice of words in describing the end of alchemy as lying inside a castle is not random. The notion of a fortress often appears in alchemical discourse as a metaphor for a hermetically sealed vessel that not only ensures defence from invasion or outside influence of the contents within, but which also keeps the volatile contents from escaping. Both dimensions are central to Dorn's socio-epistemic imaginary concerning the *Arcana* of nature. Furthermore, the term 'castle' or 'fortress' can also be perceived as a metaphor for the impure matter that holds the pure spirit which must be freed during the great work. It can also be interpreted as a furnace in which the alembic must be placed.<sup>497</sup>

Expanding the metaphor of the fortress, Dorn says that it has appeared three times to him. The first time it appeared as the "treasure" which "was held under the celestial waters and the bronze."<sup>498</sup> Dorn refers to the cleansing stage where the body of the Philosopher's Stone is washed from its impurities by the mercurial waters. The cleansing is also associated with a baptism where the soul is purified during the washing.<sup>499</sup> The fortress thus appeared for the first time as the impure matter, from which the pure matter must be freed. It is in accordance with the *nigredo* and *albedo* stage of the alchemical *opus*, where the matter is putrefied and then washed of its impurities during the ablution, the whitening. The fortress appeared for a second time as the white foliated earth, where the seeds are sown in so that they can grow into the matter of the stone. Lastly, it appeared for the "fabrication of the most precious stone."<sup>500</sup> From

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<sup>495</sup> Dorn, *AS*, 359.

<sup>496</sup> Dorn, *AS*, 359.

<sup>497</sup> Abraham, *Dictionary*, 31-2.

<sup>498</sup> "Una thesaurus ingens alliis longe felicior, ad humani corporis medicinam, continetur sub aquis aereis & caelestibus," Dorn, *AS*, 359.

<sup>499</sup> Abraham, *Dictionary*, 114.

<sup>500</sup> "preciosorum lapidum fabricationem," Dorn, *AS*, 359.

these sources, “fertile waves stream out,” through which our alchemist can bring about “marvellous nature of the things.”<sup>501</sup> The function of the fortress seems to shift, but each time, it appeared at a crucial phase in the production of the Philosopher’s Stone. Dorn associated the manifestation of the fortress with the insertion of the celestial virtue into the work as well as with the celestial waters.<sup>502</sup> There is a clear connection between the stages of the *opus* where the impure matter is cleaned in order for the pure matter to arise so that the quintessence, the celestial virtue, can be brought into the pure matter of the Stone.

## 8.2. Becoming Worthy in Seven Steps

The process of cleansing, or purification, is what further demarcates the worthy from the vain. The aspiring adept needs to invest his resources and time into the alchemical work, because without this, he will surely fail.<sup>503</sup> Our alchemist describes a process through which men can attain knowledge of both the nature of the world and of themselves. Dorn integrates part of his treatise on the *Philosophia Meditativa* in his *Artificium*. The complete treatise is found in the *Tractatus de naturae luce physica* (1583), which also features in the *Theatrum Chemicum* (1602). To examine the association between the step and the chymical operation, I will draw from the *Philosophia Speculativa* which is a part of Dorn’s *Clavis totius philosophiae chymisticae* (1567). It was published in the *Theatrum Chemicum* (1602).

Gerhard Dorn parallels the process of purifying the stone, with a process of internal purification to receive the divine illumination. As the starting material of the alchemist is transmuted into the Philosopher’s Stone, so can the meditative philosophy bring about an internal transmutation within the human soul. The transmutation can be brought about through manifestation and liberation of the soul by means of seven steps, already set out by Trithemius:

Learning creates understanding. Understanding nurtures love, love becomes the likeness. The likeness becomes mutual participation through frequency and familiarity. The fellowship comes with trust. With trust, virtue, through virtue power. And then the miracle.<sup>504</sup>

Dorn describes, by way of Trithemius, a contemplative process that can make the soul worthy of creating the miracle, the universal medicine, through the supernatural art. From these seven

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<sup>501</sup> “Ex tribus fontibus scaturiunt undae mundo felices, quiuis admiranda patrantur in rerum natura.” Dorn, AS, 359.

<sup>502</sup> Dorn, AS, 359.

<sup>503</sup> Dorn, AS, 363.

<sup>504</sup> Studium generat cognitionem, cognitio parit amorem, amor similitudinem. Similitudo frequentiam, sive communionem, aut familiaritatem. Communio fiduciam. Fiducia virtutem. Virtus dignitatem. Dignitas potentiam, & potentia miraculum efficit.” Dorn, AS, 363.

grades or steps are distilled: philosophical study, cognition, philosophical love, constant practice, virtue, power and the miracle.<sup>505</sup> The grades are likened to the alchemical work:

Just as there are seven philosophical steps through which an entrance to the sublime lies open to the mind, so also are seven in number the chymical operations through which the artist can attain to that most excellent Arcanum of medicine.<sup>506</sup>

### 8.2.1. Step One: Philosophical Study

The first step is philosophical study, where the aspiring adept examines the truth of the teachings of the ancients.<sup>507</sup> It contains a call for a search for the alchemical truth: the adept needed to reject the pagan philosophy of Aristotle and instead focus on the Christian doctrines if he wished to bring about a genuine internal transmutation.<sup>508</sup> The truth, according to Dorn is Being, something from which nothing can be lacking, to which nothing can be added, and much less something that anything can harm.<sup>509</sup> The truth is something constant and everlasting: the hands of time cannot hurt it, it is an unchangeable thing. This conception of truth is reminiscent to the Renaissance ideas of a pristine Adamic knowledge as well as a *philosophia perennis*. Our alchemist appears to express the belief that there is a core of philosophical truths existing independent of and unaffected by time and space. The truth is out there and the aspiring adept should uncover “the things concealed by the enigmas of the ancients and bringing them into the light.”<sup>510</sup> The aspiring adept thus needed to uncover the wisdom that lay hidden in the writings of the ancients. And this wisdom entailed the truth, the eternal philosophy. The aspiring adept was also instructed to carefully examine the writings of the ancients and see if they hold up to the reason and sense of the teachings of the Scripture.<sup>511</sup> It is through reason and common sense that the aspiring adept could bring the truth to light.

Alchemical texts were rarely straightforward, alchemists excelled at being vague, ambiguous and hermetic. Reconstructing their laboratory procedures is no walk in the park. It was up to the aspiring adept to find the right text and to study it so that he can later understand what he must do. Our alchemist does not let his readers aimlessly wander through the labyrinth of alchemical treatises, he tells them to find the correct teachers, who are, according to Dorn, the necromancers, true sages and magicians.<sup>512</sup> This is a rather peculiar lineage, especially

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<sup>505</sup> Dorn, *SP*, 302-3.

<sup>506</sup> “Uti septem gradus philosophici, per quos ad sublimia menti patet aditus, septem sunt etiam operationes chemica per quas artifex ad arcanum illud medicinae praestantissimum pervenire potest.” Dorn, *SP*, 302-3.

<sup>507</sup> Dorn, *SP*, 271.

<sup>508</sup> Kahn, *Alchimie et Paracelsisme*, 148.

<sup>509</sup> “Verum est esse, a quo nihil abesse, cuique; nil adesse, multoque; minus obesse potest.”

<sup>510</sup> Dorn, *AS*, 362.

<sup>511</sup> Dorn, *SP*, 271.

<sup>512</sup> Dorn, *AS*, 362.



considering the context and time. Dorn was writing during a time of religious strife, in which magic was still readily demonised, precisely through terms like ‘necromancer’. By claiming that these teachings also came from magicians and necromancers, he was placing himself in rather risky waters.

Necromancy is often associated with the evocation of the spirits of the dead and black arts. In some works, however, necromancy has a broader significance. Albertus Magnus (ca. 1200 – 1280), a saint and philosopher, would view necromancy as a part of divinatory practices. It entails an invocation of spirits from the celestial sphere to get an image of the future.<sup>513</sup> For Michael Scott (before 1198 – after 1236), an astrologer, necromancy was part of astronomy which could be used to summon both demons and spirits. In the *Picatrix*, a medieval book on astrology and alchemy, necromancy signifies the noblest kind of wisdom. It entails both celestial and terrestrial magical operations to unite the necromancer with the universal divine spirit.<sup>514</sup> It is precisely this unique conception of necromancy as a term of approval rather than opprobrium that we encounter in Dorn’s work. Ironically, Dorn would be accused of being a necromancer himself. He would relate this claim of necromancy to his knowledge of the powers of superior bodies as well as him being a very bold experimenter who investigated the power of inferior bodies.<sup>515</sup>

To counter possible charges, Dorn asserts that his supernatural art is not contrary to the religion of the true God.<sup>516</sup> Similar ideas were held by Trithemius and Paracelsus. Trithemius would defend magic, believing in a theological rationale for magic: magic could as easily obey the commands of God as those of the devil.<sup>517</sup> Paracelsus believed that magic was necessary to contemplate the marvellous works of the creator, and thus to come to a better understanding of God and the world.<sup>518</sup> The Neoplatonic Renaissance conception of magic was equally influential for the alchemist’s idea that magicians held the knowledge needed to uncover the secrets of nature. Magical operations were perceived as strictly natural actions, where the magician merely tapped into the arcane forces of nature.<sup>519</sup> Founded on the belief in a cosmic-human analogy, magic relied on the universal bond between all the parts of the living cosmos.<sup>520</sup>

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<sup>513</sup> Charles Burnett, *Magic and Divination in the Middle Ages*, (Aldershot: Ashgate Publishing Ltd., 1996), 3-5.

<sup>514</sup> Jean-Pierre Brach, “Magic IV: Renaissance – 17<sup>th</sup> Century,” in *Dictionary of Gnosis and Western Esotericism*, ed. Wouter J. Hanegraaff, (Leiden: Brill, 2006), 745.

<sup>515</sup> Thorndike, *Magic and Experimental Science*, 635. Dorn makes this claim in a preface to a Latin translation of one of Paracelsus’ works: *De summis naturae mysteriis* (Basel, 1584).

<sup>516</sup> Dorn, AS, 363.

<sup>517</sup> Brann, *Trithemius and Magical Theology*, 10.

<sup>518</sup> Webster, *Paracelsus*, 167-8.

<sup>519</sup> Brach, “Magic IV,” 732.

<sup>520</sup> Brach, “Magic IV,” 732.

This is what Ficino called the ‘Platonic love,’ an energising principle that facilitates generation of both the subjective mind and the objective world. An “occult sympathetic *spiritus*” acts as a bond between all things, ensuring the presence of life.<sup>521</sup> It further acts as a mediator between the rational soul and the body.<sup>522</sup> Magic can also entail a metaphysical process of deification. An actual transformation in man can be brought about through the power of intellectual contemplation.<sup>523</sup> The soul can then ascend or heal, which is what Dorn wished to achieve with his seven steps.

The first step of philosophical study is likened to the process of putrefaction where the matter was decomposed in an inert mass.<sup>524</sup> Putrefaction is part of the corruptive wheel of the opus where the starting material was regressed to its *prima materia*. The idea of corruption was founded on the belief that for something new to arise, the old and impure matter needed to die. Likewise, through the philosophical study, the impure and untrue notions are done away with by critically reviewing them so that the hidden truth, like the spirit released from the matter during the putrefaction, can arise.

#### 8.2.2. Step Two: Cognition

Once the aspiring adept has reviewed the writings of the ancients he can form his own opinion of the truth. The alchemist has made sure that the precepts of how to practise the art are in accord with the teachings of the holy writ and he no longer fears that there is anything present which goes against the Scripture and God.<sup>525</sup> During the process of cognition, all the doubts are washed away and he is strengthened in his conviction of the truth. This process is paralleled to the chymical solution, where the bodies are dissolved, so are the doubts of the alchemist dissolved.<sup>526</sup>

The first two steps, study and understanding connect with Dorn’s aforementioned notions about the adept’s personal abilities. One of them was to truly understand the material the alchemist was working with. The alchemical tradition needed to be brought in concordance with the Christian teachings, the pagan elements needed to be dispelled so that the true learning could be established. This true learning can be related to the existence of the pristine and perfect knowledge once held by Adam.

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<sup>521</sup> Brann, *Trithemius and Magical Theology*, 27-8.

<sup>522</sup> Brach, “Magic IV,” 732.

<sup>523</sup> Brach, “Magic IV,” 733.

<sup>524</sup> Dorn, *SP*, 303.

<sup>525</sup> Dorn, *SP*, 272.

<sup>526</sup> Dorn, *SP*, 303.

### 8.2.3. Step Three: Philosophical Love

Philosophical love is the “union of the separated.”<sup>527</sup> Dorn understands philosophical love as the return to the unitary, where the parts are one with the whole and everything is held together in harmony and peace.<sup>528</sup> Philosophical love fosters the “natural union” which is said to bring life into the body, by means of establishing peace between the hostile forces in the body.<sup>529</sup> Here we must turn back to Dorn’s conception of the post-lapsarian world as discussed in chapter five. God had conceived a harmonious and peaceful universe, but due to the rebellion of Lucifer and the fall of both Lucifer and of Adam, the result is a divided world where the spirit and soul were subjected to the sublunary body. Furthermore, the devil also had power in the sublunary region, and could thus extend his influence on humankind. Gerhard Dorn’s aim was to overcome this divided world by restoring humankind back to its original unity. Salvation could be found in overcoming the binary of love and hate present in the human body which was subjected to the elementary, sublunary region. Through the fall of Adam, wickedness has thus entered the body, hiding the pre-lapsarian Edenic core of Creation.

A first step toward restoration is done by uniting the spirit and the sensitive soul. The sensitive soul is the sensitive soul and is different from the intellective soul which contains the ratio and is the discerning principle of humans. The sensitive soul contains the primary faculties of sense and emotions.<sup>530</sup> Dorn believes that the sensitive soul can either act as the organ of the intellective soul by following the attraction of the spirit of the Lord. Or it can subject itself to the wickedness of the body and resist the divine spirit.<sup>531</sup> The natural union is thus made when the sensitive soul decides to follow the divine spirit and release itself from the influence of the elementary body. It thus chooses to follow the love it holds for the union and for God. The natural union creates the ternary, the *tertium* necessary to reunite the intellective soul with body and thus overcoming the binary once and for all.

The process of releasing the spirit from the malignant influence of the body is likened to the process of congelation in the alchemical *opus*.<sup>532</sup> Congelation entails the solidifying of the liquid produced during the dissolution. Once the sulphur and quicksilver have been released from the matter, they can conjoin in a natural union and produce a *tertium* in the form of the vegetative

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<sup>527</sup> “amor philosophicus dicitur secretorum ab uno, rursus in unum per pacem unio,” Dorn, *SP*, 277.

<sup>528</sup> Dorn, *SP*, 277.

<sup>529</sup> “per unionem naturalem,” Dorn, *PM*, 451.

<sup>530</sup> Dorn, *PM*, 452.

<sup>531</sup> Dorn, *PM*, 451.

<sup>532</sup> Dorn, *SP*, 303.

mercury, which acts as a transformative substance throughout the rest of the work while the liquid is turned into the matter of the white elixir which will be purified in a further stage.

#### 8.2.4. Step Four: Constant Practice

The art is said to be impossible without constant practice. The aspiring adept must practise and try again and again to reach the highest truth. The fourth step is a process of refinement, where the alchemist further sharpens and purifies his mind so that he can go from the philosophical love to the creation of the virtue. It is the perseverance of the philosophical love, of continuing to follow the divine spirit and resist the temptations of the body.<sup>533</sup> It furthers the understanding of the alchemical tradition and familiarises the aspiring adept with the truth he has uncovered during the first two stages. It thus entails meditative contemplation and devotion.

The fourth step is likened to the ablution where the matter of the stone is purified by the mercurial waters. The process of washing the matter resonates with the notion of constant practice as a refinement of the truth.<sup>534</sup> The fourth stage prepares the mind so that it can dwell in the celestial spheres, like the washing purifies the matter of the Stone so that it can receive the celestial influx.

The conjunction of the spirit and the sensitive soul needs to be brought about through the quaternary: “through the transmutation of the elements of which the body is composed into a unique and most pure element.”<sup>535</sup> The quaternary entails the four grades or steps described above (i.e. philosophical study to constant practice). These four steps can help to overcome the elementary world and activate the celestial power within through the creation of the mediating *tertium* which can overcome the binary. Our alchemist will further expand on how the purest element, the quintessence, can be activated through the transmutation of elements. Dorn once more draws the parallel between the chymical operations which transmute the elements to the meditative process of the aspiring adept.

Our alchemist likens the process of acquiring understanding of God and self-cognition to the generation of water from the “earth of your body.”<sup>536</sup> The earth of the body is a reference to the *limus*, the dirt from which God created humankind. As seen in chapter seven, the alchemist must first create the *limus* which is then turned into the matter of the Stone. *Limus* is a mixture of

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<sup>533</sup> Dorn, *SP*, 293.

<sup>534</sup> Dorn, *SP*, 303.

<sup>535</sup> “haec tamen coniunctio fieri debet per gradus quaternarii, ho est per elementorum ex quibus constat corpus, transmutationem in unicum & purissimum elementum,” Dorn, *AS*, 362.

<sup>536</sup> “primo ex terra tui corporis aqua fiat,” Dorn, *AS*, 362.

earth and water and through the operations of the alchemist the water can be extracted from the earth. The *limus* is also something akin to the *prima materia*, which was pure potentiality and could be imprinted with any form and Dorn will expand on this notion of imprinting in the meditative philosophy. He likens the process of contemplation to the imprinting of the knowledge in your heart.<sup>537</sup> From the water, air arises and Dorn parallels this with the raising of the contrite and humbled heart heavenwards, toward the Creator.<sup>538</sup> This grade is associated with reaching for higher things and is related to the ability “to understand those things that are of God.”<sup>539</sup> It is the application of faith and the dissolution of the doubts: the aspiring alchemist must trust God and hope for a better life.<sup>540</sup>

Finally, from this air there comes fire every desire of your heart is converted into love, which is likened to the fire on account of the heat. That love must be love both of God and of your neighbour here on Earth, so that its flame can never be extinguished.<sup>541</sup>

The final element that is attained is fire, which holds an immense significance in relation to the alchemical *opus*. Section 7.4 has already illustrated the omnipresence of fire in the chymical operations as well as its relation to the celestial heat fostering the body. The relation between the fire and the third step of philosophical love is expressed in the citation above. Fire signifies the essence, the interior heat animating the body. This connection is further expanded by Dorn’s constant use of *cor*, heart. The meditative process appears to be focused on the heart rather than the mind and intellect.

Living beings in Dorn’s cosmology are conceived as holding an astral body, transmitting divine activity. The astral body is sustained in everything in nature. The astral body in men acts as the medium through which the soul could enter the body of humans. The principal location of the astral body was believed to be in man’s heart where it could spread to every member of the body thanks to the circulation of the blood.<sup>542</sup> The heart thus holds the vital principle of life; it houses the celestial power within men and thus needs to be elevated and purged from the wickedness of the power to be prepared for the celestial influx.

The statement that the love must be both for God as for the neighbour here on Earth appears to be rather peculiar. Keeping in mind Dorn’s aim to purify the hate and evil from the human body

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<sup>537</sup> Dorn, AS, 362.

<sup>538</sup> “Id est, attolle sursum in caelum ad eum qui te creavit humiliatum iam cor tuum,” Dorn, AS, 362.

<sup>539</sup> “ad intelligendum ea quae Dei sunt.” Dorn, AS, 362.

<sup>540</sup> Dorn, PT, 449.

<sup>541</sup> “Postremo ex aere hoc fiat ignis: hoc est, desiderium tui cordis omne convertatur in amorem (cui comparatur ignis ob ardorem) Dei proximique tui hic in terris, ut flamma haec non extinguatur unquam.” Dorn, AS, 362.

<sup>542</sup> Hannaway, *Chemists*, 28.

it appears as a call for letting go of grudges and envy for your fellow man.<sup>543</sup> The notion of loving one's neighbours can be related to the Christian ideal of *caritas*. Steven Vanden Broecke's article on the socio-epistemic imaginary has related the ideal of *caritas* to a social practice of care within a delineated society of knowers in the Southern Netherlands during the early modern period. A Paracelsian doctor, Pierre Haschaert, believed knowledge communities were driven by the charities. The basis of such a knowledge community could thus be found on moral principles.<sup>544</sup> This idea resonates with Dorn: the worthy need to have a healthy mind and need to be free from hatred and envy. The aspiring adept needed to banish all hatred and envy from his heart so that it was purged and could only hold love which kindles the celestial fire and aids in overcoming the binary of the spirit and the body by means of the ternary created from the natural union of the sensitive soul and the spirit.<sup>545</sup> The aspiring adept has created for himself the key to the speculative philosophy through which he can liberate his soul.<sup>546</sup> He can ascend to higher beings and receive the illumination of God and he can understand the secrets of nature in order to bring about the miracle which entails a return to the unitary.

#### 8.2.5. Step Five: Virtue

The first step in lifting the binary of spirit and body has been completed by creating a ternary. Following the Trithemian adage that says that the binary is rejected and the ternary will be convertible to unity, the aspiring adept needs to bring the ternary back to the one. This is the aim of the last three steps (i.e. virtue to miracle), where the spirit, united with the sensitive soul can be supernaturally joined with the intellective soul. Together they can overcome the influence of the body and return to the one.

The virtue is an *Arcanum*; it is that which is most hidden in objects and holds the quintessence celestial field within the body. The *quinta essentia* was trapped in the prison of the body which impeded the virtues, the souls and the spirit to effectuate their natural strength.<sup>547</sup> Through purging the body, the celestial and natural spirit within men has ascended and must now descend again into the elementary body. Through this ascension the aspiring adept can achieve a process of metaphysical deification: the search for the truth brings him closer to God. Through

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<sup>543</sup> Dorn, *PM*, 469.

<sup>544</sup> Vanden Broecke, *Monas*, 11.

<sup>545</sup> "binarius, id est, spiritus & corpus, in unum ternarium perfecte iungatur, per quaternarium eiusque gradus." Dorn, *AS*, 362.

<sup>546</sup> Dorn, *AS*, 362.

<sup>547</sup> Dorn, *SP*, 298.

a God-given revelation, the alchemist can receive “the power of both higher and lower beings.”<sup>548</sup> He can thus further effectuate the return to the unity.

Gerhard Dorn parallels the fifth grade with the chymical composition of the elements: it is the virtue that unites the philosophers in the same way that the elements are being composed through the smallest part.<sup>549</sup> The virtue acts as a uniting principle both in the meditative philosophy where the spirit must descend into the body, as well as in the alchemical work where the spirit must be placed in the matter of the Philosopher’s Stone.

#### 8.2.6. Step Six: Power

“The power is the constancy of the received virtue from the lord.”<sup>550</sup> The virtue has been extracted so that it could reach its first celestial influence through ascension and it needs to be brought back in the body to animate it. Animation was the process of reuniting the soul and the body during the alchemical work. By means of accepting the potentiality of the universal medicine can be educed into the actuality: it can effectively operate and penetrate within the elementary body. The quintessence is thus freed from its prison of the body and it can accomplish the miracle in the last grade.<sup>551</sup>

The sixth grade corresponds to the chymical operation of fixation where the spirits are permanently fixed in the body, unable to flee from it. In the alchemical *opus*, fixation was a part of the process of fermentation where the eternal spirit was fastened into the body. Fermentation occurred during the last stage of the *opus*, where the body and soul are united and the Philosopher’s Stone can grow into maturity.

#### 8.2.7. Step Seven: Miracle

Dorn believes the miracle to be the effect of the “harmonious truth.”<sup>552</sup> The *magnum opus* of the alchemist finishes with the projection, where the medicine shows its perfection and likewise, the philosophical work manifest the virtues, the celestial power, within the human.<sup>553</sup> The soul, having been purified and restored, is returned to the human. The restored human is ready to receive the secrets of nature from God and can activate the celestial power within. These “freed knowers” can now accomplish the marvellous in nature and create the universal medicine.

The power of the miracle comes into effect through the One:

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<sup>548</sup> “recipit vim superiorem & inferiorem,” Dorn *PT*, 443.

<sup>549</sup> Dorn, *SP*, 303.

<sup>550</sup> “Potentia est acceptae virtutis à domino Constantia.” Dorn, *SP*, 301.

<sup>551</sup> Dorn, *SP*, 302.

<sup>552</sup> “constantiae veritis,” Dorn, *SP*, 302.

<sup>553</sup> Dorn, *SP*, 303.

Every operation of the miracles of nature that is in some way subject to limits has therefore descended from unity, by way of the binary, to the ternary, but not before it has risen in simplicity from the quaternary through a series of steps. For if you want to count to four you do not know any other way of starting than with one, but you then say one, two, three, four, which when added together make ten. This is the perfect consummation of every number, because then the numbering returns to one, since beyond the denary no single digit number is to be found.<sup>554</sup>

Everything is said to be created from the monad, the one. In Dorn's theo-cosmological myth, this monad is the *Mysterium Magnum*, the defined one brought forward by God. From the *Mysterium Magnum*, God created heaven and earth, which constituted the first binary. The ternary is found in the conception of the three regions of the world: the terrestrial, celestial and divine centre. The ternary is also reflected in nature by the trichotomous division into the terrestrial body, the astral body, containing the celestial spirit or quintessence and the soul, which is the eternal and divine element within the elementary world. The quaternary thus relates to the elementary world, the sublunary world where the spirit and soul are subjected to the malignant influence of the devil. Dorn believes that if you add these together you get the number ten. Our alchemist draws on Pythagorean numerology to found his own conception of the various grades and principles employed in his work.<sup>555</sup> The notion of the denary relates to the Pythagorean tetractys, a mathematical conception of the universe where the elemental realm follows a pattern of numerical relations.<sup>556</sup>

The power of natural miracles thus comes into effect through the celestial virtue derived from the One. This pure virtue must progress from the ternary and the quaternary; it must be subjected to the seven grades ( $3+4=7$ ) in order to be activated. Through these seven steps, the adept escapes from the tensions of the elementary world and can attain the long life of the uncorrupted nature, not like it was before the Fall of Adam, but the life as it is after the union.<sup>557</sup>

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<sup>554</sup> "Omnis itaque naturae consistens limitibus operatio mirandorum, ab unitate per binarium in ternarium descendit: non prius tamen, quam a quaternario per ordinem graduum in simplicitatem consurgat: nam si quatuor numerare velis, non aliter quam ab uno scis inchoandum et dicis, unum, duo, tria, quatuor: quae simul sumta faciunt decem. Haec omnis numeri perfecta consummatio est, quia tunc sit regressus ad unum & ultra denarium non est numerus simplex." Dorn, *AS*, 361.

<sup>555</sup> Dorn's employment of Pythagorean numerology could provide further research options. The link between Dorn and Trithemius is already well established, but there is a possibility to fully establish a link between Dorn and John Dee, which so far has only been hinted at in literature. Both are heavily influenced by Trithemius and use Pythagorean numerology in their philosophy. Perhaps Dorn has drawn from not just Trithemius' writings in his conception of the *unarius*, but he might've also relied on Dee's *Monas Hieroglyphica*. Further research on the influence of Dee on Dorn's philosophy could shed some light on the precise relation of their ideas.

<sup>556</sup> Clulee, Nicholas, *John Dee's Natural Philosophy: Between Science and Religion*, (New York: Routledge, 2013), 90.

Dorn, *AS*, 363.

<sup>557</sup> "Porro vita longa abud nos est incorrupta natura, non qualis ante lapsum erat, sed uti post restituta." Dorn, *PC*, 517.



This uncorrupted nature is the universal medicine: the unitary is the well-being itself, it is the celestial field within the human body which has no need for a medicine, because it is perfect and incorruptible. The Edenic core of Creation has thus been released from the duality of the devil, not by curing it through a remedy, but by converting it into the ternary, the re-converted man who unites the *spiritus, animus et corpus*. The binary of the devil cannot be cured because he is condemned to an eternal death as the result of the banishment of Satan from the heavenly region.<sup>558</sup>

### 8.3. The Metaphysical Truth: the Mystery of Resurrection

The seven grades thus describe a contemplative process that prescribes a voluntary withdrawal from the body of a well-composed mind in order to gain an even better understanding of the truth.<sup>559</sup> The mind, which is the conjunction of the spirit and the intellectual soul, liberated itself from the elementary prison and, in a “moment d’interruption,” it coagulates again into a celestial physicality where it is immune to the infirmities plaguing the microcosm.<sup>560</sup> Through this contemplative process the adept receives divine illumination, providing him with the metaphysical truth. This section will first delve further into the importance of divine illumination and to why it is necessary for the practice of the alchemical work. The emphasis on the divine illumination inevitably leads to the question of the usefulness of Dorn’s alchemical treatises. If the adept can only gain the truth through a contemplative process, why should anyone be bothered to read the book? This question will be addressed in this section as well. The last part of this section will relate to the ultimate union of the conjoined spirit, soul and body with the *unus mundus*.

#### 8.3.1. The Divine Illumination: the Operation of Light

The concept of divine illumination can be associated to what Paracelsus conceived as the light of nature which served as an intermediary between the divine sphere and the human soul. Through study and experiment the soul can be driven upwards to the celestial sphere, which is the ascent brought about by the first four stages, and it is also rendered capable of manifesting its illumination in actual practice where it can create the universal medicine in the alchemical *opus*.<sup>561</sup> Paracelsus recognised two divine lights. Firstly, the above-mentioned light of nature, which served as the gift of God and was a testimony of God’s mercy and beneficence in His creation. It guided humankind during the period between the Fall and the Incarnation of Christ,

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<sup>558</sup> Maquet, “Philosophie et Alchimie,” 221.

<sup>559</sup> Dorn, *PM*, 450.

<sup>560</sup> Maquet, “Philosophie et Alchimie,” 221.

<sup>561</sup> Brach, “Magic IV,” 734.

enabling mankind to employ the divine powers instilled in God's creation. The birth of Christ brought the eternal light into the world. The light of grace complemented the light of nature. The two lights are related to the two disciplines of philosophy, which follows the light of nature, and theology which follows the light of grace.<sup>562</sup>

These two lights are also present in Dorn's work in the idea that the aspiring adept gains the power of the higher things and the lower beings. The lower beings relate to everything in nature; which is in the elementary world. But to truly understand, he must rely on the divine revelation by means of the light of grace. It is also present in the two-book principle of Paracelsians: they needed to study both nature as well as the holy writ. The knowledge of the operations of the natural is indispensable for the alchemist, but it can only get him so far. In order to create the universal medicine the adept must move nature through that which is above nature. It goes beyond the natural and physical world, it taps into the occult power present in all living beings, namely the quintessence which is the divine element and relates to the celestial world:

The theory of the superior or supernatural wisdom and the practice of the inferior natural wisdom are essentially one and the same. It is upon an understanding of the supernatural that any real comprehension of natural secrets depends.<sup>563</sup>

This citation also seems to confer the notion that theology provides the theoretical framework whereas natural philosophy acts as the effectuation of the superior and supernatural wisdom. The adept must acquire mastery of all materials; both the terrestrial and the celestial. The philosophy transcends the terrestrial realm, but the alchemist holds effect in the terrestrial realm and must understand how nature operates. Dorn will further rely on the Hermetic dictum that "That which is above, is like that which is below, for accomplishing the miracles of the one."<sup>564</sup> It provides the foundation for the synchronicity of the purification of substances and the purification of the mind as well as to the concordance between the higher and the lower world.

In the laboratory, the alchemist imitates the process of Creation. He takes on the role of God in his laboratory, generating a small world in his glass vessel as seen in chapter six. He regresses nature back to its prime matter and then repeats the process of Creation on a microcosmic scale. The theo-cosmological myth described in chapter five also mentioned the termination of the creation in an ultimate creature, Adam. The chymical operations in the laboratory also

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<sup>562</sup> Hannaway, *Chemists*, 8-9.

<sup>563</sup> "[...] se habeant ambae unius & eiusdem sapientiae partes, quam theorica superioris scientiae aut supernaturalis & practica inferiores sapientiae naturalis. Verum quia ex supernaturalium congitione pendet omnis cognitio naturalium arcanorum," Dorn, *PT*, 450

<sup>564</sup> "Quod est superius, est sicut id quod est inferius, ad perpetranda miracula rei unius," Dorn, *AS*, 360.

terminate in the *ultimate matter* of the Philosopher's Stone, which holds the universal medicine. It is the creation of a perfect and pure microcosm in the glass vessel, where everything approaches its initial celestial state. The alchemical *opus* thus serves as a parallel of what happens during the contemplative process of the seven grades. It is the sublunary body of men that is purified and approaches its first celestial state, liberating the medicine which lay hidden in man himself. This celestial power lies dormant and can only be activated by its likeness. Because the celestial element, the quintessence, can be found either within man or outside him, the generation of the Philosopher's Stone in the laboratory can act as the likeness which activates the celestial power within man.<sup>565</sup> The chymical operations can thus enable the contemplative process, kindling the celestial power within humankind.

### 8.3.2. The Ultimate Union with the *Unus Mundus*

The parallel process of creating the Philosopher's Stone and the contemplative process for receiving the truth are thus complementary and both are aimed at achieving unity. Once the unitary has arisen, the adept has acquired the understanding of higher things and of the alchemical operation which is concerned with the lesser things. Man has overcome his primeval corruption where the body prevailed over the spirit.<sup>566</sup> During this process, the philosopher fabricates the secrets of nature; the unity manifests itself through the work of the alchemist and the metaphysical truth has manifested itself in the converted human.

The generation of a small world is, according to Dorn, the "one way" to the universal medicine and the metaphysical cure for all morbidities.<sup>567</sup> In his preface, Dorn argues against the modern natural philosophers who deny the existence of the quintessence and thus the legitimacy of the supernatural art. An interesting reproof offered by Dorn is that they "chase the dreams of those who do not know or deny the Resurrection," and therefore cannot fully grasp the secret nor are they worth knowing the secret.<sup>568</sup> Dorn believed that if these modern physicists were to understand the mystery of Resurrection, they would be less inclined to disagree with the metaphysical truth.<sup>569</sup> The metaphysical truth asserts the existence of the quintessence, which is present in everything produced by nature.

What is the relation between the quintessence, the celestial element, and the mystery of Resurrection? The universal medicine is created from the incorruptible heaven and the

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<sup>565</sup> Dorn, *PM*, 456.

<sup>566</sup> Dorn, *PT*, 445-6.

<sup>567</sup> "unica via," Dorn, *AS*, 313.

<sup>568</sup> "Verum q eorum qui resurrectionem ignorarunt, ac negarunt, sectentur somnia, huius etiam arcani capces exister minime valent nec eo digni sunt." Dorn, *AS*, 313-4.

<sup>569</sup> Dorn, *AS*, 313.

incorruptible elements: it holds in itself the purest and divine influence of the *quinta essentia*, which holds the power to cure the diseases of the microcosm. As we have seen, the quintessence holds the universal form, it holds the part which goes back to the initial Chaos from which it was created. It held a longing and desire to facilitate generation and to eventually return to the One. Due to the microcosm-macrocosm analogy, Dorn believed there to be something akin to a divine junction, as though it was ordained by God: “the minor world, that of humans, with the body and the spirit of life which was created to the likeness of the bigger.”<sup>570</sup> Following this reasoning, everything which was created to the image of God in the major world, ought to exist in the minor world as well. All these are connected to one another by means of sympathies and the *quinta essentia* which is present in all natural bodies. Our alchemist wishes to lead everything back to the One and to do that, he also needs to reunite heaven and earth and bring it back to the *unus mundi*.<sup>571</sup>

To go back to Chaos, the earth (the lower world) needs to be brought back to the celestial waters of the abyss from which everything was said to be created. This can be done, says Dorn, because the earth was created from the celestial waters. Here Dorn obviously returns to the biblical account of creation, where God had separated heaven and earth. The hermetic philosopher uses the alchemical art in order to bring about a qualitative change, simply altering the earth back into the water it once was. Once the alchemist has succeeded into bringing the earth back to the water, the higher and the lower can coagulate and become the *unus mundus*.<sup>572</sup>

The speeding up of cosmic events is also found in the work of John de Rocquetaillade and John Dee. In her study of John Dee, Harkness argued that the *Monas Hieroglyphica* might be perceived as “an attempt to take mankind to that point in cosmic history and that level of cosmic ontology through a universal, exegetical science so that a door would open in the heavens and further marvels could be revealed.”<sup>573</sup> Like Dorn, Dee wished to bring about the End of Times through an exegetical science. Dee also based his science on the holy writ and further combined it with the book of nature. He believed that one needed to look at nature and observe it in order to see whether there were any signs of decay. The decay of nature was interpreted as a sign that the end was near and that it could be sped up to bring about the Apocalypse and, in Dorn’s case, to reunite heaven and earth.

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<sup>570</sup> “cum igitur minor mundus, homo videlicet, corpore vitalique spiritu, sit ad magni similitudinem creatus”  
Dorn, AS, 357.

<sup>571</sup> Dorn, AS, 357.

<sup>572</sup> Dorn, AS, 360.

<sup>573</sup> Deborah E. Harkness, *John Dee's Conversations with Angels: Cabala, Alchemy, and the End of Nature*, (Cambridge: Cambridge University Press, 1999), 90.

The *unus mundus* is the one from which everything was created. Man, restored into his incorruptible nature, can overcome the elementary world and resides in the heavenly spheres of the One World. The universal medicine, according to Dorn, not only resembles the whole world, but the Resurrection as well.<sup>574</sup> We might deduce that Dorn believed that through the restoration of the unitary he could bring about the paradise on earth, a world without suffering and pain. It is the world after the Apocalypse where God comes to dwell with the humanity in New Jerusalem. Dorn's supernatural art thus gains an eschatological dimension, not only does he reprise Creation, but he also brings about the End of Times where creator and creature are together in a Heaven on Earth.

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<sup>574</sup> Dorn, AS, 313.



## 9. Conclusion

This study set out to dissolve the dualistic model of the natural and the supernatural interpretation of alchemy that is recurrent in the study of early modern alchemy. Gerhard Dorn's historical record clearly countenances an interpretation of alchemy which combines the investigation of the order of nature with that of the order of grace. An exploration of the metaphysical, the operational and the internal level of Dorn's alchemical enterprise has illustrated the coherence between the three.

The metaphysical level provided the alchemist with a theo-cosmological myth. It formed the foundations of the whole enterprise, serving as a blueprint for the chymical operations as well for the internal process of transmutation. It offered a guideline for the supernatural art which reiterates *Genesis* by generating a small and perfect world in the laboratory, as well as transcending the mere physical world because it moves nature by that which is above nature, namely through the divine. Dorn's cosmos does not draw a division between the sublunary and the superlunary world, instead he perceived them as inextricably connected by way of analogies and correspondences. He further based his argument on the existence of a celestial, incorruptible and eternal element within nature, transcending the cosmos and resonating the incorruptible nature as conceived by God during the creation.

In Dorn's account of *Genesis*, Adam was conceived as the ultimate creature, the termination of the process of the Creation. But due to the Fall from Eden, Adam fell from the divine centre into the elementary world where Lucifer could infect the creation with darkness and hate. Following the biblical-eschatological account, Dorn believed in the salvation of humankind. Salvation could be brought about by liberating the Edenic core of creation, the incorruptible nature of the celestial quintessence that was trapped in the shackles of the elementary world; hidden behind darkness and hate. The adept needed to find the spagyric key that could release the celestial element and restore humankind to its incorruptible nature. Finding this spagyric key entailed a knowledge of both the natural and the supernatural world. Theology, which roughly covered the knowledge of the supernatural world, provided the theoretical framework whereas the chymical operations provided the effectuation of the theory. This brings us to the guiding research question: how was alchemy used to inquire and contemplate the cosmos on both a physical and a metaphysical level.

On the physical level, the chymical operations act as an experiment. The praxis in the laboratory where the alchemist creates the Philosopher's Stone serves as the final proof of the speculative philosophy. Herein resonates Redgrove's conception of alchemy: "alchemy, considered from a

physical standpoint, was the attempt to demonstrate on the material plane the validity of a certain philosophical view of the Cosmos.”<sup>575</sup> But, Dorn’s practice doesn’t end with providing the ultimate proof. In his laboratory, the alchemist created the perfect microcosm, namely the pure and incorruptible Philosopher’s Stone, which is imbued with the celestial virtue. The Stone, artificially produced by the chymical operations, can then activate the celestial element lying dormant in humans so that they can be restored to their incorruptible nature.

The physical and the metaphysical thus cohere in Dorn’s conception of the cosmos. He perceived his cosmos in terms of analogies and correspondences between the microcosm and the macrocosm, between the higher and the lower world. They are all connected to one another by means of the celestial element, which in turn can be conceived as an emanation from the World Soul. Dorn’s alchemical enterprise is founded on this metaphysical substance, penetrating nature. The physical and the metaphysical are inextricably linked, both in nature as in all of humanity. Humans could act as a *tertium* because they held both the elementary and the celestial within themselves. It also made it possible for the alchemist to act as a mediator between the higher and the lower world, between the chaos and the universal medicine. The artist educes the pure *potentia* of the chaos into the actuality of the universal medicine, like God had educes the *potentia* of the *limus*, the prime matter, into the actuality of the created world.

The role of men in the creation of the world, that of ultimate creature, is mirrored on a microcosmic scale in the laboratory where our mercury is created, which is to act as a *tertium*, connecting the matter with the soul of the Philosopher’s Stone. In mirroring the macrocosmic process of creation in the laboratory, the alchemist becomes the artist, the creator who generates his likeness, like God had created the humans to his likeness. Therefore, Dorn emphasises the role of the artist in the *opus* and why it transcends the physical world. The divine creation is repeated in the laboratory and the alchemist acts as the form-giver, he must imprint his intellectual form onto the *prima materia* to create the Philosopher’s Stone to his likeness.

Dorn’s supernatural art becomes an endeavour concerned with divine matters, yet firmly rooted in a physical and natural world. It entails a process of restoration to bring about the salvation of all of humankind. The aspiring adept cannot perfect nature without the help of divine intervention, needing to reach a sublimity of mind to gain the illumination necessary to enact the supernatural. The construction of a socio-epistemic imagery marks a social delineation between a community of worthy knowers and those of the vain, greedy sloths who cannot fully master the art because they cannot or will not grasp the inward operations. Dorn

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<sup>575</sup> Redgrove, *Alchemy*, 1.



prescribes a process of inward transformation and purification to gain access to the *Prisca theologia*, the knowledge which transcends space and time. Once this knowledge is granted, the alchemist can descend into his heaven on earth. The true salvation does not lie in a return to the Garden of Eden, but it lies in the union of the restored human and the restored world, where the quaternary, elementary world is lifted and joined with the heavens in one world, the *unus mundus*.

The supernatural art follows the biblical-eschatological time scheme. The alchemist must first repeat the *Genesis* account and, as a God, he creates his own perfect microcosm, generating a pure, ultimate creature: the Philosopher's Stone. He must purge himself by means of a spiritual process, where the adept ascends to the higher heavens to gain a full understanding of the world and from which he descends, so he can accomplish the marvellous. The creation of the miracle forms the ultimate stage through which everything can be returned to the Absolute One, to God. Following the holy writ, Dorn skips the Apocalypse and immediately brings about the End of Time, the New Jerusalem where God and his creatures are united in peace.

The result of my study is preliminary, aimed at providing a coherent picture of Dorn's laboratory praxis in relation to his speculative philosophy. More research can definitely be done on this Renaissance philosopher. The corpus of texts produced by Dorn provide ample opportunities to deepen our understanding of Dorn as well to extrapolate some connections between our alchemist and contemporaries. Dorn's commentary on the Emerald Table provides an excellent starting point to explore the connection with Marsilio Ficino and the Neoplatonic undertones of Dorn. I have already hinted at an association between Gerhard Dorn and John Dee which could be explored more. Dorn's texts on the Creation and the Physics of Trithemius show great promise for this research as well as his *Monarchia triadis, in unitate soli Deo sacra* (1577).<sup>576</sup> These texts are concerned with the power of mystical numerical analysis and can thus be related and compared to John Dee's *Monas Hieroglyphica*. Dorn's *Clavis* can also be explored more: I only highlighted some of the aspects, but there still remains a lot of research to be done, for example by looking at the moral philosophy that is also propagated in combination with the speculative philosophy.

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<sup>576</sup> Gerhard Dorn, *Monarchia triadis, in unitate, soli Deo sacra*, in Paracelsus *Aurora thesaurusque philosophorum*, (Basel: Palma Guarini, 1577), 65-127.



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## 11. Appendix

### 11.1. Glossary of Alchemical Terms

This glossary provides an overview of various terms employed throughout this dissertation. The glossary is based on the glossary found in Gareth Roberts' *The Mirror of Alchemy*.<sup>577</sup> I supplied it with the *Dictionary of Alchemical Imagery* of Lyndy Abraham as well as with my own findings.<sup>578</sup>

**Ablution** is the purification of bodies, it is the washing of a solid with a liquid, usually the mercurial waters.

**Albedo** is the pure, white stage of the *opus*.

**Alchemy** is the separation of the pure from the impure (Gerhard Dorn); a branch of knowledge by which the origins, causes, properties and passions of metals are thoroughly known, and by which those that are imperfect, unfinished, mixed and corrupt are changed into true gold. (Petrus Bonus); a science teaching the transformation of metals which is effected by a medicine. (Roger Bacon).

**Alembic** is the upper part of a still used for distillation. It is sometimes (wrongly) used to refer to the whole vessel.

**Arcanum** is that which is the most hidden in objects. These hidden things reside in all natural objects and are of an eternal and celestial origin, from which the particular virtue is derived.

**Argent-vif, quicksilver** is the cold, moist, female and receptive principle. It is the volatile principle which needs to be fixated by the hot and dry principle, the **sulphur**. The quicksilver is also associated with the mercury, the *argentum vivum* which is alive and abundant with spirits, as well as with the **radical humid**.

**Astral body** provides the link between the soul and the body, between the supernatural and the natural, transmitting the divine activity. The astral body also marked the essential difference of objects, and Paracelsus considered them to be supernatural: they have neither beginning nor end, deriving directly from God.

**Blood** is the transformative substances, often perceived as both the solvent and the coagulator. It holds the same properties as the vegetative mercury, able to nourish the seeds of the Stone and helping them in maturing to become the red elixir.

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<sup>577</sup> Gareth Roberts, *The Mirror of Alchemy*, (Toronto: University of Toronto Press, 1994, 97-113.

<sup>578</sup> Lyndy Abraham, *A Dictionary of Alchemical Imagery*, Cambridge: Cambridge University Press, 1998.

**Calcination** is the reduction of substances by fire. A pulverisation of substances to remove the moisture that unites the parts.

**Ceriation** reducing hard substances to a wax-like state, it entails a mollification or softening. Also called **inceration**.

**Chaos** is said to be the confusion of the particular forms and its material with the universal form and its matter. It is the formless, shapeless matter from which the world and the Philosopher's Stone were believed to have been formed. The macrocosmic process of Creation as held in *Genesis* served as a blueprint for the microcosmic process of creating the Philosopher's Stone in the glass vessel of the alchemist. The Chaos is thus the *massa confusa*, the raw material with which the alchemist works. The *prima materia* was believed to be a part of the original Chaos from which everything was created. Dorn believed that there also remained a memory within the created beings of this Chaos, a shackle that bound them to this Chaos and facilitated generation.

**Chymical wedding** is a central imagery within the alchemical *opus*. The alchemist needed to unite two opposites in order to generate the Philosopher's Stone.

**Citrinitas** is the penultimate stage in the creation of the Stone. It is the appearance of the yellow colour. From the sixteenth century onwards, the stage was usually left out of the account of the work.

**Coagulation** is the conversion of a liquid into a solid. The liquid is reduced to a solid mass by depriving it from its vapours. It is the thickening of a thing.

**Congelation** is the process of thickening, it is the conversion of liquid into a solid state, crystallisation.

**Digestion** is the maturation, the preparation of a substance with a gentle heat. It is modelled on the process of digestion of food by the stomach.

**Elements** the four Aristotelian principles of matter: earth, fire, water and air. According to Paracelsus, an element is the corruptible and transient essence of the world and of all things which are subject to change.

**Elixir** is the agent of transmutation, the medicine, the Philosopher's Stone

**Essence** is the extract, the indispensable quality: the fine extract can be gained through distillation. It continues the nature and perfection of the substance from which it is derived.

**Exaltation** is the elevation of a substance to a higher dignity and virtue.

**Fermentation** is a stage in the *opus* where the Stone converts the mercury itself

**Fixation** is the deprivation of a substance from its volatility and fluidity. It is the process of turning the spirit into the body, of uniting the two and making sure that the spirit cannot escape anymore.

**Limus** refers to slime of the earth, a mixture of earth and water. It is the substance from which God created his creatures. Paracelsus gave the name 'limbus' to the biblical dust, clay or mud to denote the basic material constituents of the humans. It referred to the "special transcendent status of the type of ur-matter chosen for the purpose of conferring a unique status on humans."<sup>579</sup> As a Paracelsian Dorn most likely used the word *limus* in its Paracelsian meaning, where it became something akin to the *prima materia*.

**Luna** is the female principle of the alchemical *opus*. It is often associated with the **quicksilver** or the philosophical silver. Due to this association with the female she is also described as the mother of the philosophical child, of the **Philosopher's Stone**. Luna is also the principle that needs to be joined with its opposite, the **Sol** to conceive the philosophical child.

**Major heaven** consists of the pure element, namely the *quinta essentia*. Dorn discerns two types of forms in the major heaven: a universal form, the quintessence, and the distinct forms which are derived from the quintessence. The major heaven thus holds a form-giving function: it furnishes the matter with its form, bringing out the potencies and the strength into a state of being.

**Menstruum** is the mercurial solvent of the philosopher. It holds a similar function as the **blood**. It is the means through which the alchemist can dissolve the material into the prime matter in order to create the matter for the Stone.

**Mercurius** is the transformative substance of the *opus*. It is the philosophical mercury, '**our mercury**,' which not only enables the process in the laboratory and the alteration, but it also aids in the formation of the universal medicine and the process of animation. It appears as an activating spirit, the agent through which the work is effectuated. It is present in the alchemical work as the **vegetative mercury**, holding the vegetative properties of growing and nourishing: it holds the *potentia* of the **intellective mercury**, which is the soul of the Philosopher's Stone.

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<sup>579</sup> Webster, *Paracelsus*, 144.

**Metaphysical heaven** is **our mercury** which is the same as the **philosophical key**.

**Mysterium Magnum** is the prime matter of all things, the beginning and mother of all corruptible creatures of God. **Prime matter** was said to be the first matter, the original, pure substance from which the universe was created. All the created things in the visible, corporeal world were created from the *Mysterium Magnum*. It serves as the common matter of all things, and functions as the ultimate substratum for the compounds in the corporeal world.

**Nigredo** is the black stage of the *opus*, where the matter is brought back to the *prima materia* by means of calcination, dissolution and putrefaction. It entails the “dead of the matter.”

**Philosopher’s Stone** is the much sought after goal of the alchemical work. It is the Arcanum of all arcana, holding within it the power to perfect all imperfect things. It is the agent of transmutation, able to turn base metals into gold as well as transforming the earthly man into an enlightened philosopher. Due to it holding the most pure Arcanum, the quintessence, it can enable the liberation of the celestial element within mankind and restore them to their incorruptible nature. It also appears in the works as the **philosophical child**, the result of the first union of **Sol** and **Luna**.

**Philosophical gum** is the prime matter containing the seeds or sperm of the metals. It acts as the mercurial medium of conjunction, aiding in the union of opposites.

**Prima materia or prime matter** it is the first material from which the world was created.

**Projection** is the final alchemical process where the powder or the Stone is thrown upon molten metal to transmute it into gold or silver.

**Putrefaction** is the decomposition or disintegration of a substance where the material is converted into an apparently inert mass or powder.

**Quintessence** is the most refined part of a substance, it is a spiritual matter which is extracted corporeally out of all things that have life and is elevated to the highest degree of purity by separating all impurities. It is the eternal and incorruptible substance present in all living things.

**Rubedo** is the final stage of the *opus* where the Philosopher’s Stone or the red elixir is produced.

**Seeds** are “discrete, individual centres of actualisation in the world, centres of divinely predestined activity.”<sup>580</sup> The *semina* are present in all parts of a given body. They hold a magisterial power of life, are of an astral nature, they does hold an astral body with the quintessence, and cannot be destroyed during the alchemical *opus*.

**Sol** is the male principle of the alchemical *opus*. It is the philosophical gold, as well as acting as the hot and dry principle which must be joined with its opposite, **Luna**, to create the **Philosopher’s Stone**

**Solution** turning solid to liquid, it turns the dry in the wet, reducing the calcined body into water.

**Solve et Coagula** is dissolution and coagulation. It is an alchemical axiom which refers to the idea that the *opus* consist of repeated cycles of dissolution and coagulation.

**Soul** is the volatile vapour that is released when a substance is dissolved. The soul also provides reason, understanding and memory to the living being, and is a direct emanation from God. Furthermore, the soul gives a form to the mixed bodies, it holds a spark of nature as well as the aforementioned link to creation, the memory to the time before the first separation, due to its faculty of memory. It is the breathing-tube of eternal life, divine breath in the elementary body.

**Soul of the metals** is the microcosmic heaven in the metals.

**Spirit** is a volatile substance as well as the pure essence of a metal or person. The spirit also acts as a mediating substance, it acts as the instrument of the soul through which it can vivify the body.

**Sublimation** entails the conversion of a solid to a vapour which is then followed by the condensation of the vapour into a solid from through cooling it down.

**Sulphur** is the hot, dry, male and active principle. It can also be associated with the vital heat of a body, providing it with an animating soul.

**Tincture** is a colouring liquid.

**Vessel** is the receptacle in which the elixir was made. It existed out of glass, had a long neck which was sometimes called the heaven and it had a round bottom which was also called the belly.

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<sup>580</sup> Jole Shackelford, *A Philosophical Path for Wisdom*, 168.

**Volatile** is used to denote a substance that has the tendency to rise upward when heat is applied to the glass vessel.

**Vulgar mercury** is 'dead', because its internal fire is sleeping. It is opposed to the **quicksilver**.

**White foliated earth** is the earth awaiting reanimation. It is the sublimated earth, the purified matter of the Stone, ready to receive the soul.