

## INTRODUCTION: JOHN DEE, ALCHEMY AND PRINT CULTURE

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This special issue is based on a conference sponsored by the Society for the History of Alchemy and Chemistry held at the Plantin-Moretus museum in Antwerp in October 2014, co-organized by myself, Manuel Mertens, and Steven vanden Broecke. The conference had a dual purpose: first, it was designed as a celebration of John Dee's *Monas Hieroglyphica* which had been published in Antwerp 450 years earlier. It was also intended to highlight the role played in its production by the Antwerp printer and "royal typographer" (*Typographus Regius*) Willem Silvius (d. c.1580), in whose house and print shop near the at the Camerpoort bridge, Dee had written and supervised the printing of his book. Dee addresses a letter to Silvius as "his singular friend" (*Amico suo singularis*),<sup>1</sup> and signs off his letter "From our study at Antwerp" (*Ex Musaeo nostro Antwerpiensi*).<sup>2</sup> Dee identifies Silvius as the "typographical parent" of his work, someone who can "bring it forth and produce it trim and well put together in every way."<sup>3</sup> While Silvius was a gifted and enterprising printer, he was also, as Colin Clair has noted, a "man of letters," having been responsible, for example, for the Flemish translation of Claude Paradin's *Devises héroïques* which he published in 1562.<sup>4</sup>

This intimate relationship between Dee and his printer brings me to the second purpose of the conference: to raise the question, through a detailed case study, of the relationship between alchemy and print culture. Having originally been part of a thriving manuscript culture, between 1550 and 1670 alchemy underwent something of a "print revolution" (although alchemy to some extent remained a manuscript culture, with publically circulated books existing alongside privately – and sometimes secretly – distributed manuscripts).<sup>5</sup> Various questions arise out of this deluge of alchemical publication. What happens to alchemy when it enters the public sphere? What role was played by printers, editors, engravers, and booksellers, in the promotion of alchemical studies? How was the posthumous reputation of medieval alchemical authors, or Renaissance authors such as Theophrastus Paracelsus, shaped by their reproduction in printed books? Who undertook these editions and why? To what extent was the print trade responsible for the formation of an accepted canon of alchemical authorities? In what ways could living authors make use of the medium of print to promote their own ideas?

Whilst literary historians have been thinking long and hard about the impact of print on literature, and the co-existence of print and manuscript culture,<sup>6</sup> the history of science and the history of alchemy in particular, could benefit from further reflection in this area. Whilst many historians of alchemy have done excellent work in locating, identifying, and analysing

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<sup>1</sup> C. H. Josten, "A Translation of John Dee's 'Monas Hieroglyphica' (Antwerp, 1564), with an Introduction and Annotations," *Ambix*, 12:2-3 (1964): 84-221 (148-9). John Dee, *Monas Hieroglyphica* (Antwerp, 1564), p. 10 v.

<sup>2</sup> Josten. "A Translation", 152-3. Dee, *Monas*, p. 11v.

<sup>3</sup> Josten. "A Translation", 150-151. Dee, *Monas*, p. 11r: "te elegi, Istius nouiter Nati Operis parentem Typographicum: qui omnibus modis, nitidum, suisque bene Compositum Membris, tua Curatura, emittere potes."

<sup>4</sup> *Princelijke Devijzen ofte wapenen van M. Claude Paradyne* (Antwerp, 1562). See Colin Clair, "Willem Silvius," *The Library* (1959): 192-205 (193).

<sup>5</sup> On the massive increase of the printing of alchemical books in the seventeenth century (especially 1650 onwards) see Lauren Kassell, "Secrets Revealed: Alchemical Books in Early Modern England," *History of Science*, 49:1 (2011): 61-87.

<sup>6</sup> See, for example, Harold Love, *The Culture and Commerce of Texts: Scribal Publication in Seventeenth-Century England* (Amherst: Amherst University Press, 1993) and Arthur F. Marotti, *Manuscript, Print and the English Renaissance Lyric* (Ithaca: Cornell University Press, 1995). Alexandra Gillespie, *Print Culture and the Medieval Author: Chaucer, Lydgate, and Their Books 1473-1557* (Oxford: Oxford University Press, 2006).

alchemical works in manuscript, or have had insightful things to say about particular printed books or publishing houses, no systematic study of alchemy and print culture has yet been written.<sup>7</sup> Such a systematic study is perhaps a lot of ask from any one individual researcher, and it seems suited rather to an international conference, or a group research project (or projects).

The conference we organized in Antwerp, “The Royal Typographer and the Alchemist: Willem Sylvius and John Dee,” was a very modest affair. It aimed to look at one book by one author and his relationship with a single printer. But its aim was to draw attention to the broader potential of these kinds of studies in the history of alchemy and chymistry. The decision to hold the event in the Plantin-Moretus museum was a deliberate one: the intention was to emphasise the role of print in Dee’s work. To that end we brought historians of alchemy, intellectual historians, and historians of science together with historians of print and print culture such as Goran Proot, Jeroen J. M. Vandommele, and Arjan Vandixhoorn. If it proved nothing else, this small conference showed that our understanding of a particular alchemical work can be deepened by reflecting on the role of printers in the production of individual works.

Early modern printers of alchemical texts were often very conscious of the role that they were playing in the preservation of “ancient” (i.e. medieval) manuscripts and the contribution they were making towards the establishment of “the chemical philosophy” as a new discipline. They often had a genuine intellectual interest in alchemy, and used their interests to inform their publishing practices. The Italian émigré printer Pietro Perna (1519–1582), for example, based in Basel, was a great promoter of Paracelsian works, and his letters to the reader show that his knowledge of Paracelsus’s works was far from superficial,<sup>8</sup> and reveal that he worked closely with translators such as Gerhard Dorn and Josquin Dalhem to establish Paracelsus’s reputation.<sup>9</sup> As Perna’s biographer Leandro Parini has noted, “Through the intermediation of Perna ... the whole Paracelsian system was put at the disposal of the German world and then, through the translations, of the European intellectual world.”<sup>10</sup>

The German Lazarus Zetzner (1551-1616) is another example of a printer whose contribution to the discipline of alchemy was of enormous importance. The *Theatrum Chemicum*, a comprehensive compilation of key alchemical text published in six volumes between 1602 and 1661, was a lifelong project for Zetzner, which had to be brought to fruition by his heirs.<sup>11</sup> The first four volumes are accompanied by Zetzner’s letters to his patron and readers where he is very conscious of the role he is playing in the promotion of alchemy. His publication brings together works which have been “scattered and widely dispersed” (*dissipata lateque dispersa*), reducing the whole art of alchemy into a single work, for the benefit of “those who are studious in chemical philosophy” (*studiosis philosophiae*

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<sup>7</sup> See for example Didier Kahn’s work on the diffusion of Paracelsianism in France, *Alchimie et Paracelsisme en France à la fin de la Renaissance (1567-1625)* (Geneva: Librairie Droz, 2007), or Jennifer Rampling’s work on the publication of George Ripley’s works in Europe: Jennifer M. Rampling, “Transmission and Transmutation: George Ripley and the Place of English Alchemy in Early Modern Europe,” *Early Science and Medicine*, 17 (2012): 477–499.

<sup>8</sup> On Perna see Leandro Parini, *La vita e i tempi di Pietro Perna* (Rome: Edizioni di storia e letteratura, 2002). For his interest in Paracelsianism see esp. Ch. X, ‘Un laboratorio alchimistico’, pp. 149-160. Leandri’s volume usefully collects Perna’s prefatory letters in this volume: see ‘Dedicato, avvertenze al lettore’, pp. 303-373.

<sup>9</sup> On Dalhem’s translations see Kahn, *Alchimie et Paracelsisme en France*, pp. 207-212 and Isabelle Pantin, ‘The role of translations in European scientific exchanges in the sixteenth and seventeenth centuries’, in *Cultural Translation in Early Modern Europe*, ed. Peter Burke and R. Po-chia Hsia (Cambridge: Cambridge University Press, 2007), pp. 163-191 (p. 167).

<sup>10</sup> Parini, *La vita*, p. 155: ‘Per la intermediazione del Perna ... tutto il sistema paracelsico fu messo a disposizione del mondo tedesco e poi, attraverso le traduzioni, del mondo intellettuale europeo.’

<sup>11</sup> See Rita Sturlese, ‘Lazar Zetzner, “Bibliopola Argentinensis”’, *Alchimie und Lullismus in Strassburg an den Anfängen der Moderne*, *Sudhoffs Archiv*, 75 (1991): 140-162.

*Chemicarum*).<sup>12</sup> In his letter “to the candid reader” in the fourth volume, Zetzner speaks of his printing project as an attempt to promote the study of chymistry (*in promovendis Chemicorum studiis*) among a *public* readership.<sup>13</sup> With projects like Zetzner’s *Theatrum*, alchemy leaves the privacy of the laboratory and joins the Republic of Letters.

It has long been recognised that there was a symbiotic relationship between the print trade and early modern scholars.<sup>14</sup> Lisa Jardine in her 1993 study of Desiderius Erasmus, for example, stressed the role of printing houses in the formation of his career. Jardine noted the “crucially textual nature of Erasmus’s shaped reputation and the ways its fortunes are inextricably intertwined with those of the publishing houses with which he associated.”<sup>15</sup> This collection of essays shows how John Dee also consciously co-opted the expertise of his Antwerp printer to enhance and fashion his own European scholarly reputation.

In Peter Forshaw’s contribution we see the role that one typographical feature – the frontispiece – can play in the construction of an authorial character. It is clear that Silvius’s reputation as an illustrator of printed books was one of the chief motives for adopting him as the “typographical parent” of the *Monas*, which is a work which manipulates visual components in sophisticated ways. The frontispiece, as Forshaw demonstrates, was more than merely decorative, but sought rather to “epitomise the book and glorify its author and his work.” Forshaw places the frontispiece of the *Monas* in the context of Dee’s other frontispieces (particularly that of the *Propaedeumata aphoristica*) and reveals how it constructs a dense network of cryptic allusions for his readers to interpret, inviting the wise to find what they are seeking in his hieroglyphic sign, as well as repelling the unworthy (or puzzled) reader with his injunction to either “be silent or learn”. Forshaw carefully traces the subtle differences between the architectural title pages of the *Propaedeumata* and the *Monas*, as well as suggesting astrological reasons for certain elements of the *Monas*’s frontispiece (and for the timing of its composition).<sup>16</sup> He also reveals some of the hitherto unidentified Greek sources of the *Propaedeumata*.

Forshaw speculates that Dee’s inspiration for the *Monas* symbol, may have been some of the diagrams in Janus Lacinius’s 1546 edition of the *Pretiosa margarita novella*, which Dee had read in July 1556. Diagrams were certainly an important feature of the *Monas Hieroglyphica*. When writing to his friend Silvius, Dee urges him to “imitate” as much as he was able the “variety of letters, the points, the lines, the diagrams, the schemata, the numbers, and other things,” which are contained in his manuscript.<sup>17</sup> In my own contribution to this

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<sup>12</sup> Lazarus Zetzner, *Theatrum Chemicum, Praecipuos Selectorum Auctorum Tractatus de Chemiae et Lapidis Philosophici Antiquitate, veritate, jure, praestantia, & operationibus, continens: In gratiam Verae Chemiae, & medicinae Chemicarum studiosorum (ut qui uberimam inde optimorum remediorum messem facere poterunt) congestum, & in Sex partes seu volumi digestum* Strasbourg: Heredum Eberh[ardi] Zetzneri, 1659), vol. 1, dedicatory epistle to the Frederick Duke of Wurtemberg, sig. A2r-v.

<sup>13</sup> Zetzner, *Theatrum Chemicum*, vol. 4, ‘Candido Lectori S. P.’, sig. A2r.

<sup>14</sup> See, for example, Brian Richardson, *Printing, Writers and Readers in Renaissance Italy* (Cambridge: Cambridge University press, 1999); Lucien Febvre and Henri-Jean Martin, *The Coming of the Book: The Impact of Printing, 1450-1800*, translated by David Gerard (London: Verso, 2010); Andrew Pettegree, *The Book in the Renaissance* (Newhaven and London: Yale University Press, 2010); Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (1998); Margaret J. M. Ezell, *Social Authorship and the Advent of Print* (Baltimore: Johns Hopkins University Press, 1999); Anthony Grafton, *The Culture of Correction in Renaissance Europe*, The Panizzi Lectures 2009 (London: British Library, 2011).

<sup>15</sup> Lisa Jardine, *Erasmus, Man of Letters: The Construction of Charisma in Print* (Princeton: Princeton University Press, 1993), 23.

<sup>16</sup> For an insightful study of the architectural title page see William H. Sherman, ‘On the Threshold: Architecture, Paratext, and Early Print Culture’, in *Agent of Change: Print Culture Studies After Elizabeth L. Eisenstein*, ed. Sabrina Alcorn Baron, Eric N. Lindquist, and Eleanor F. Shevlin (Amherst and Boston: University of Massachusetts Press, 2007), pp. 67-81.

<sup>17</sup> Josten. “A Translation”, 148-9. Dee, *Monas*, p. 10v.: “in Literarum Varietate, Punctis, Lineis, Diagrammatibus, Schematibus, Numeris, aliisque, Imiteris, (quantum possis).”

special issue I consider the *Monas* as a text which makes use of the new medium of print, and especially its capacity to reproduce identical diagrams. The *Monas*, I argue, is one of the first alchemical texts to make extensive use of diagrams, rather than the more traditional symbolic imagery with which Dee was extremely familiar. His reliance on diagrams is such that I think we can fairly characterise the alchemy of the *Monas* as a “diagrammatic” alchemy, rather than an alchemical work which just happens to use diagrams.

Elizabeth Eisenstein, the preeminent historian of the print revolution, has argued that the diagram was an integral part of what made print “revolutionary” in the first place: “The fact that identical images, maps, and diagrams could be viewed simultaneously by scattered readers,” she suggests “constituted a kind of communication revolution in itself.”<sup>18</sup> More recently Susanna Berger has suggested that the diagram was just one part of a wider drive towards making knowledge available in new efficient forms. “Many early modern philosophical images,” she argues, “were the products of a particular moment in European history, when a method of transmitted knowledge aimed at optimizing efficiency through the clear presentation of information began to flourish.”<sup>19</sup>

James Franklin has identified a particular mode of cognition associated with the use of diagrams which he calls “diagrammatic reasoning.”<sup>20</sup> While Franklin probably didn’t have alchemical texts in mind when he developed this concept, I aim to show that it is particularly useful for understanding what Dee is doing with his diagrams in the *Monas Hieroglyphica*.

Print culture obviously played a key role not just in shaping the nature and reproduction of texts, but also changed the ways in which texts circulated. These new modes of circulation had profound effects on various disciplines, but especially those where the dominant mode of pre-print circulation was carefully monitored. With the shift from privately circulating manuscripts to the printed book, alchemical works move from a situation where the distribution of the works could be strictly controlled to one of unregulated access. If medieval alchemical texts made much of the relationship between a *magister* and his chosen *discipulus*, with whom he might deign to share his alchemical secrets, the printed book shifts us into a relationship between a new kind of author and a broader, less-regulated readership. Readerships, as we now know, are amorphous and ill-defined. Anyone who had the desire (and the money) to purchase an early modern printed book could gain access to the secrets they contained. Whereas medieval authors had some sense of who their readership was (fellow university scholars and students working in the same disciplinary field, for example) print created a more variegated and promiscuous audience. But how can the mysteries and secrets of alchemy be made public to all and sundry without “profaning” them? The answer, I think, lies in the fact that even when they are openly communicated, the secrets of alchemy remain out of reach: they are public *arcana*, “open” secrets.<sup>21</sup> The traditional symbolic language of alchemical processes withheld the secrets of the art of transmutation from its readers: it promised to explain them clearly, but concealed them under veils of metaphor – it imposed a labour of interpretation. The *arcana* disseminated in printed books broadened the interpretative community. Print also allowed the practitioners of the alchemical art to become public authors (or authorities), and to manipulate their public *personae*.

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<sup>18</sup> Elizabeth L. Eisenstein *The Print Revolution in Early Modern Europe*, second edition (Cambridge: Cambridge University Press, 2005), P. 24.

<sup>19</sup> Susanna Berger, *The Art of Philosophy: Visual Thinking in Europe from the Late Renaissance to the Early Enlightenment* (Princeton: Princeton University press, 2017), p. 3.

<sup>20</sup> James Franklin, “Diagrammatic Reasoning and Modelling in the Imagination: the Secret Weapons of the Scientific Revolution”, in *1543 and all that: Image and Word, Change and Continuity in the Proto-Scientific Revolution*, ed. Guy Freeland and Anthony Corones (Dordrecht: Kluwer, 2000), pp. 53-115.

<sup>21</sup> On the transition from the privately circulated secret to the public secret see William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton: Princeton University Press, 1994), esp. pt 2: “The Secrets of Nature in the Age of Printing”, p. 93 et seq.

John Dee, for example, explains to Silvius why he has printed the *Monas Hieroglyphica*:

You see my excellent friend William how singularly I love and value the very noble virtues of the illustrious King Maximilian, to whom I impart rare and very excellent arcana from my innermost heart. I do this also with the intention that, thanks to your care and fidelity, the more people may enjoy them throughout the world (for the greater honour of the King, on account of his uncommon and royal virtues, and also that others may learn from him, who knows how to find time most wisely to attend to the government of his kingdoms and nevertheless to learn in rich abundance the stupendous mysteries of philosophers and wise men).<sup>22</sup>

Publication allows Dee to flatter Maximilian and seek his patronage, whilst at the same time enhancing his own reputation as a philosopher and wise man with “stupendous mysteries” and “excellent arcana” to impart. This reciprocity – which would once have been performed by the presentation of a singular manuscript – is now attained by the “many people” who will read the printed book. While the rhetoric of the singular exchange survives in Dee’s addresses to Maximilian, that rhetoric is now exposed to the view of the book-buying public.

It is precisely this reciprocity which forms the subject matter of Steven vanden Broecke’s paper. Vanden Broecke seeks to place Dee’s *Monas* within the context of a specific “socio-epistemic imaginary,” that is to say a “mental map .... which specifies the various relations that organize and determine the individual pursuit of knowledge and wisdom.” The “knowledge society” that Dee encountered in the Spanish Netherlands in the 1560s, he argues, was very complex, and in his case required him to establish a specific social vision which placed access to divine knowledge outside the reach of the vulgar, constructing a “worthy” readership of philosophers and the Emperor himself, who would together establish a “Christian polity.” The “very notion that the *Monas* contained secrets,” vanden Broecke argues, “was supported by Dee’s vision of social order and vice versa.” The relationship between divine knowledge, earthly power and apocalyptic consummation was certainly a factor which continued to inform Dee’s angelic conversations in the 1580s, which also fostered a “culture of secrecy” and sought to provide a means (this time, immediate revelation from God’s angels) of “escaping and transcending the confined of a strictly human horizon on truth.”<sup>23</sup> In his essay, vanden Broecke shows Silvius to have put himself at the service of other “esoteric” projects in the years after his collaboration with Dee: Pierre Haschaert’s French translation of Paracelsus’s *Grosse Wundtartzney*, and Denis Zachaire’s alchemical treatise, the *Opusculè très excellent de la vraye philosophie naturelle des métaulx* (1567), although he finds differences as well as similarities in the ways in which Haschaert and Zachaire related their works to the *vulgus*, or “common” reader.

The final paper in the volume, by Manuel Mertens, offers us an unusually clear picture of the birthplace of Dee’s typographical “child,” the *Monas Hieroglyphica*. Whilst we have always known that Dee wrote and printed his work in Silvius’s printing house on Den Camer Straet, at the “sign of the golden angel,” and that he referred to it intimately as “our study (*musaeum*) in Antwerp,” we have had no detailed picture of what Silvius’s printing house might have looked like. Luckily for us (although unfortunately for Silvius), Dee’s Antwerp friend was involved in legal proceedings in March 1568, only four years after the publication of Dee’s book. After his arrest, a detailed inventory of his printing house was drawn up by

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<sup>22</sup> Josten. “A Translation”, 148-9. Dee, *Monas*, p. 10v.

<sup>23</sup> See, for example, his prayer, the “Protestatio Fidelis”, where he writes : “But, (to be brief) after all my forsaid endeavor I could fynd no other way, to such true wisdome atteyning, but by thy extraordinary gift: & by no vulgar schole-doctrine or humane invention ...”, British Library, MS Sloane 3188, fol. 7r.

local businessmen, which offers us an unprecedented glimpse of Silvius's house, room-by-room, giving us an overview of his stock, and his private library. The detail even allows Mertens to gain a rough estimate of how many unbound copies of the *Monas* Silvius had available for sale, four years after its publication.

Taken as a whole then, this special issue gives us a very clear picture of the production of the *Monas Hieroglyphica* and the important role played in it by the Royal Typographer. Clucas and Forshaw make clear what the Antwerp printer had to offer Dee in terms of the frontispiece and the diagrams, and how the nature of his alchemical project was shaped by the exigencies of print. It shows us how Dee was able to avail himself of what Jardine has called the "charisma" of print, to construct an image of himself as a royal client, a philosopher, and a wise man possessed of "stupendous mysteries" (*Stupenda ... Mysteria*). Vanden Broecke shows us that Silvius's relationship with Dee was not a one-off: Silvius published a number of works which traded on the aura of printed secrets and adept knowledge. Finally, Mertens's piece takes us to the very scene of the *Monas*'s production, inside Silvius's print-shop itself, revealing it to be a site of learning and erudition as well as commerce.

Although Dee's later career, which involved communicating with angelic spirits, was constrained to observe the secrecy of the earlier manuscript culture (until Meric Casaubon – with an agenda of his own – made some of them public in 1659),<sup>24</sup> the *Monas Hieroglyphica* is very much a product of the age of print. We hope that this collection of essays will lead to further investigations into the very close relationship between alchemy and print in early modern Europe. The story of how alchemy was reshaped by print has yet to be told.

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<sup>24</sup> Meric Casaubon, *A True & Faithful Relation of what passed for many Yeers Between Dr. John Dee ... and some Spirits* (London: D. Maxwell, for T. Garthwait, 1659). On Casaubon's agenda see Stephen Clucas, "Enthusiasm and "damnable curiosity": Meric Casaubon and John Dee", in R. J. W. Evans and Alexander Marr (eds.), *Curiosity and Wonder from the Renaissance to the Enlightenment* (Aldershot: Ashgate, 2006), pp. 131-148.