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Magic and Memory in Giordano Bruno

The Art of a Heroic Spirit

By

Manuel Mertens

To my beloved children Vif, Renée, and Cyriel

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Contents

Preface

This book discusses the magical and mnemonic writings of Giordano Bruno, a 16th-century philosopher who was burnt at the stake. When I have presented my research to laymen summarized thusly, it has often been welcomed with great enthusiasm. Not only do magic and mnemonics excite general interest, but his *auto-da-fé* on the Campo dei Fiori in Rome seems to make the whole enterprise even more alluring.

In March 2016 a colleague and I guided a group of seventeen-year-old students through Rome. On the first day, after visiting the Roman Forum and the Palatine hill, we reached the Campo dei Fiori at sunset. The day had been long and exhausting. Yet, despite their obvious fatigue, the faces of these boys and girls lit up when we paused at Bruno's statue and started to recount his life story. Gazing into history, they could see how, on 17 February 1600, this cosy little square had been the setting for a cruel episode. This man they were looking at had opted to die rather than to renounce his own ideas. How crazy was that? And then there were his ideas, which were even crazier: an infinite universe with an infinite number of worlds, the transmigration of souls, a reform of magic; all these ideas well stored in fabulous mnemonic palaces. Who could think of anything more spectacular? Whereas my voice might have betrayed my admiration for this thinker, it was Bruno's life story and his extraordinary way of thinking that triggered their fascination.

It goes without saying that listing the heretical points for which he was condemned only provides a partial answer to the question as to *why* this thinker was sentenced to death. Nowadays, one could fill many bookshelves with Bruno studies, and many of these studies propose an interpretation of his execution as a milestone in the history of thought, some more convincingly than others. This book, in turn, sheds new light on this episode. It leads to a quite literal reading of the words spoken by the philosopher himself on the day of his execution, showing that they were well balanced and rightly chosen. After having stated that those who sentenced him to death were probably more fearful than he who had to undergo the penalty, he proclaimed that "he died willingly, as a martyr, and that his soul would go up with the smoke to paradise".[1] Whereas his statement that "his soul would go up with the smoke to paradise" is

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1 L. Firpo, *Le Procès*, BOeuC, 1:523: "Giovedì mattina in Campo di Fiore fu abbrugiato vivo quello scelerato frate domenichino da Nola, di che si scrisse con le passate: heretico ostinatissimo, et havendo di suo capriccio formati diversi dogmi contro nostra fede, et in particolare contro la Santissima Vergine et Santi, volse ostinatamente morir in quelli lo scelerato; et

generally read as an expression of his heroism, I will argue that, in magical and mnemonic terms, for Bruno a heroic state of mind could be described exactly as a fiery spirit elevating the soul to a divine level. In other words, his last words were uttered less metaphorically than they are usually read. However, to understand how exactly Bruno believed this to be true, it is necessary to get a grip on his magical and mnemonic ideas. And since a discussion of these principal topics that does not include their Neoplatonic background makes no sense, I shall briefly explain here what magic and mnemonics meant to Bruno, and how they relate to philosophy. Thereafter I shall present my overall argument with a short description of my four chapters.

A magical revival took place at the end of the 15th century, in great part thanks to Marsilio Ficino's works, and his translations of Neoplatonic and Hermetic sources. Thus, at the moment the witch-hunts began to intensify, philosophical treatises emerged to offer a well-defined intellectual framework for the magical practices then coming into prominence. The Neoplatonic view of an animated world, in which similitudes linked the different levels of being, explained why plants and stones could contain occult virtues. These virtues were "occult" because their causes were hidden from human understanding. Nevertheless, their marvellous effects could be experienced and were considered to be dependent on the natural powers of heaven. By means of this universal sympathy, physicians could cure their patients by invoking the celestial powers with herbs, animals, and images associated with a given planet. The similarities between specific herbs, animals, and images and their ruling planets were thought to explain their capacity, as a kind of "bait", to attract the desired planetary power and thus influence the lower world. Hence, the all-encompassing similitudes led to a conception of "causality" far removed from our present explanation of "why things happen". Within this world view, a special role was reserved for the universal spirit, a thin, airy substance believed to mediate between the celestial and sublunary worlds and to facilitate the traffic of higher powers with the world below. By virtue of this spirit the magician was said to unite or "marry" heaven and earth. One could rightly argue that this universal spirit was inherited from the pneumatic doctrine of the Stoics rather than from the Neoplatonic school. A strict distinction between these philosophical currents, however, was not yet in force, certainly not before Justus Lipsius's works on Stoicism. In brief, it was predominantly sources translated by Ficino which offered a way of philosophically underpinning a range of

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diceva che moriva martire et volentieri, et che se ne sarebbe la sua anima ascesa con quel fumo in paradiso. Ma hora egli se ne avede se diceva la verità."

magical practices already present in the Middle Ages and coming closer to the surface in the Renaissance.

The importance of the Neoplatonic heritage does not mean that magical issues did not fit into early modern scholasticism. A great challenge, for example, was to reconcile Neoplatonic magic with the Aristotelian-Thomistic conception of substantial forms. If a magical preparation of matter (the incision of an image on a stone, or the pronunciation of words) did not alter the substantial form of this matter, how could it result in the manifestation of a property which was previously absent? For opponents of magic, this manifestation pointed to the intervention of a supernatural essence or demon. Hence, early modern scholasticism also broached magical issues. Charles Schmitt even spoke of an "invasion of Hermetic material into Aristotelian texts", referring to the work of such Aristotelians as Agostino Nifo or, in England, John Case.[2] Although magic cannot be identified with Hermetism, both subjects obtained an important position within the philosophical debates of the Renaissance. Many philosophers took a stance against superstition and witchcraft but did not consider all magic to be contemptible. On the contrary, sometimes a great value was ascribed to it. Giovanni Pico della Mirandola even described it as the fulfilment of natural philosophy (*magia est consummatio philosophiae naturalis*). By Bruno's time *magia naturalis* was generally understood as the "practical part of natural philosophy" and was opposed to superstitious and theurgical magic, which, by invoking angels, came into conflict with orthodox religion. This last form of magic acquired a bad reputation because there was always the suspicion that the invoked angels or (in a Neoplatonic sense) benign planetary spirits were in fact evil demons, very adroit at disguising themselves and deceiving mere mortals.

These debates were still in progress when Bruno, a philosopher *pur sang*, concluded in the 1580s that an infinite cause like God should result in an infinite effect too: the infinite universe. Magic occupies a considerable place in Bruno's *oeuvre*. But an initial remark is necessary. By propounding an infinite universe with an infinite number of worlds, where the centre was everywhere and the circumference nowhere (according to the famous formula from the *Liber XXIV philosophorum*), Bruno dissolved the traditional cosmological hierarchy, on which a great part of magic was based. Was his conception of magic, then, influenced by his new cosmological vision? In a word, how could he "marry" heaven and earth in an infinite universe?

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2   C.B. Schmitt, *Aristotle and the Renaissance* (Cambridge, Mass.: Harvard University Press, 1983), pp. 97, 99–101.

Although many passages in his magical writings still echo the hierarchical conception of the world, there are also indications of an endeavour to adapt magic to his infinite universe. The central point is that, although the physical universe has lost its traditional hierarchy, the structuring of the mind – precisely one of the aims of his art of memory – remains indispensable for magical action. And that being the case, the traditional view of *magia naturalis* as the "practical part of natural philosophy" is not fully applicable to Bruno's magic, in which cognition and operation converge. There is another reason why Bruno's "natural magic" does not conform to the traditional notion of the term, as defined in opposition to demonic magic. Notwithstanding Bruno's stress on the "natural" character of good magic, his conception of nature as matter imbued with spirit implies the existence of demons. These are corporeal beings consisting of very subtle matter or "spirits", fully integrated into nature, where their actions are seen as "physical causes". Hence, magical action, although natural, must take these causes into account as well.

This does not mean that, in line with the ongoing debates, Bruno does not reject superstitious forms of magic. From his first writings we encounter contemptuous references to such abracadabra. In his comedy *Candelaio*, for example, the old roué Bonifacio tries to seduce the courtesan Vittoria by means of magic. Another figure in the same comedy, Bartolomeo, devotes himself to alchemy in the hope of becoming rich. These characters and their superstitious forms of "magic" are ridiculed. One year later, a good form of magic is presented in Bruno's *Sigillus sigillorum* as one of the four guides (together with love, art, and mathesis) of the inner (i.e. psychological) acts. Opposed to superstition, this kind of magic is called "a companion and rival of nature", but also "in some way director and governor of nature for one's own use".[3]

However, it is a difficult exercise of the historical imagination to approach the concept of "superstitious" magic, or, even more so, its alleged rejection, without being unduly influenced by our own understanding of "superstition". As an example we could refer to a passage of *De magia naturali*, in which Bruno tells of a sort of "nose transplant" to prove that the soul diffuses outside its body:

> Experience teaches this also in the case of those whose nose has been cut off; if they arrange to grow a new nose for themselves from the flesh of some other animal, and if that animal whose flesh was used dies, then as the body of that animal rots, so does the borrowed nose. From this, it

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3   G. Bruno, *Sigillus sigillorum*, BOMNE, 2:266: "[…] naturae cunctipotentis aemula et socia efficitur [magia] atque quodammodo eiusdem ad proprium usum directrix et gubernatrix."

is clear that the soul diffuses outside of the body in every aspect of its nature.[4]

Odd testimonies of this sort are not alien to Bruno's magical writings. We may wonder where and how he gained the "experience" of such a phenomenon, which we would immediately relegate to the domain of "superstition". Although his overall reasoning shows a progressive view on magic, some elements which are in our view "superstitious" clearly remain.

A perceptive remark by Keith Thomas, whose studies have contributed much to the comprehension of the phenomenon of magic, may help us to understand these "superstitious remains" in Bruno's magic. "It is a feature of many systems of thought", Thomas writes in the concluding chapter of *Religion and the Decline of Magic*, "and not only of primitive ones, that they possess a self-confirming character. […] Such systems of belief possess a resilience which makes them virtually immune to external argument."[5] Many wizards or astrologers were able to explain the failure of their operations from within their own system of beliefs. The failure, they said, was due to a mistake in calculations, or the magus had omitted a vital ritual precaution. Maybe his power was simply not great enough, and therefore he could advise his patient to visit another, more powerful magus. This self-confirming attribute of certain systems of thought is well illustrated by a passage from Chaucer's *The Canon's Yeoman's Tale* (402–408), where the failure of an alchemical experiment does not injure the belief in alchemical theory.

> Another seyde the fir was over-hoot,
> But, be it hoot or coold, I dar seye this,
> That we concluden everemoore amys.
> We faille of that which that we wolden have,
> And in oure madnesse everemoore we rave.
> And whan we been togidres everichoon,
> Every man semeth a Salomon.[6]

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4   G. Bruno, *Cause, Principle and Unity: And Essays on Magic*, ed. and trans. R.J. Blackwell (Cambridge: Cambridge University Press, 1998), p. 113. Cf. G. Bruno, *De magia naturali*, BOM, p. 188: "Ipsum et experientia docet in ipsis qui, abscisso naso, novum sibi ex aliena carne succrescere fecerunt membrum; siquidem obeunte diem illo, cuius erat caro, iuxta modum quo putrescit corpus illius, etiam mutuatus nasus ille putrescit. Hinc manifestum est animam plus se diffundere extra corpus, per totum horizontem suae naturae."

5   K. Thomas, *Religion and the Decline of Magic: Studies in Popular Beliefs in Sixteenth- and Seventeenth-Century England* (1971; repr. Middlesex: Penguin Books, 1982), p. 767.

6   *The Works of Geoffrey Chaucer*, ed. F.N. Robinson (London: Oxford University Press, 1974), p. 217.

Likewise, Bruno, often praised as a thinker well ahead of his time, continued to adhere to certain "systems of belief" which he had inherited, and in which his thought was formed from his youth onwards. His rejection of "superstitious" forms of magic should therefore be qualified according to his own principles. In our view, these principles relate to his art of memory. Superstitious magic implies a *passive* and credulous attitude on the part of those who are involved in the magical practice. Non-superstitious magic, on the other hand, is based on the regulated belief (*regulata fides*) of those who consciously act and are not acted upon against their will. Two of the major aims of his art of memory, as we will see, were precisely to regulate belief and to prevent a passive and credulous attitude.

Thus, after these introductory remarks on Bruno's magic, let us look briefly at the art of memory. We find references to the *ars memoriae* in the chief rhetorical writings of antiquity – Cicero's *De oratore*, Quintilian's *Institutio oratoria*, and the pseudo-Ciceronian *Rhetorica ad Herennium*.[7] From these treatises we understand that this art makes use of places (*loci*) and associative images (*imagines*) to remind the orator of his arguments. In a preparatory phase, the speaker places these images in the desired order within a well-known building. When he delivers the oration, he begins by taking an imaginative walk through the building, encountering the images that remind him of the arguments. In this way, he can reliably both remember his arguments and recall them in the proper order during his discourse.

It is only in the second half of the 20th century that the different forms taken by this *ars memoriae* in the various stages of Western history have been the subject of serious research, undertaken by scholars such as Paolo Rossi, Frances Amelia Yates, Mary Carruthers, and Lina Bolzoni. By now, the study of *ars memoriae* (from antiquity through the Middle Ages, and well into the early modern period) has become a fully recognized branch of the humanities – one which may even be said to be "in fashion".

In the Renaissance the *ars memoriae* naturally persisted in a rhetorical context and was employed by those who had to compose orations or sermons. When Bruno entered the convent of San Domenico Maggiore in Naples in 1565, the Dominicans were known for their expertise in this art, which was considered useful in proselytizing. Trained in the art of memory, the missionary was armed with a large quantity of arguments with which to convert the infidel. From his own testimony we know that Bruno was acquainted with the art of

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7   Cicero, *De oratore* (Cambridge, Mass.: Harvard University Press, 1913), 2:350–67; Quintilian, *Institutio oratoria* (Cambridge, Mass.: Harvard University Press, 2002), 10:2; Pseudo-Cicero, *Rhetorica ad Herennium* (Cambridge, Mass.: Harvard University Press), 3:16–24.

memory at an early age, and was probably soon recognized for his mnemonic feats. In the early 1580s he gained access to the French court by attracting the interest of Henri III with his art of memory. The philosopher later pursued a career as a renowned mnemonic teacher. It is no overstatement to say that Bruno owed a great part of his career to his fame as a mnemonist.

Besides its use in a rhetorical context, the scope of the *ars* increased considerably in the 16th century. Giulio Camillo, for one, claimed that his art contained great secrets which were veiled in his theatre. A later mnemonist, Lambert Schenkel, promised almost superhuman results, including the ability to learn languages in a short span of time, and the capacity to dictate fifteen letters on different subjects at the same time. Bruno, for his part, clearly inserted the art into his philosophical project.

This project is explicit in *De umbris idearum* (1582), Bruno's first surviving mnemonic treatise. Although many different philosophical currents are tapped when it suits the author, a primary position is ascribed to Plotinus, the *Platonicorum princeps*. Plotinus' view of memory as an active power, through which the soul realizes its true, and divine, self, stands in clear opposition to the Aristotelian conception of memory as a receptive cognitive faculty. Plotinus' view of memory makes Bruno's introduction of mnemonics in a philosophical context understandable. The core of the philosophical project delineated in *De umbris idearum* is precisely to seek out divine ideas through their shadows (that is, their reflections in the human mind) – a neverending and never fully achievable quest. As such, Bruno's art of memory seems to propose an epistemology in which memory plays a leading role.

But, as with "superstition", here again we must be careful not to project our own category of "epistemology" onto Bruno's. It would be wrong to see the art of memory as merely being concerned with epistemology. For as we have already seen, in Bruno's mind cognition and operation are closely intertwined. In the *Ars memoriae* his art is described as following nature's perfection and emulating its industry, but also as perfecting its shortcomings.[8] This definition of his art of memory echoes the definition of magic given in his *Sigillus sigillorum*. The analogous definition of the arts of memory and magic offers an ideal starting point for our study, which proposes to clarify the relationship between Bruno's writings on the art of memory and his magical works via a comprehensive study of their form and content.

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8   G. Bruno, *Ars memoriae*, BOMNE, 1:122: "Tunc artem sub umbra idearum degere arbitramur, cum aut torpentem naturam antecedendo sollicitat, aut deviam exorbitantem dirigit et perducit, aut deficientem lassamque roborat atque fulcit, aut errantem corrigit, aut perfectam sequitur et industriam emulatur."

In the book's first chapter we will look at the major studies that have been dedicated to our subject. I will show that modern scholarship has been dominated by two currents, represented by Frances Amelia Yates and Rita Sturlese, the former arguing for a magical reading of Bruno's art of memory, the latter denying that Bruno's mnemonics are linked to magic. Besides these contributions, we also take into account more recent studies of this issue. Both currents are capable of adducing passages in Bruno's mnemonic writings to confirm their own reading. This means that Bruno's treatises contain apparently contradictory passages, that is, passages that affirm a magical reading and others that deny it.

In the book's second chapter, therefore, I try to clarify these "contradictory passages". We might be tempted by the approach offered by Leo Strauss's thesis that persecution leads to a certain "art of writing" in which contradictions can play a part in the heterodox author's strategy to avoid suspicion. Yet it goes without saying that from a methodological perspective, putting a microscope over the "art of writing" is a tricky enterprise. If the author's opinion – located somewhere between the lines – is not clearly expressed, the way is open to an infinite number of interpretations. On the one hand, Bruno sometimes declares that he fears censure and that he deliberately writes in such a way as to not be understood by everyone. Since magic was certainly a dangerous bottle to uncork, it is not surprising that the link between his art of memory and magic is left implicit. On the other hand, his allusions to magic are sometimes too obvious and of an offensive nature. Why is there this ambiguity with regard to magic in his mnemonic works? This methodological difficulty requires a formal approach including both textual *corpora*. In the end, the ambiguity will become more understandable from a rhetorical point of view, rather than having it explained away as fear of persecution.

After this study of the form, the book's two final chapters will shift their focus to the content of both *corpora*. The third chapter attempts to study the philosophical basis of both Bruno's art of memory and his magic: the concept of *similitudo*. Firstly, I will seek a definition; then, I will show how both arts function by means of this concept; and finally, I will demonstrate how *similitudo* is used to express the aim of both the magical and the mnemonic doctrine.

In the book's fourth chapter another key concept of both magic and mnemonics is taken into consideration: *spiritus*. After an introduction to this concept, the role of *spiritus* in Bruno's psychology is analysed, especially in relation to his magic, which is concerned with the capacity of demonic spirits to deceive the cognitive faculties. We will then look back at Bruno's early

mnemonic treatises, where this concern for demonic deception was already present.

At the end the reader will have a view on a specific area of Bruno's mind, where epistemological and magical issues are inseparably interconnected. Thus, an exceptional part of the history of philosophy will come to the surface in the works of an exceptional thinker.

Acknowledgements

Magic and Memory in Giordano Bruno: Towards a More Encompassing Perspective

> L'histoire de la philosophie part, en effet, de textes (les textes philosophiques) pour aboutir à un texte (le texte historique). On procède du même au même. Toujours elle a cherché ainsi à évoquer les textes passés, sans se contenter simplement de les répéter, ou de les résumer, mais en produisant à leur propos de nouveaux textes, où les premiers sont à la fois présents et absents, selon des modalités variables.
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> L. BRAUN, *Histoire de l'histoire de la philosophie* (Paris: Ophrys, 1973), p. 3

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This first chapter introduces the question to which the following three chapters will try to formulate an answer. The subject of our enquiry can best be classified under the discipline of "history of philosophy". The reader may be surprised that the history of philosophy can meddle with such concepts as "magic" and "memory". Is magic not related to religion, rather than to philosophy? And does memory not belong to the field of psychology? Is it legitimate to associate magic and memory with philosophy? The answer is yes. At least, magic and memory *were* relevant for philosophy in the 16th century; therefore, they *are* relevant for the historian of philosophy. However, the doubt expressed by the former questions points to one of the main challenges for the discipline: to not project modern categories onto the thought of earlier ages. This remark is not as trivial as it seems, if we recall that Bruno's magic was long considered marginal, that his art of memory has been interpreted as a post-Saussurian semiotics, and that his philosophy was recently connected with post-Einsteinian relativity and quantum mechanics.[1] If the title of this chapter announces an

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1 Despite their valuable contributions, the approaches of certain scholars are sometimes anachronistic. F. Tocco, for example, considers Bruno's unpublished, magical works to be secondary (*Le Opere inedite di Giordano Bruno. Memoria letta all'Academia di scienze Morali e Politiche della Società Reale di Napoli dal socio Felice Tocco* (Naples: Tipografia della regia università, 1891)). Sturlese and Wildgen tend to apply modern semiotics to Bruno's art of

"encompassing perspective", it most certainly does not propose an anachronistic approach to the Nolan's philosophy. On the contrary, it seeks a perspective which can be justified within Renaissance thought, where magic takes a prominent place, where the categories of signification and causation are intertwined, and where the physics of Plato and Aristotle, not that of Einstein, is at stake.

Perhaps it is doubtful that a book of some two hundred pages can offer an "encompassing perspective" on one of the most complex and frequently studied authors of early modern Europe. Over recent decades the secondary literature on Bruno has taken on such proportions that the ability to bring together all the diverse aspects of his thought has been attained by only a handful of scholars. Notwithstanding the present condition of increasingly specialized research, my ambition is to transcend the frontiers between the different areas of Bruno's intellectual activities and bring together two major fields of his interest: magic and memory. To this end I bring together two *corpora* of texts – publications on the art of memory and manuscripts on magic – which have been separated too strictly by recent scholarship. But these fields, as I hope to show, belong together.

1.1   Changing Perspectives on Magic and Memory

1.1.1   *The Blind Spot in Tocco's Perspective*
The scholarly outlook on the history of philosophy has changed over time. If the reader takes up Schelling's *Bruno, oder über das göttliche und natürliche Prinzip der Dinge: Ein Gespräch* (1802) and leafs through the initial dialogue on beauty and truth, he or she will quickly detect the author's Romantic background. Bruno the heretic, burnt at the stake – deservedly so, in the opinion of many of his contemporaries – appears in Schelling's dialogue as a hero. The same sorts of fingerprints are visible on historical perspectives on Bruno's works on magic and memory.

At the end of the 19th century, Felice Tocco embarked on an edition of Bruno's Latin works. This ambitious enterprise took more than ten years and

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memory (R. Sturlese, "Il *De imaginum, signorum et idearum compositione* di Giordano Bruno ed il significato filosofico dell'arte della memoria," *Giornale critico della filosofia italiana* 10 (1990), 182–203; W. Wildgen, "Brunos Logik der Phantasie und die moderne Semiotik," *Zeitsprünge. Forschungen zur Frühen Neuzeit* 3 (1999), 155–81). Finally, Gatti links Bruno's science to "post-Einsteinian relativity and quantum mechanics" (H. Gatti, *Giordano Bruno and Renaissance Science* (Ithaca, NY: Cornell University Press, 1999), p. IX).

produced the standard edition still used today.² The complete collection of Bruno's Latin *oeuvre* was divided into four groups: writings on the art of Ramon Lull, mnemonic treatises, polemical works, and books that elaborate new theories. This division is justified by Tocco in *Le opere latine di Giordano Bruno esposte e confrontate con le italiane*, where each group is meticulously described and analysed.³ Discussing the second group (mnemonic treatises), he situates Bruno's art of memory in the history of mnemonics with a view to assessing his exact contribution.⁴ Although Tocco understands mnemonic techniques to a certain degree, the small amount of importance ascribed to these works appears at the end of the discussion. In general, Tocco judges the pretensions of the art. After all, why would the memorization of an arbitrary link between a syllable and an image demand less effort than the memorization of a simple word? In his view the art inserts a superfluous intermediary step. In his irritation, he indicates an even worse failure, namely the enigmatic manner (*quel fare enimmatico*) in which the art is presented, and which Bruno has in common with other writers who discuss the subject. The Nolan, he claims, exaggerates to such an extent that "a good third of his mnemonic treatises cannot be read without effort, nor is the meaning always understood with certainty; and when in the best case it is understood, one regrets the time spent and the long strain".⁵

After his description of the four groups of texts, Tocco sums up Bruno's philosophy in the fifth and concluding part of his book. He plainly admits that he "does not take into account the Lullian and mnemonic works, which today have only a historical interest".⁶ With these words Bruno's Lullism and mnemonics are without scruple banished from the philosophical field. It is not surprising, then, that only those passages from *De umbris idearum* and *Sigillus sigillorum* (both mnemonic treatises) that concern metaphysics or epistemology are discussed in Tocco's exposition of Bruno's philosophy. The obscure "good third"

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2   *Opera latine conscripta, publicis sumptibus edita.* Recensebat F. Fiorentino (F. Tocco, H. Vitelli, V. Imbriani, C.M. Tallarigo), Naples-Florence, Morano (poi Le Monnier), 1879–91.

3   F. Tocco, *Le opere latine di Giordano Bruno esposte e confrontate con le italiane* (Florence: Le Monnier, 1889).

4   Ibid., p. 21.

5   Ibid., pp. 100–01: "Si aggiunga ancora un altro difetto ed ancor più grave, ed è quel fare enimmatico che il nostro ha di comune con parecchi trattatisti di memoria artificiale, e che egli esagera in tale guisa, che un buon terzo dei suoi trattati mnemonici non si legge senza sforzo, nè sempre si è sicuri di avere colto il senso, e quando alla meglio s'è colto, si rimpiange il tempo speso e la fatica durata."

6   Ibid., p. 412: "Non teniam conto delle opere lulliane e delle mnemoniche, che oggi non hanno più se non un interesse storico, […]."

of the mnemonic work, which "cannot be read without effort", is considered redundant. In this way Bruno's *fare enimmatico* – an important and recurrent feature of his *oeuvre*, which we shall discuss further in the second chapter – is brushed aside with a 19th-century insistence on systematic disciplines, a mindset quite alien to Bruno's 16th-century eclecticism. Tocco's exposition ends with his famous description of the evolution of the Nolan's philosophy in three stages: Neoplatonism, pantheism, and atomism. For Tocco, the value of this sequence depends on its impact upon later philosophers, such as Spinoza, Leibniz, Schelling, and Hegel.[7] Bruno's philosophy is thus appreciated only for its anticipation of Leibniz and Spinoza. Thus, Tocco's perspective avoids any engagement with the mnemonic treatises, simply by labelling them irrelevant.

The same categorical misconception is shown by Tocco when he describes Bruno's magic as a preconception of Hegel's *Dialektik*.[8] Bruno's writings on magic are preserved in a small number of manuscripts, brought to light for the first time in 1891 as the keystone of the edition of Bruno's *Opera latine conscripta*. They were presented by Tocco to the Accademia di Scienze Morali e Politiche della Società Reale di Napoli, in honour of his master Bertrando Spaventa.[9] The miminal impact of this discovery on Tocco is striking. How could he reconcile strange magical writings on the order of *De magia naturali* or *De vinculis in genere* with his overall conception of Bruno, the Neoplatonist who became an atomist? In fact, Bruno's unpublished works present Tocco with no difficulty, prompting him to repeat his former hypothesis about the three stages, despite some slight adaptations with regard to the individual soul, the individuality of which in these newly discovered writings appears to be only of an ephemeral nature.[10]

An image of "Bruno the magus" never crosses Tocco's mind, despite the numerous references to magic in his other works. These unpublished treatises might have provided an inducement to frame the magical fragments spread among his other writings. Yet magic clearly falls beyond the scholar's focus. Neither magic nor mnemonics is of any interest to him, so that it is no wonder that the relationship between them is left out of consideration. At the end of

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7   Ibid., p. 414.

8   Here, Bruno's magic is understood in the light of Hegel's dialectics. Ibid., p. 414: "E non è dubbio che per molti rispetti il Nostro anticipa l'Hegel, e prima di lui facendo ritorno ad Eraclito professi un evoluzionismo idealistico, e chiami profonda magia quella che con parola non nuova l'Hegel chiamerà Dialettica, voglio dire il metodo di trarre i contrarii dall'uno e in esso risolverli."

9   Tocco, *Le opere inedite di Giordano Bruno*.

10   Tocco, *Le opere inedite di Giordano Bruno*, p. v.

the 19th century, the relationship between magic and memory was located precisely in Tocco's scholarly blind spot.

1.1.2   *The Focus in Yates's Perspective*

In the 1960s this blind spot became Frances Yates's exact focus. Her reading of Bruno, however, did not come out of the blue. In the preceding decade the scholarly view of the Renaissance had widened. Besides the occult sources collected by Thorndike over a period of more than thirty years (1923–58) – still today a treasure trove of information – Festugière had edited the *Corpus Hermeticum* with Nock (1945–54) and published his *La Révélation d'Hermes Trismégiste* (1950–54).[11] Kristeller, in his turn, had demonstrated the importance and diffusion of Ficino's translation of the *Corpus Hermeticum*, and Garin had made valuable observations in his *Medioevo e Rinascimento* with regard to magic. Together with a group of young researchers, among them some of the later specialists in Renaissance thought, Garin had further explored the traces of Hermetism in authors such as Lazarelli, Francesco Giorgi, and Agrippa.[12] One of these young scholars had even devoted an article to Bruno's early Lullian and mnemonic writings.[13] In brief, the importance of magic and Hermetism had been well established by the time Yates sat down to write her first book on Bruno.

Besides these scholars there was, of course, Yates's colleague D.P. Walker, who was conducting research on Renaissance musicology, and whom Yates herself had introduced to the Warburg Institute as a fellow.[14] In 1958 Walker's book *Spiritual and Demonic Magic from Ficino to Campanella* offered the

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11   L. Thorndike, *A History of Magic and Experimental Science* (New York: Columbia University Press, 1923–58); *Corpus Hermeticum*, ed. A.D. Nock, trans. A.-J. Festugière (Paris: Les Belles Lettres, 1945–54); A.-J. Festugière, *La Révélation d'Hermes Trismégiste* (Paris: Les Belles Lettres, 1950–54).

12   P.O. Kristeller, *Supplementum Ficinianum* (Florence, 1937), 1:LVII–LVIII, CXXIX–CXXXI; E. Garin, *Medioevo e Rinascimento* (1954; repr. Bari: Laterza, 2007); *Testi umanistici su l'ermetismo, testi di Ludovico Lazarelli, F. Giorgio Veneto, Cornelio Agrippa di Nettesheim*, a cura di E. Garin, M. Brini, C. Vasoli, P. Zambelli (Rome, 1955).

13   C. Vasoli, "Umanesimo e simbologia nei primi scritti lulliani e mnemotecnici del Bruno," in *Umanesimo e simbolismo, Atti del IV convegno internazionale di studi umanistici (19–21 Settembre 1958)* (Padua: Cedam, 1958), pp. 251–304.

14   Zambelli discusses the scholarly interaction between Walker and Yates in her sections "F.A. Yates, D.P. Walker e altri Warburghiani" and "La magia rinascimentale nella tesi di Yates e in quella di Walker" in P. Zambelli, *Magia bianca, magia nera nel Rinascimento* (Ravenna: Longo Editore, 2004), pp. 160–75.

first true study dedicated to the theme of Renaissance magic.[15] For this historian of musicology, Ficino playing his lyre to invoke the required celestial influence – harmonizing the music of the human soul (*musica humana*) with the music of the spheres (*musica mundana*) – was the most potent evocation of Renaissance magic. In Ficino's view, argued Walker, music has a stronger effect than anything transmitted through the other senses, because "it powerfully affects the whole of us – the musical sound by working on the spirit, which links body and soul, and the text by working on the mind or intellect."[16] At this stage Bruno is hardly mentioned.

1.1.2.1   The "Yates Thesis"

Taking into account the contributions of Thorndike, Kristeller, Festugière, Garin, and Walker, Yates's first book on Bruno, *Giordano Bruno and the Hermetic Tradition*, is not as groundbreaking as it might appear[17] – nor, for that matter, is the famous "Yates thesis" (Garin and Rossi had already formulated similar theses), often ascribed to her first book on Bruno but in fact only elaborated in her later article "The Hermetic Tradition in Renaissance Science".[18] But *Giordano Bruno* already contained the core of this "thesis" by suggesting that modern science inherited from Hermetism the principle that we must look to nature if we are to impose our will. As she writes at the end of her book:

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15   D.P. Walker, *Spiritual and Demonic Magic from Ficino to Campanella* (1958; repr. State College: The Pennsylvania State University Press, 2003).

16   Walker, *Spiritual and Demonic Magic*, p. 10.

17   F.A. Yates, *Giordano Bruno and the Hermetic Tradition* (1964; repr. London: Routledge, 2002). A. Corsano, *Il pensiero di Giordano Bruno nel suo svolgimento storico* (Florence: Sansoni, 1940), emphasizing Bruno's interest in magic and political reform towards the end of his career, may also have inspired Yates's interpretation of Bruno, although he is rarely cited in her book. The work of Paolo Rossi could have been extremely relevant for her research, but he is not cited in Yates's first book. See P. Rossi, *Francesco Bacone. Dalla magia alla scienza* (Bari: Laterza, 1957); P. Rossi, *Clavis universalis, arti della memoria e logica combinatoria da Lullo a Leibniz* (1960; repr. Bologna: Il Mulino, 1983).

18   F.A. Yates, "The Hermetic Tradition in Renaissance Science," in *Art, Science and History in the Renaissance*, ed. C.S. Singleton (Baltimore, Johns Hopkins University Press, 1968), pp. 255–74. The relationship between Hermetism and science is also discussed in F.A. Yates, *The Rosicrucian Enlightenment* (London: Routledge, 1972). Similar theses were put forth by Rossi, *Francesco Bacone*; and Garin, *Medioevo e Rinascimento*, p. 142. A recent evaluation of the impact of Yates's book is given by G. Giglioni, "Who is afraid of Frances Yates? *Giordano Bruno and the Hermetic Tradition* (1964) fifty years later," *Bruniana & Campanelliana* 20/2 (2014): 421–32.

The history of science can explain and follow the various stages leading to the emergence of modern science in the seventeenth century, but it does not explain *why* this happened at this time, why there was this intense new interest in the world of nature and its workings. [...] It is here, as a historical study, and particularly as a historical study of motives, that the present book may have a contribution to make towards elucidating these problems. It is a movement of the will which really originates an intellectual movement. A new centre of interest arises, surrounded by an emotional excitement; the mind turns whither the will has directed it, and new attitudes, new discoveries follow. Behind the emergence of modern science there was a new direction of the will towards the world, its marvels, and mysterious workings, a new longing and determination to understand those workings and to operate with them. Whence and how had this new direction arisen? One answer to that question suggested by this book is "Hermes Trismegistus".[19]

Apart from the suggestions at the end of her book, her eighth chapter is given over to a discussion of "Renaissance Magic and Science". Here she writes that

[...] the cosmos, or the world-picture, within which the Agrippan Magus operates, is not different, in its main outlines, from the mediaeval world-picture. [...] What has changed is Man, now no longer only the pious spectator of God's wonders in the creation, and the worshipper of God himself above the creation, but Man the operator, Man who seeks to draw power from the divine and natural order.[20]

Two important claims about magic and science are made in the development of this chapter. First of all, the Pythagorean and kabbalistic attention to numbers is brought into relation with the capital position mathematics would begin to assume within science.[21] Renaissance magic turns "towards number as a possible key to operations, and the subsequent history of science has shown that number is indeed a master-key, or one of the master-keys, to operations by which the forces of the cosmos are made to work in man's service."[22] Yates

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19   Yates, *Giordano Bruno*, pp. 487–88.

20   Yates, *Giordano Bruno*, p. 161.

21   A similar suggestion was already present in T. Kuhn, *The Copernican Revolution, Planetary Astronomy in the Development of Western Thought* (1957; repr. New York: Vintage Books, 1959), p. 129.

22   Yates, *Giordano Bruno*, p. 164.

admits that neither Pythagorean numerology, with its symbolism and mysticism, nor kabbalistic conjuring has anything to do with applied science. Rather, her point is that in the magician's world there is a place for genuine mathematical sciences and their practical application. Pointing to Pico, Agrippa, Dee, Francesco Giorgi, and others, she emphasizes that by "forcefully directing attention to number as the key to all nature they may be said to have prepared the way for genuine mathematical thinking about the universe."[23] Secondly, heliocentricity is brought into relation with Ficino's Hermetism, in which the sun is worshipped as the "visible god" leading upwards to the supreme *Lux Dei*, and as such takes a central place.[24] Yates indicates a reference to Hermes Trismegistus in a crucial passage of Copernicus's *De revolutionibus orbium coelestium*, and observes that "Copernicus' discovery came out with the blessing of Hermes Trismegistus upon its head, with a quotation from that famous work in which Hermes describes the sun-worship of the Egyptians in their magical religion."[25] It is noteworthy that this chapter of Yates's famous book does not seek to construct a history of science. Rather, it offers a history of mentalities, concentrating on Hermetism as the "psychological reorientation of the will which was neither Greek, nor mediaeval in spirit."[26] Nevertheless, the overall tone of the chapter's argument is suggestive.[27]

Despite her remarks on the Scientific Revolution, the primary concern of Yates's book is Bruno's Hermetism and its place within the Hermetic tradition, *not* the emergence of modern science. The Nolan is put on stage as the culminating point of this tradition, and his definition of the magus as "a wise man with the power to operate" gives her the perfect occasion to connect magic to science, equally marked by the will to manipulate nature.

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23   Yates, *Giordano Bruno*, p. 169.

24   Also, this observation had already been made by Kuhn, *The Copernican Revolution*, pp. 130–31.

25   Yates, *Giordano Bruno*, p. 173.

26   Yates, *Giordano Bruno*, p. 175. Yates's often-challenged "history of mentalities" is not very far from Blumenberg's well-esteemed "Trial of Theoretical Curiosity" (H. Blumenberg, *The Legitimacy of the Modern Age*, trans. M. Wallace (Cambridge, Mass.: MIT Press, 1983), pp. 229–453), in which the 16th century gradually dissolves the ruling Augustinian concept of *vana curiositas*. We do not claim, however, that the two scholars assert the same thing: while Yates focuses on the mentality shift with regard to the human will, Blumenberg describes the shift in the mentality of curiosity.

27   Yates, *Giordano Bruno*, p. 174: "This chapter has only hinted in a partial and fragmentary way, and with but a few examples, at a theme which I believe may be of absolutely basic importance for the history of thought – namely, Renaissance magic as a factor in bringing about fundamental changes in the human outlook."

However, her sketch of the "Hermetic tradition reaching its height in Bruno the magician" calls for some refinements. In particular, from her perspective Hermetism and magic seem to denote one and the same thing.[28] This is one of the main reasons the "Yates thesis" has come under attack. Is it the case that Hermetism is quite so magical, and magic quite so Hermetic, as she supposes? Brian Copenhaver, for example, states that "magic is not a central issue in the Hermetica."[29] He concludes that "modern scholars should not use *Hermetic* and related terms as if they were vaguely synonymous with *magical* and its cognates."[30] In a later contribution Copenhaver shifts his focus from the relation between Hermetism and science towards the relation between natural magic and science.[31] He asserts that special properties of plants and animals (for instance, the purgative action of rhubarb) were considered occult and non-demonic because they were thought to "come from an imperceptible substantial form – not from manifest qualities of the natural object nor from the personal agency of a spiritual being."[32] As long as these properties remained occult, they were ascribed to the world of natural magic. A good example is

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28   See, for example, Yates, *Giordano Bruno*, p. 211: "As was explained in the Preface, the present book aims at placing Bruno within the history of Renaissance Hermetism and magic. I hope to write another volume, similar in plan to the present one, the aim of which will be to place Bruno within the history of the classical art of memory. The two strands converge, for Bruno's art of memory is a magical art, a Hermetic art." Her third chapter, however, is dedicated to "Hermes Trismegistus and Magic", pointing to a clear awareness of the conceptual difference between Hermetism and magic. In fact, she distinguishes between the philosophical Hermetic writings (for instance, the *Corpus Hermeticum* and *Asclepius*) and the magical, alchemical, and astrological texts going under the name of Hermes. She follows Festugière in studying the magical texts as the necessary preliminary to the philosophical *Hermetica* (ibid., p. 47). But this does not change the fact that she sometimes uses magic and Hermetism as synonyms.

29   B. Copenhaver, "Hermes Trismegistus, Proclus and the Philosophy of Magic," in *Hermeticism and the Renaissance, Intellectual History and the Occult in Early Modern Europe*, eds. I. Merkel and A.G. Debus (Washington, DC: Associated University Presses, 1988), pp. 79–110, p. 83. Another famous criticism of Yates came from the hand of Westman, who stressed that "interpretations of the Copernican theory cannot be deduced from the intellectual tradition known as 'Hermetic' or 'Neoplatonic'". See R.S. Westman and J.E. McGuire, *Hermeticism and the Scientific Revolution, Papers Read at a Clark Library Seminar, March 9, 1974* (Los Angeles: University of California, Los Angeles, 1977), p. 69.

30   B. Copenhaver, "Hermes Trismegistus," p. 93.

31   B. Copenhaver, "Natural Magic, Hermetism, and Occultism in Early Modern Science," in *Reappraisals of the Scientific Revolution*, eds. R.S. Westman and D.C. Lindberg (Cambridge, Cambridge University Press, 1990), pp. 261–301.

32   Copenhaver, "Natural Magic," p. 274.

given by the torpedo fish, which was only removed from the list of enchanted beings after the concept of electricity was discovered.[33] On such evidence, according to Copenhaver, the overlap between occult and scientific interests is to be found in natural magic, not in Hermetism. This thesis has in turn been challenged by Clark's comprehensive study *Thinking with Demons*, which demands a place for demonology in the history of science by pointing out that discussion of the natural, preternatural, or supernatural status of demonic operations stimulated new conceptions of nature.[34]

In summary, Yates's thesis has provoked a vigorous discussion among historians of science – of which only a fraction is reproduced here – while her primary field of research was elsewhere. As Charles Schmitt, one of her critics, admits:

> The relation of Bruno to the history of science plays a relatively small role in Yates's book and the attentive reader will find that she focuses rather upon other issues, e.g. symbolic, occult, political and religious ones, and touches upon Bruno's role in science only in passing.[35]

Schmitt's observation hits the nail on the head. The so-called Yates thesis, linking the Scientific Revolution to Hermetism, is an invention of Yates criticism rather than of Yates herself. From this perspective it is of interest that, in contrast to Walker's lyre-playing Ficino, who stresses the primary position of the sense of hearing, Yates's mnemonist Bruno emphasizes the sense of sight, located in the "light bearing eyes which God modelled in the face of man, according to Plotinus".[36] The importance accorded by the Nolan to sight well suits Yates's primary focus on the imagistic aspects of Renaissance culture.

A re-evaluation of the so-called Yates thesis lies beyond the scope of this study. Thus, although an "encompassing perspective" on magic and memory is proposed, this does not imply a brand-new panorama of the relationship between Hermetism, magic, and science. Where relevant, however, we shall

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33   Copenhaver, "Natural Magic," p. 279.

34   S. Clark, *Thinking with Demons: The Idea of Witchcraft in Early Modern Europe* (Oxford: Clarendon Press, 1997), especially pp. 151–311.

35   C.B. Schmitt, "Reappraisals in Renaissance Science," *History of Science* 16 (1978), 200–14, 201.

36   G. Bruno, *De umbris idearum*, BOMNE, 1:86: "'Luciferos – inquit Plotinus – in facie Deus oculos fabricavit, caeterisque sensibus adhibuit instrumenta, ut inde tum naturaliter servarentur, tum etiam cognata luce aliquid contrahent.' Quibus sane verbis manifestat aliquid esse praecipuum, quod de mundo intelligibili ad ipsos pertineat."

glance at the relation between the magical and scientific worlds, and see how magical themes sometimes invade the epistemic field.

1.1.2.2   Yates's Reading of Bruno's Magical Memory

Yates's true field of interest is magic, memory, and imagery in Renaissance thought.[37] This is well illustrated by a paradox present in her interpretation of Bruno: her picture of Bruno the magician is predominantly based on her reading of Bruno's mnemonic treatises and his Italian dialogues, and only to a lesser extent on his magical works. It is the mnemonic treatises which induce the English scholar to conjure up her image of "Bruno the magus". Although she announces in her *Giordano Bruno* a projected second volume, "similar in plan to the present one, the aim of which will be to place Bruno within the history of the classical art of memory", a great deal of her argument in the first volume already concerns this art.[38] It may now be worthwhile to summarize and remark on the arguments of both books, so crucial to our own topic.

In her first book on Bruno she starts by presenting Hermes Trismegistus in late antiquity, and assesses his revival in the Renaissance following Ficino's translation of the *Corpus Hermeticum*. The following chapters lead gradually to Bruno by discussing Ficino's natural magic, Pico's kabbalistic magic, and Agrippa's *De occulta philosophia*. The first chapter on Bruno discusses his first visit to Paris and "two books on the art of memory which reveal him as a magician."[39] Thus, for Yates the books on memory suffice to identify Bruno as a magus. It is remarkable that, in comparison to the books on memory, his magical writings are scarcely considered.[40] Her magical reading of these mnemonic works comprehends two basic elements: firstly, the Hermetic experience of reflecting the universe in the mind, and secondly, Ficino's talismanic magical images – imprinted, however, not on amulets, but on the memory.

> The Hermetic experience of reflecting the universe in the mind is, I believe, at the root of Renaissance magic memory, in which the classical mnemonic with places and images is now understood, or applied, as a method of achieving this experience by imprinting archetypal, or magically activated, images on the memory. By using magical or talismanic

37   Dell'Omodarme reconstructs the various stages and chief fields of interest of Yates's research career in F. Dell'Omodarme, "Frances A. Yates interprete di Giordano Bruno," in *La mente di Giordano Bruno*, ed. F. Meroi (Florence: Olschki, 2004), pp. 555–75.

38   Yates, *Giordano Bruno*, p. 211.

39   Yates, *Giordano Bruno*, p. 210.

40   Dell'Omodarme, "Frances A. Yates," p. 565.

images as memory-images, the Magus hoped to acquire universal knowl-
edge, and also powers, obtaining through the magical organisation of the
imagination a magically powerful personality, tuned in, as it were, to the
powers of the cosmos.[41]

Next, Bruno's *De umbris idearum* is described and analysed. At the outset of
this work, several mysterious poems warn the reader of the difficulty of the
book with which he is about to engage. Yates justly notes that "the combina-
tion of mysteriousness and bombast in these poetic sign posts to the book sets
a tone which it follows throughout."[42] Then comes the introductory dialogue
between Hermes, Philothimus, and Logifer. On Philothimus's question as to
which book he has in his hand, Hermes responds that the book is entitled *De
umbris idearum*, and expresses his doubt as to whether to bring it into the light,
or to leave it in darkness, where it was previously preserved, for many might
find its content offensive.[43] Philothimus confutes Hermes by stating that no
great work would be produced if such hesitations were allowed to prevail.
Then Logifer enters the conversation and summarizes all the learned doctors
who run counter to the Nolan's *ars memoriae*: Doctor Bobus, Magister Anthoc,
Magister Roccus, and many others. One by one, their criticisms are refuted by
Philothimus.

It is surprising that Yates does not pause at this discussion, because one of
the objections against the art concerns precisely her main argument: magic.
Magister Anthoc accuses those who perform extraordinary feats of memory
of being "magi or possessed persons or something of that sort". Philothimus
replies that the art has nothing to do with magic. The suspicion of Magister
Anthoc seems here to be mocked and deemed unworthy of a serious answer.
It is simply brushed aside.[44] This denial that the art has anything to do with

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41   Yates, *Giordano Bruno*, p. 212.

42   Yates, *Giordano Bruno*. For the poems, see Bruno, *De umbris idearum*, BOMNE, 1:8–14.

43   For the introductory dialogue, see BOMNE, 1:16–40.

44   Bruno, *De umbris idearum*, BOMNE, 1:24: "LOGIFER: Quid respondebis magistro Anthoc,
      qui eos, qui praeter vulgares edunt memoriae operationes, putat magos vel energumenos
      vel eiusce generis alicuius speciei viros? PHILOTHIMUS: Hunc non dubitaverim esse ne-
      potem illius asini, qui ad conservandam speciem fuit in archa Noe, reservatus." However,
      the assumption that in this passage the author brushes aside Anthoc's accusation is not
      unproblematic, because Bruno is probably referring to the ass in his own (lost) work
      L'Arca di Noe, which Bruno claims in the dedicatory epistle of his *Cabala* to have dedicat-
      ed to Pope Pius V. Unfortunately, we do not know which position was ascribed to the ass
      in this work. The fact that Hugh of St Victor had written a treatise laced with mnemonics
      entitled *De archa Noe* makes it very tempting to suppose that this treatise by Bruno dealt

magic is overlooked by Yates, who concludes that *De umbris idearum* is "a book about magic, about a very strong solar magic."[45] It goes without saying that this omission weakens her case for a magical reading of the art.

Thereafter the philosophical part of *De umbris idearum* is discussed; here, thirty intentions (passages about the will in search of the divine light) and thirty conceptions (passages related to the intellectual conception of ideas) are presented. These conceptions, according to Yates, allude to "Ficino's 'Plotinising' of celestial images, and prepare the way for the lists of such images upon which the magic memory system is based."[46] So far, her analysis of *De umbris idearum* has not moved away from the text. Now, however, she continues with the list of images found at the end of the practical treatise *Ars memoriae*, which is appended to *De umbris idearum*. She thus skips the major part of *Ars memoriae* to analyse the astrological images at the end of it. As we shall see, this missing part is exactly that which treats mnemonic practice, upon which Sturlese will later build her interpretation. Ignoring this practical part constitutes another lacuna in Yates's argumentation.

With regard to the astrological images Yates asserts that "Bruno has returned to Ficino's use of talismans with a vengeance, and without any of Ficino's Christian inhibitions, for he believes in Hermetic Egyptianism as better than Christianity."[47] Bruno does not fear using those astrological images with a dangerous reputation, namely the images of the thirty-six decans, ascribed to Teucer the Babylonian, and avoided by Ficino.

> Extraordinary though this may seem, I believe that Bruno's "shadows of ideas" *are* the magic images, the archetypal images in the heavens which are closer to the ideas in the divine mind than things here below. [...] The magic images were placed on the wheel of the memory system to which corresponded other wheels on which were remembered all the physical contents of the terrestrial world – elements, stones, metals, herbs and plants, animals, birds, and so on – and the whole sum of human knowledge accumulated through the centuries through the images of one hundred and fifty great men and inventors. The possessor of this system thus rose above time and reflected the whole universe of nature and of man

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with mnemonics as well. On Hugh of St Victor, see M. Carruthers, *The Book of Memory, A Study of Memory in Medieval Culture* (1990; repr. Cambridge: Cambridge University Press, 2008), pp. 53–55.

45   Yates, *Giordano Bruno*, p. 214.
46   Ibid., p. 216.
47   Ibid., p. 217.

in his mind. I believe, as already suggested, that the reason why such a memory system as this is a Hermetic secret may be because of allusions in the *Corpus Hermeticum* to gnostic reflection of the universe in the mind, […].[48]

This passage, revealing the core of Yates's interpretation, indicates that her reading is based on intuition rather than on evidence. At a crucial moment of her reasoning she resorts to verbs such as "believe" and "suggest", illustrating the uncertainty of her claims. Of course, we cannot blame scholars for being guided by intuition, which is, after all, a major incentive for original research. Nonetheless, the community of scholars is not convinced by intuition alone, and this was made clear in later reactions to Yates's reading.

Bruno's second book on the art of memory, *Cantus Circaeus*, is next interpreted by the English scholar in the same way. It consists of two dialogues, the connection between which is really rather obscure. In the first, Circe and her disciple Moeris conjure the planetary spirits. The second is a dialogue between an advanced student in the art of memory and a novice, who discuss specific mnemonic techniques. Yates reads Circe's incantation as showing the "reactionary and barbaric character of Bruno's wild magic."[49] She thinks these planetary incantations from the mouth of Circe have the function of "disposing the imagination to receive imprints of planetary images" in preparation for the second dialogue:

> The adept would then proceed to the Art of Memory with an imagination already stamped with celestial images, the necessary preliminary for magic memory. I am not sure if this is the right explanation of the

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48   Ibid., p. 218. The passage of *Corpus Hermeticum* to which Bruno's art alludes, according to Yates, is the eleventh dialogue. See *Corpus Hermeticum*, 1:147–57. I reproduce here Yates's translation (Ibid., pp. 218–19): "Unless you make yourself equal to God, you cannot understand God: for the like is not intelligible save to the like. Make yourself grow to a greatness beyond measure, by a bound free yourself from the body; raise yourself above all time, become Eternity; then you will understand God. Believe that nothing is impossible for you, think yourself immortal and capable of understanding all, all arts, all sciences, the nature of every living being. Mount higher than the highest height; descend lower than the lowest depth. Draw into yourself all sensations of everything created, fire and water, dry and moist, imagining that you are everywhere, on earth, in the sea, in the sky, that you are not yet born, in the womb, adolescent, old, dead, beyond death. If you embrace in your thought all things at once, times, places, substances, qualities, quantities, you may understand God."

49   Ibid., p. 222.

unexplained connection between the incantations and the following Art of Memory, but it is a possible one.[50]

The middle chapters of her *Giordano Bruno* focus on the philosopher in England. His Copernicanism, expounded in his *Cena delle ceneri*, and his political philosophy, contained in *Lo Spaccio della bestia trionfante*, are read along Hermetic lines. Moreover, Bruno's second stay in Paris, his years in Germany, and his fatal return to Italy all suit this Hermetic interpretation. The two elements we have indicated – the Hermetic reflection of the universe in the mind, and the talismanic images – are linked to Bruno's ambition for a magical religious reform.[51] The purpose of this constant return to talismanic images is, according to Yates, to attract the desired powers of the planets into one's own personality through imaginative concentration on those images, and so "to become a Solar, Jovial and Venereal Magus, the leader of the magical reformation."[52]

The last chapters discuss Bruno in relation to Campanella who, unlike Bruno, almost succeeded in bringing off the project of magical reform, and whose *Città del sole* is read in a Hermetic light. She also analyses the impact of Casaubon's dating of the Hermetic writings on the *prisca theologia* tradition, and the role of Hermes in the controversy between Fludd and Kepler. She ends with some remarks about the relationship between science and Hermetism.

This rapid survey affirms that Yates's major concern is not the influence of Hermes Trismegistus on the origin of modern science, but rather Giordano Bruno's Hermetism, expressed in his *ars memoriae*. As a sort of psychologized version of Ficinian talismanic magic, Bruno's art of memory constantly draws her attention. Even the emblems of *De gli eroici furori* and the statues of

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50   Ibid. The problematic relation between the two dialogues of *Cantus Circaeus*, a treatise central to my own argument, will recur in the course of this study.

51   The emblems of *De gli eroici furori*, like the statues of *Lampas triginta statuarum* and the ideas of *De imaginum, signorum et idearum compositione*, are interpreted as talismanic images. Ibid., p. 311: "Those familiar with the memory systems in which Bruno tries to unify the universal contents of memory by basing it on magic or talismanic images, will recognise the familiar pattern of his mind in the basing of the *De gli eroici furori* on the visual emblems."; p. 337: "The astrological images on which the memory was based in the 'Thirty Shadows' are replaced by 'statues', or interior images constructed on talismanic principles."; p. 365: "For the book is really about, as its title states, 'the composition of images, signs and ideas', and by this is meant, the composition of magic or talismanic images, signs and ideas, and "ideas" being here the equivalent of a talismanic image."

52   Ibid., p. 365.

Lampas triginta statuarum are seen as inner talismans intended to reinforce the magician's personality with divine powers.

Two years after *Giordano Bruno*, Yates's *The Art of Memory* appeared.[53] The inducement for this work, a history of the art of memory from antiquity to the 17th century, is the same as that which prompted her history of Hermetism: namely, to "try to understand Giordano Bruno's works on memory".[54] Bruno consequently plays the leading part here as well, and the history of the *ars memoriae* leads up to an analysis of the Nolan's mnemonics.

Before entering the Nolan's system, she sets out the major mnemonic sources from antiquity and the Middle Ages, Camillo's memory theatre, and Lullism. For Yates Lullism is, after Hermetism and the art of memory, the third major current present in Bruno's mnemonic books.[55] This combinatorial art was originally designed by Lull in the 13th century to arm missionaries. If the missionary was adept in the art he could invent a great number of arguments to convert infidels to Christianity. This conversionary aspect was of scant use to our philosopher. Two other features of Lullism, on the other hand, are clearly employed in Bruno's *ars memoriae*: the philosophical (and even metaphysical) status of Lull's art is transposed to his art of memory; and many of Bruno's mnemonic innovations are derived from Lull's combinatory art. Lull's influence is discussed by Yates after her treatment of Camillo, in her chapter "Giordano Bruno: the secret of *Shadows*". She stresses that Bruno's Lull is not the medieval but the Renaissance Lull, who by the 16th century was thought to be the author of many alchemical and kabbalistic treatises.[56] In her view, while the lists of

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53   F.A. Yates, *The Art of Memory* (London: Routledge, 1966).

54   Yates, *The Art of Memory*, p. XI.

55   On Lullism, see Rossi, *Clavis universalis*; J.N. Hillgarth, *Ramon Lull and Lullism in Fourteenth-Century France* (Oxford: Clarendon Press, 1971); F.A. Yates, *Lull and Bruno, Collected Essays I* (London: Routledge, 1982).

56   On the relation between Lullism and kabbalah, see J. Carreras y Artau, "Ramon Lull y la Cábala," *Las Ciencias* 22 (1957), 146–50; J.M. Millás-Vallicrosa, "Las relaciones entre la doctrina Luliana y la Cabala," *Sefarad* 18 (1958), 241–53; M. Idel, "Ramon Lull and Ecstatic Kabbalah: A Preliminary Observation," *Journal of the Warburg and Courtauld Institutes* 51 (1988), 170–74; P. Zambelli, *L'apprendista stregone. Astrologia, cabala e arte lulliana in Pico della Mirandola e seguaci* (Venice: Marsilio Editori, 1995); and H.J. Hames, *The Art of Conversion: Christianity and Kabbalah in the Thirteenth Century* (Leiden: Brill, 2000). On Bruno's Lullism, see M. Cambi, *La macchina del discorso. Lullismo e retorica negli scritti latini di Giordano Bruno* (Naples: Liguori, 2002); S. Clucas, "*Illa est mater, haec vero filia*: Reformed Lullism in Bruno's Later Works," in *Giordano Bruno in Wittenberg 1586– 1588, Aristoteles, Raimundus Lullus, Astronomie*, ed. T. Leinkauf (Pisa: Istituti Editoriali e poligrafici internazionali, 2004), pp. 59–69; and my own contribution M. Mertens, "A

images in *De umbris idearum* occultize memory in an astrological way, Lullism occultizes memory in a kabbalistic or theurgical manner.

> Bruno several times mentions in *Shadows* a work of his called *Clavis Magna*, which either never existed or has not survived. The Great Key might have explained how to use Lullian wheels as conjuring for summoning the spirits of the air. For that is, I believe, a secret of the use of the Lullian wheels in *Shadows*. Just as he converts the images of the classical art of memory into magical images of the stars to be used for reaching the celestial world, so the Lullian wheels are turned into "practical Kabbalah" or conjuring for reaching the demons, or angels, beyond the stars.[57]

Next, Yates explains how the lists, each of one hundred fifty images (all indicated by a combination of two letters), are intended to be set out on the five concentric revolving wheels. "The result", she writes, "is the ancient Egyptian looking object, evidently highly magical, for the images on the central wheel are the images of the decans of the zodiac, images of the planets, images of the mansions of the moon, and images of the houses of the horoscope."[58] Apart from the introduction of Lullism, which is turned into conjuring, her chapter on "the secret of shadows" contains no new advances on the analysis in her first book on Bruno. Besides, by focusing directly on the lists at the end of *Ars memoriae*, without taking into account the first part of the practical treatise added to *De umbris idearum*, she reproduces exactly the same fault that her former book contained. This gap in Yates's reading is regrettable and, as we have said, was received badly by later scholars, because it shows that the concrete mnemonic practice lies beyond her Hermetic focus.

   In her subsequent chapters Bruno's Hermetic memory remains the main subject, studied in the other mnemonic treatises and the Italian dialogues. The conflict between Brunian and Ramist conceptions of memory is treated, as is Fludd's mnemonic system. The last chapter, "a postscript to the main part of the book",[59] demonstrates the extent to which the art of memory and Lullism are present in authors such as Bacon and Descartes, and the role of these currents in their "methodological revolution". But in addition to the remarks made above, Yates conspicuously fails to take into account Bruno's *Cantus Circaeus*.

Perspective on Bruno's *De compendiosa architectura et complemento artis Lullii*," *Bruniana & Campanelliana* 15/2 (2009), 513–25.

57   Yates, *The Art of Memory*, p. 211.

58   Yates, *The Art of Memory*, pp. 212–13.

59   Yates, *The Art of Memory*, p. 369.

In my view, this dialogue is crucial for the understanding of the relationship between Bruno's magic and his mnemonics, and so it will occupy a central position in my own discussion.

1.1.3   *Rita Sturlese's Interpretation of Bruno's* memoria verborum

Many historians of science in the 1970s and 1980s were obliged to adopt a position towards the daring and innovative "Yates thesis", but reactions against her magical-Hermetic reading of the Nolan's memory system were not forthcoming. In 1990, however, her view of this subject was seriously challenged by Sturlese, who was at that time preparing a new critical edition of *De umbris idearum*.

Sturlese proposed a wholly new reading of Bruno's *De imaginum, signorum et idearum compositione*.[60] She argued that the mnemonic systems present in Bruno's work served to imprint certain words onto the memory by translating them into corresponding images.[61] Yates's interpretation of the mnemonic images as talismans was explicitly rejected.[62] Instead, these images were components of a mechanism designed to remember words. In 1991, Sturlese applied this reading to the system in *De umbris idearum* as well.

In the introduction to her edition of *De umbris idearum* Sturlese refers to Yates's interpretation, its success, and its lack of challengers.[63] She stresses that the *ars memoriae* has been divided since antiquity into two branches: the memory of objects or arguments (*memoria rerum*) and the memory of words themselves (*memoria verborum*).[64] She shows that *memoria verborum*, barely used in antiquity, finds new areas of application in a number of Renaissance books on the art of memory. It is, for example, employed to memorize scientific terms – the names of herbs, trees, minerals, and the like – or the so-called *vocabula non intellecta* – words in foreign languages that are not understood.[65] According to Sturlese it was exactly to improve the *memoria verborum* that Bruno invented the system with the five wheels, which she sets out to explain.

Each of the five wheels contains one hundred fifty fragmentary images, each accompanied by a syllable. On the outermost wheel, acting personalities or *agentes* are placed to represent these syllables; on the second, their actions or *actiones*; on the third, adjectives or *insignia* describing the actor in question;

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60   Sturlese, "Il *De imaginum, signorum et idearum compositione*," pp. 182–203.

61   Sturlese, "Il *De imaginum, signorum et idearum compositione*," p. 191.

62   Sturlese, "Il *De imaginum, signorum et idearum compositione*," p. 197.

63   BUI, p. LV.

64   Ibid., p. LVI.

65   Ibid., p. LVII.

on the fourth, objects or *adstantia*; and on the central wheel, astrological images or *circumstantia*. By combining the fragments into an imagined scene, words can be translated into composite images and memorized. Yet in order to make this system truly effective, Sturlese introduces a number of fundamental textual changes, which she characterizes as typographical corrections.[66] In her edition, as in the new Adelphi edition, the corrected syllables are given next to the original syllables. These fundamental changes in the original text are the price of making the system work.

Thereupon Sturlese exposes Yates's interpretation, reproducing entire passages from her book, and deprecates the "general nature of Yates's conclusions and the failure of her endeavour to take into account the effective functioning of Bruno's mnemonic system – exactly the endeavour which she first fortunately initiated by means of the reconstruction of the model of the 'memory system'."[67] With regard to Yates's reconstruction, Sturlese asks where the syllables that accompany the lists of mnemonic images have gone. They do not appear on her reconstruction of the concentric wheels themselves. It goes without saying that these syllables are crucial for Sturlese's interpretation of the system as a machine for remembering words. For her, the astrological images which in Yates's vision magically animated the system from within, now signify letter combinations occurring as the fifth syllable in a word. "Questo, niente di più e niente di meno."[68] In 1992 a further article appeared setting forth her own interpretation.[69]

In his famous *La ricerca della lingua perfetta nella cultura europea* (1993), Umberto Eco approved of Sturlese's reading.[70] This non-magical interpretation of Bruno's mnemonics also stands as the basis of the recent edition

66   Ibid., p. LVI: "La ricostituzione del testo corrispondente ha richiesto una serie di restauri di notevole ampiezza, [...]. Nella convinzione che il sistema combinatorio delle cinque ruote potesse e dovesse funzionare effettivamente, ho ritenuto necessario apportare modificazioni talora radicali alla seria delle sillabe che costituiscono la prima colonna delle tabelle dei paragrafi n. 182–221."

67   Ibid., pp. LXIII–LXIV: "Ho riferito di proposito queste lunghe citazioni, perché da esse risulta evidente la genericità delle conclusioni della Yates e, implicitamente, anche il fallimento del suo tentativo di render conto dell'effettivo funzionamento del sistema mnemonico bruniano – proprio di quel tentativo che aveva per prima felicemente avviato con la ricostruzione del modello del 'sistema di memoria'."

68   Ibid., p. LXX.

69   R. Sturlese, "Per un interpretazione del *De umbris idearum* di Giordano Bruno," *Annali della Scuola Normale Superiore di Pisa, Classe di Lettere e Filosofia* 22 (1992), 943–68.

70   I make use of the French translation U. Eco, *La recherche de la langue parfaite dans la culture européenne* (Paris: Seuil, 1994; original Italian edition published in 1993), pp. 157–64.

of the mnemonic works (2004–09), although here the anti-magical rigour is mitigated.[71] Recently, however, Sturlese's view seems, to a degree, to have changed course. Together with Marco Matteoli, in an article on *Cantus Circaeus*, she proposes a semi-"magical" reading of Bruno's mnemonics – not entirely denying the relevance of "magic", as before, but giving it incidental force.[72] Circe's "magic", which transforms vicious men into beasts, is admissible to the extent

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71   For the sake of completeness I list here and, where relevant to my study, briefly clarify all the comments on the relation between memory and magic. The comments on *De umbris idearum* admit the importance of the Platonic shadow in both a mnemonic and a magical context (BOMNE, 1:384–85). It is stated, however, that Bruno is not interested in the magical value of the shadow (p. 407). Yates's interpretation is rejected (pp. 525, 538–39) by recalling Sturlese's interpretation of the astrological images, which are adopted by Bruno as the arbitrary signs of syllables ("tali imagini sono assunte da Bruno come segni arbitrari di sillabe"). The comments on *Cantus Circaeus* acknowledge the magical character of the first dialogue. The kind of magic in the first dialogue of *Cantus* is rightly seen as theurgic: that is, using the power of superior spirits to control the lower ones (p. 752). This interpretation is based on a study by Vittoria Perrone Compagni ("*Minime occultum chaos*. La magia riordinatrice del *Cantus Circaeus*," *Bruniana & Campanelliana* 6/2 (2000), 281–97). It seems, however, that these Italian scholars cannot reconcile demons with Bruno's *ars memoriae*. This is evident from the several metaphorical interpretations of these spirits: as heretical Huguenots, other extreme Protestants, or, in a secular context, as the powers that hinder political reform (p. 753). What appears to elude them is that these demons may be taken at face value, namely as deceitful spirits corrupting human cognition. It is precisely this conception of deceptive spirits which makes many magical allusions comprehensible in the cognitive context of the art of memory, as will be seen in my fourth chapter. In the comments on *Sigillus sigillorum* (BOMNE, 2:453), it is acknowledged that Bruno's reasoning evolves around certain keywords of the magical tradition. But the two tendencies in Bruno's thought are to be clearly separated because "l'*ars memoriae* non ha alcun rapporto con l'operatività magica." In the comments on *De imaginum compositione* the link between magic and memory is recognized to a greater extent (pp. 882–83, 886–91, 898–902, 906–11, 919). But again, we find a clear separation of the two corpora that is based on the distinction between magical operation and mnemonic cognition. "Il *De imaginum compositione*, diversamente, affronta in modo specifico la possibilità di impiegare l'immagine per vincolare l'intelletto alla verità: spostando il fuoco del ragionamento dal piano pratico-operativo a quello gnoseologico, Bruno utilizza le acquisizioni teoriche delle opere magiche per conferire nuovo valore alla riflessionne mnemotecnica." In the course of this study I will show that the distinction between the fields of cognition and operation is difficult to maintain. Operation and cognition are, in Bruno's view, two sides of the same coin. It will appear that, during the redaction of the mnemonic works, Bruno clearly had magical ideas in mind. Likewise, his magical ideas are closely linked to the understanding of cognition maintained in his works on memory.

72   M. Matteoli and R. Sturlese, "Il canto di Circe e la 'magia' della nuova arte della memoria del Bruno," in *La magia nell'europa moderna. Tra antica sapienza e filosofia naturale.*

that "the marvellous power of the art is to go beyond appearances and succeed in knowing even the most elusive being, man; namely the different characters, temperaments and inclinations of human individuals."[73] In short, the "magic" of the art is its capacity to unmask and recognize the real nature of mankind.[74] However, despite this "magical" reading, Bruno's mnemonics are still clearly separated from the magical works on the grounds of a distinction between the epistemic and operative areas.

1.1.4   Post-Sturlesian Interpretations

Sturlese's change of direction is not without reason. Her previous interpretation did not escape criticism. In 1997 Francesco Torchia showed that her reading, like Yates's, is untenable. "Insisting exclusively on one or the other (magical research or mechanical operation) results in rendering unintelligible the goal aimed at by Giordano Bruno by means of his studies of artificial memory."[75] Torchia indicates Sturlese's weakness in altering her edition of *De umbris idearum* to fit her own interpretation by changing the syllables accompanying the mnemonic images. For Sturlese, the original Latin capital letters are sometimes meant to represent Greek and Hebrew characters. She ascribes this substitution to a lack of Greek and Hebrew fonts in Gourbin's printing office, where Bruno's *De umbris idearum* was printed.[76] Yet this absence cannot explain why the one hundred fifty images of the fourth wheel, for example, are solely indicated by lower-case Latin vowels. This entire fourth wheel is adapted by Sturlese. The lower-case vowels are turned into upper-case consonants.

Atti del convegno (*Firenze, 2–4 ottobre 2003*), eds. F. Meroi and E. Scapparone (Florence: Olschki, 2007), pp. 467–87.

73   Matteoli and Sturlese, "Il canto di Circe," pp. 479–80: "Ecco allora che sotto la magia di Circe, che tramuta gli uomini viziosi in bestie, dando alle anime viziose il corpo giusto, si scopre la 'magia' dell'arte della memoria, il potere mirabile di andare al di là delle apparenze, arrivando a conoscere anche l'ente più sfuggente, l'uomo, cioè i diversi caratteri, temperamenti, inclinazioni, dei singoli uomini." See also BOMNE, vol. 1 (p. 760). Other important articles by Sturlese with regard to Bruno's mnemonics are "Arte della natura e arte della memoria in Giordano Bruno," *Rinascimento* 40 (2000), 123–41; M. Matteoli and R. Sturlese, "La nuova 'arte' del Bruno in tre enigmi," *Rinascimento* 41 (2001), 113–65.

74   However, at least one truly magical suggestion is made with regard to the art, namely that in Bruno's eyes it serves to communicate, through the World Soul, with the divine, just like the magic of the Egyptians. See Matteoli and Sturlese, "Il canto di Circe," p. 482.

75   F. Torchia, "La chiave delle ombre," *Intersezioni* 17/1 (1997), 131–51, p. 131.

76   BUI, p. LX: "È evidente che queste anomalie dipendono da ragioni tipografiche, e cioè dal fatto che la tipografia del Gourbin non disponeva probabilmente della copia richiesta delle lettere greche ed ebraiche sopra dette, […]."

Considering the fact that Bruno interfered during the printing of *De umbris idearum* – leaving us with two different versions of his book – it is indeed unbelievable, as Torchia stresses, that the Nolan brought in relatively minor changes while leaving untouched the errors that render his whole system impossible.[77]

After having indicated the weaknesses of Sturlese's interpretation, Torchia asserts that the astrological images are the "true key" to Bruno's archive of knowledge.[78] But they are not talismanic. Torchia's opinion is that a great quantity of data can be archived in these simple but very powerful astrological images.[79] He links Bruno's mnemonic project to his view of Egyptian hieroglyphs, a symbolic language that granted the ancient sages contact with the gods.[80]

Finally, he proposes a view of how the five wheels (in their original, pre-Sturlesian version) might function, suggesting that combinations between the wheels are only possible if the initial consonants are identical. The C group of the first wheel, for example, may only be combined with the C group of the second. According to Torchia this also explains the fourth wheel, which contains nothing but groups of lower-case Latin vowels. The use of these groups was unrestricted, and they could be combined freely with all the images of any other wheel.[81]

Paolo Rossi, who had already dedicated a chapter to Bruno in his famous *Clavis universalis* (1960), also came down against Sturlese's interpretation. In his opinion, the Brunian machine was impossible and could not function.[82] For Rossi the principal problem was not the machine, but Bruno's view of it.[83] Without doubt, Bruno's art was an art of memory, but it was not *only* an art of

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[77]   One part of *De umbris idearum* (the last part of *Ars memoriae*, indicated by fasciculum K) has been revised. The second version contains, for example, another decorative frieze. Henri III is now addressed as *rex christianissimum* rather than *serenissimum*. The lists of syllables, however, are identical in the two versions. For the "storia del fascicolo K", see: BUI, pp. XL–XLVIII. See also Torchia, "La chiave delle ombre," p. 140.

[78]   Torchia, "La chiave delle ombre," p. 147.

[79]   Torchia, "La chiave delle ombre," p. 144.

[80]   Torchia, "La chiave delle ombre," p. 146.

[81]   Torchia, "La chiave delle ombre," p. 149. An interpretation similar to that of Torchia is offered by Mino Gabriele, who has edited Bruno's *Corpus Iconographicum*, a cura di M. Gabriele (Milan: Adelphi, 2001), pp. 70–71. According to Gabriele, the irregularities in the lists of syllables should not be adapted to Sturlese's rigid system, but rather testify to the possibility of diverse combinatory games within the lists themselves, and thus illustrate the marvellous manoeuvrability of Bruno's art.

[82]   P. Rossi, "Giordano Bruno: memoria e magia," *Rivista di filosofia* 95 (2004), 9–36; 11.

[83]   Rossi, "Giordano Bruno," p. 13.

memory.[84] Rossi agreed with Torchia that the power of images for Bruno was not proportionate to the small importance ascribed to them by Sturlese. The power of these images even implied a danger for the mnemonist who, believing that he had mastered them, had in fact been mastered by them. Rossi argued that in the magical world, the demonic always lies in wait. An obsession with phantasms comes perilously close to possession by demons.[85] Unlike Torchia, Rossi did not examine the machine of *De umbris idearum*, which in his opinion was inoperable. But he remained convinced that Bruno's art of memory was never separable from magic.

Besides Torchia and Rossi, the British scholar Stephen Clucas has also argued against Sturlese's reading in a couple of articles, and draws attention to a number of interesting points.[86] First, he criticizes Sturlese's modern semiotic approach, which she shares with Wildgen. By contrast, he stresses that the art of memory is an *ars* in the 16th-century meaning of the term. As with other uses, it implies practice – not purely logical, but also ethical: "The ability to operate on the passions and affections, and to 'domesticate' the unruly human soul seems to have been one of the primary aims of his art."[87] This ethical aspect of the Nolan's mnemonics prompts Clucas to consider Bruno's art as magical too, because the magical power Bruno ascribes to images is located precisely in their ability to work on the inner human processes; they can determine our reactions in desiring or rejecting this or that objective.[88]

Another gap in Sturlese's interpretation to which Clucas draws attention is that her reading of the art as a mechanism for memorizing words loses all

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84   Rossi, "Giordano Bruno," p. 28.

85   Rossi, "Giordano Bruno," p. 34: "Bruno sa bene che, come tutte le pratiche magiche, anche queste sono delicate e pericolose: è infatti facile credere di essere fra coloro che agiscono e trovarsi invece dalla parte di coloro che vengono agiti da altri. Accostandosi troppo ai fantasmi si corre il rischio non di prenderli entro di sé, ma di essere presi entro di essi. Nel mondo magico, il Demonio è sempre dietro l'angolo."

86   S. Clucas, "Amorem, artem, magiam, mathesim: Brunian Images and the Domestication of the Soul," *Zeitsprünge: Forschungen zur Frühen Neuzeit* 3/1 (1999), 5–24; idem, "Giordano Bruno's *De imaginum, signorum et idearum compositione*: Art, Magic and Mnemotechnics," *Physis: rivista internazionale di storia della scienza* 38 (2001), 75–98; idem, "*Simulacra et Signacula*: Memory, Magic, and Metaphysics in Brunian Mnemonics," in *Giordano Bruno: Philosopher of the Renaissance*, ed. H. Gatti (Aldershot: Ashgate, 2002), pp. 251–72; idem, "Mnemosine in London: The Art of Memory and Giordano Bruno's *Spaccio della bestia trionfante* and *De gli eroici furori*," *Société d'études anglo-américaines des XVIIᵉ et XVIIIᵉ siècles* 58 (2004), 7–23.

87   Clucas, "Giordano Bruno's *De imaginum*," p. 96.

88   Clucas, "Giordano Bruno's *De imaginum*."

connection with its theoretical element. How does Bruno's *memoria verborum* relate to the thirty intentions and conceptions of *De umbris idearum* – mostly paragraphs inspired by Plotinus? Clucas indicates a passage at the beginning of *De umbris idearum*, in which Bruno asserts that his book will present his art both in a general and in a restricted form. In Clucas's view, the art as *memoria verborum* is the restricted version, while the higher and more general art is designed to order the operations of the soul. The magic of the art, then, is not Hermetic, but Plotinian, and concerns the transformation of the self through the power of imagination.[89] This transformation is effected by means of the re-creation of the universal order in the mind of the practitioner. At this point Clucas has clearly dissociated himself from Yates's talismans and emphasis on Hermetism.

In another article, he considers the art of memory in two of Bruno's Italian dialogues. The presence of memory in these works once again affirms its ethical (and not purely logical) value. Mnemonics here plays a role in the process of deification.[90]

Besides these scholars, whose research has been directed especially against Sturlese's interpretation, another current has come to the surface, underlining the magical relevance of Bruno's mnemonics in a rhetorical context. These recent studies by Lina Bolzoni and Maria Pia Ellero are situated around an expression in Bruno's *De vinculis in genere*, where he describes the magician as a "hunter of souls" (*animarum venator*), together with Bruno's posthumously published treatise on rhetoric *Artificium perorandi*.[91] Both Bolzoni and Ellero point out that Bruno's rhetorician is at one with the enchanter, in his attempt to control the emotional world of his listeners.

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89   Clucas, "*Simulacra et Signacula*," p. 266: "The transformative power of imagination was a constant theme in Renaissance magic, and while Bruno's system does not contain references to the talismanic instruments or conjurations referred to by Yates, it can still be construed as magical, albeit a Plotinian rather than a Hermetic magic." With regard to this statement, however, it must be specified that the magical allusions worked into his mnemonic treatises often quite clearly derive from a context of mathematical and theurgic magic. Thus, in opposition to Clucas's assertion, the conjuring element is present in these works (certainly in *Cantus Circaeus*). This explains Bruno's effort to dissociate his art from the *ars notoria* (a medieval magic aiming at higher knowledge, sometimes by the mediation of possessing spirits). These issues will be discussed at length in my second chapter.

90   Clucas, "Mnemosine in London," p. 22.

91   L. Bolzoni, "Il cacciatore di anime. Note su poetica, retorica e magia in Giordano Bruno," in *Studi sul manierismo letterario, per Riccardo Scrivano*, ed. N. Longo (Rome: Bulzoni Editore, 2000), pp. 173–88; M.P. Ellero, *Lo Specchio della fantasia. Retorica, magia e scrittura in Giordano Bruno* (Lucca: Maria Pacini Fazzi Editore, 2005).

1.1.5 *Conclusion*

We have seen that Yates's chief interest was not the Scientific Revolution, but the imaginative aspects of Renaissance culture in relation to magic. Her argument for Bruno's magical memory is too biased, and it avoids passages that might contradict her Hermetic reading. After her rejection of Yates's reading – based on (a) the Hermetic reflection of the universe in the mind, (b) talismanic images, and (c) conjuring from kabbalistic Lullism – Sturlese's interpretation in its turn has been subject to much criticism, from which two negative conclusions above all may be drawn. First, the corrections she introduces to save her mnemonic machine are too extensive to be acceptable. In other words, it is very unlikely that all the proposed irregularities are due to printing or typographical errors. Therefore, it is still not clear – and perhaps never will be – what Bruno had in mind with the five wheels of the *Ars memoriae* that he added to his *De umbris idearum*. Secondly, Sturlese's interpretation isolates the mnemonic practice from the theoretical passages present in these works. A good part of Bruno's mnemonics is indeed concerned with *memoria verborum*. But from Bruno's own statements in the theoretical parts of his treatises, it appears that his art amounts to more than that.

From the studies cited above, two positive conclusions may also be drawn. First, Clucas has argued that Bruno's art of memory is magically valid in an ethical context. The art endeavours to transform the practitioner into the divine. In other words, one of its major aims is to realize deification, a common theme in magical thought of the Renaissance. Secondly, the art of memory is magically relevant in a rhetorical context. In *De vinculis in genere* Bruno characterizes the rhetorician, who is trained in the art of memory, as a magus hunting souls. He associates rhetoric with incantation. With his speech the rhetorician can influence the feelings of his listeners, and with his imagery he reaches directly into their imagination.

1.2   Towards a Broader Perspective

In the perspectives at which we have been looking, the blind spots are evident. Memory and magic simply fall beyond Tocco's interests. Yates ignores passages which contradict her magical reading and does not deal fully with Bruno's magical writings. Sturlese's early focus on the practice of *memoria verborum* banishes any magical connection at all. Why should these blind spots have afflicted such eminent scholars? In my opinion, the root of the problem is the contradictions found in Bruno's books on memory themselves. On the one hand, he denies that his art has anything to do with magic. On the other, his

books are filled with magical elements. As a consequence, different scholarly perspectives fixate on one position at the expense of the other.

To illustrate my diagnosis, let us return to a passage mentioned above. In the introductory dialogue of *De umbris idearum*, which answers many criticisms directed at Bruno's art, we find the accusation of Magister Anthoc, linking those who perform extraordinary mnemonic operations with "magi or possessed persons or something of that sort". Philothimus, one of the interlocutors, replies that the art has nothing to do with magic. The suspicious Magister Anthoc is ridiculed with the jibe that he must be a nephew of the ass that was sheltered in Noah's ark.[92] But must we interpret this riposte from Philothimus, usually seen as the author's mouthpiece, as the reliable voice and opinion of Bruno himself? According to the comments in the new edition, we must. Philothimus's statement is read as Bruno's own authorial opinion.[93] But what, then, does Bruno mean when in *Ars memoriae* he writes that some signifiers are "so appropriate to the art, that it seems to support the natural realities: and these signifiers are *signa, notae, characteres* and *sigilli*, in which there is so much power, that they seem to act beyond nature, above nature and even, if it is required, against nature"?[94] For any reader somewhat acquainted with Renaissance literature on the occult sciences, an art operating with *signa, notae, characteres*, and *sigilli* has the odour of magic about it. And might not the formula "operating against nature" evoke a kind of magic that even goes beyond natural magic? Thus, Bruno's assertion that sometimes the art is capable of "acting against nature" by employing certain signifiers (derived from a magical context) affirms exactly what is denied by Philothimus, namely that those who perform "all but vulgar operations of memory, are magi or possessed

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92   Bruno, *De umbris idearum*, BOMNE, 1:24. See note 44.

93   Commenting upon this passage, it is written (BOMNE, 1:390): "A giudizio di Bruno, infatti, la mnemotecnica non sfrutta forze latenti nelle realtà fisiche, ma si iscrive completamente nella struttura del conoscere e dell'operare umano, e dunque non ha alcun rapporto con situazioni estreme, nelle quali l'individuo perde la propria autonomia per farsi 'vaso' e 'strumento' di forze estranee." Although we agree that Bruno's art is directed towards autonomy, and does not lead the practitioner to become the passive instrument of foreign spirits, this does not imply that the art has nothing to do with foreign spirits (and magic).

94   In *Ars memoriae*, some signifiers, used during the mnemonic practice, are described in the following way: "Quaedam vero adeo arti videntur appropriata, ut in eisdem videatur naturalibus omnino suffragari: haec sunt signa, notae, characteres et sygilli, in quibus tantum potest, ut videatur agere praeter naturam, supra naturam, et si negotium requirat, contra naturam." (BOMNE, 1:136) For the importance of these formulas in 16th-century magical debates, see Clark, *Thinking with Demons*, passim.

persons or something of that sort".[95] Contradictory statements such as these may well cause us to wonder about the author's precise position on this topic. Both Yates's magical and Sturlese's non-magical readings take one position for granted and ignore the other. From that impasse, the controversy can be brought back to Bruno's texts, in which both perspectives can be affirmed and denied. The only remedy is a "broader perspective" that takes into account both contradictory positions.

It goes without saying that Bruno would not openly declare his art as magical, even if that were indeed the case. He would then be digging his own grave, and our task would be accomplished before it had even started. This is clearly not the case. Leaving aside his possible magical *ars memoriae*, his position towards magic in general is, to say the least, complex. Sometimes he judges or ridicules superstitious forms of magic. In other writings he praises magic. His publications contain magical elements, whereas a limited number of unpublished manuscripts are dedicated to a deeper study and reform of magic. Therefore, an encompassing perspective, apart from paying attention to internal contradictions in the treatises on memory, has the further ambition of fully involving Bruno's corpus of magical writings. Notwithstanding the quantity of studies dedicated to my central question, a meticulous comparison of the two corpora has never been undertaken.[96] In my opinion, this double perspective is necessary *before* we can judge the magical content of Bruno's *ars memoriae*.

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95   The comments (BOMNE, 1:470–71) on this passage about privileged signifiers, containing such power that they may even work against nature, breathe not a word of magic. These signifiers are rather explained as a specific semiotic category which is able to lend sensory aspects to things not manifest in nature. However, the formula "*agere contra naturam*" was already explicitly linked to non-natural magic by Rossi, "Giordano Bruno," p. 31.

96   The corpus of mnemonic writings comprehends the following works of Bruno: *De umbris idearum*, to which is added *Ars memoriae, Cantus Circaeus* (which comprehends *Ars Reminiscendi*), *Explicatio triginta sigillorum*, to which is added *Sigillus sigillorum*, and *De imaginum, signorum et idearum compositione*. These books were all published in the course of Bruno's career. The corpus of magical writings contains the following works: *De magia mathematica, De magia naturali, Theses de magia, De vinculis in genere*, and *De rerum principiis*, contained in only a few manuscripts (*infra*).

Special Features of Magical and Mnemonic Writings in the Sixteenth Century

> Dubito an ullus ante me secretae modo scripturae usus sit, sed obscuriores Iordanum Brunum Nolanum observasse vidi. Lectu difficilimum hactenus non vidi nec de meo hoc dici potest, ut alibi retuli.
>
> SCHENKEL, *Apologia*, p. 113

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A central issue for our study, as formulated in the first chapter, is that of Bruno's cryptic style and his contradictory statements with regard to the magical value of his *ars memoriae*. Yates simply ignored Bruno's passages that contradict a magical reading. The editors of the mnemonic works, on the other hand, have taken these same passages as a reliable expression of the Nolan's opinion. This chapter proposes a way out of the impasse, for an attentive reading of his magical writings throws a light on the contradicting passages. Next, the cryptic style in Bruno's mnemonic works will be interpreted from a rhetorical and commercial point of view, suggested by my reading of the Dutch mnemonist Thomas Lambert Schenkel. To put my interpretation into a broader cultural context, however, first we must take a glance at the stage on which an author like Bruno performed.

Long ago, Leo Strauss wrote that a necessity of methodological reflection is caused by persecution, "which gives rise to a peculiar technique of writing, and therewith to a peculiar type of literature, in which the truth about all crucial things is presented exclusively between the lines."[1] Strauss is obviously right in stressing that a climate of persecution should make us change our credulous glasses. But unfortunately his insights are of little help in finding a precise methodological approach to authors who, according to him, write "between the lines". There are many ways to mislead the censor and protect the writer: tacit allusions, non-indicated quotes, slightly altered citations, cryptic

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1 L. Strauss, *Persecution and the Art of Writing* (1952; Chicago: The University of Chicago Press, 1988), p. 25.

passages, parodies, irony, satire, fables, dialogues, contradictions (within the same work, or between different works by the same author), and so on. The creativity of the miscreant is always one step ahead of the prosecuting authorities. Interpreting all these literary possibilities as tricks to present a message between the lines leads to an infinite number of interpretations of what exactly is to be found between these lines. Therefore, Strauss's theory of the "art of writing" cannot lead us out of the impasse. His views, however, do draw one's attention to the fact that the paths of literary success and mortal danger crossed each other regularly.

2.1   Masked on the Literary Stage?

One might see the introduction of the printing press as Western society's first encounter with mass media. The press made it possible to spread information, uniformly and on a large scale – a change which came just as Europe was being torn apart by religious strife, provoking a paranoid, repressive reaction by the authorities.[2] Due to this repression, ideas considered dangerous could not benefit openly from the possibilities of the press. To circumvent repression, authors often resorted to certain strategies, which in these circumstances reached a new level.

At the same time, these "writing strategies" also suited the fascination with disguise, secrecy, deception, and dissimulation present in all aspects of cultural life during the early modern period.[3] Dissimulation, for example, became an ideal to guide the behaviour of the courtier. Fundamental texts of conduct literature show that dissimulation assumed an important place in Renaissance etiquette. In Castiglione's *Il Libro del Corteggiano* (1528), for example,

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2 On the impact of printing on Western society, see E. Eisenstein, *The Printing Press as an Agent of Change* (Cambridge: Cambridge University Press, 1979).

3 On the culture of secrecy, see the fundamental work of W. Eamon, *Science and the Secrets of Nature* (Princeton: Princeton University Press, 1994). On dissimulating writing strategies, see P. Zagorin, *Ways of Lying, Dissimulation, Persecution, and Conformity in Early Modern Europe* (Cambridge, Mass.: Harvard University Press, 1990); J.-P. Cavaillé, *Dis/simulations: Jules-César Vanini, François La Mothe Le Vayer, Gabriel Naudé, Louis Machon et Torquato Accetto: Religion, morale et politique au XVIIᵉ siècle* (Paris: Champion, 2002); T. van Houdt et al., eds., *On the Edge of Truth and Honesty: Principles and Strategies of Fraud and Deceit in the Early Modern Period*, Intersections: Interdisciplinary Studies in Early Modern Culture 2 (Leiden: Brill, 2002); F. Hallyn, *Descartes, Dissimulation et Ironie* (Geneva: Droz, 2006); J.R. Snyder, *Dissimulation and the Culture of Secrecy in Early Modern Europe* (Berkeley: University of California Press, 2009).

dissimulation is recognized to be one of the contributing factors in the worldly success of all those who have mastered the art of "civil conversation".[4] The ideal of *sprezzatura* in conduct and conversation corresponds to "a certain nonchalance, so as to conceal all art and make whatever one does or says appear to be without effort and almost without any thought about it."[5] The courtier then ought to *appear* a naturally talented speaker, notwithstanding his efforts and exercises. Castiglione's prescriptions are echoed in a magical context in Bruno's *De vinculis in genere*. In this work Bruno teaches the magus how to bind souls, that is, how to influence and manipulate the psyche of other persons – making his magic extremely relevant in a political context. Bruno remarks that "orators, courtiers and those who in any event know the rules of behaviour bind more successfully in civil conversation when they employ the elusive simulation of artifice […] for not a small part of art is to use it while dissimulating it."[6]

Both Castiglione and Bruno were inspired by Florentine Platonism, which gave a central place to the divine nature of man. In Pico's *Oratio de hominis dignitate* (1486) this divine nature is linked to man's capacity to change shape and adapt to circumstance.[7] That such a skill might suit the courtier or the ambassador – supposed to interact with different factions, from different countries and religions – is self-evident. As for Bruno, it must be noticed that, despite his offensive personality, which frequently caused him trouble, he was a true chameleon, wandering through Europe as a renegade monk, disposing of his Dominican habit and adopting it again when necessary, entering the royal court of France, criticizing Protestantism in England, praising Luther while residing in Wittenberg, and so on. This *accademico di nulla academia*

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4 The same can be said of Giovanni Della Casa's *Il Galateo* (1558) or Stefano Guazzo's *La civil conversazione* (1574). See Snyder, *Dissimulation*, p. 29.

5 Baldassare Castiglione, *The Book of the Courtier*, ed. D. Javitch (New York: Norton, 2002), p. 32.

6 G. Bruno, *De vinculis in genere*, BOM, pp. 504–06: "Vinciunt magis civiliter rhetores et aulici, et utlibet consuetudinem habentes, ubi transfuga quadam artis dissimulatione operantur; […] non exigua quippe artis pars est, artem dissimulando, arte uti."

7 Giovanni Pico della Mirandola, *Oratio de hominis dignitate*, in *Opera omnia Ioannis Pici Mirandulae*, Basileae, ex officina Henric Petrina, 1572–73, 1:314–15: "Medium te mundi posui, ut circumspiceres inde commodius quicquid est in mundo. Ne te coelestem, neque terrenum, neque mortalem, neque immortalem fecimus, ut tuiipsius quasi arbitrarius honorariusque plastes & fictor, in quam malueris formam effingas. Poteris in inferiora quae sunt bruta degenerare. Poteris in superiora quae sunt divina ex tui animi sententia regenerari. […] Quis hunc nostrum chamaeleonta non admiretur?".

– as he called himself in his comedy *Candelaio* – could shake hands with kings and beggars.[8]

Apart from its relevance to social manners, the themes of dissimulation and deceit are strikingly present in drama (itself, of course, predicated on dissimulation – the actor pretending to be the character) and literature as well. Iago's "I am not what I am" is probably the most famous scene, in which Shakespeare puts the theme of deception on stage.[9] Another example of literary dissimulation is Rabelais, who, in his prologue to *Gargantua*, compares his work to a *Silène* – ugly outside, but precious inside.[10]

But besides the areas of social behaviour, drama, and literature, dissimulation plays its part in religion and natural philosophy as well, although here it is mostly a question of necessity, not an ideal to be achieved, as in the case of the courtier. Dissimulation in a religious context never loses sight of the Inquisition. A bull of Pope Sixtus IV (1 November 1478), addressed to the Spanish

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8   In this respect, Bruno's attention to his clothing in the trial documents is noteworthy. At the end of his first declaration on 26 May 1592, Bruno recalls that he decided to leave his religious order and to dispose of his habit, before going to Noli: "[...] per il che uscì dalla religione et, deposto l'habito, andai a Noli, [...]" (Firpo, *Le Procès*, p. 39). In his second declaration (30 May of the same year), he relates how he was persuaded in Padua to adopt the habit again – despite his unwillingness to enter the order – which he did in Bergamo. Later, having arrived in Geneva, he threw off his habit once again and was clothed by some of his compatriots. "Et partendo me de qui, io andai a Padoa, dove trovando alcuni padri dell'ordine de San Domenico mei conoscenti, li quali me persuadettero a ripigliar l'habito, quando bene non havesse voluto tornar alla religione, parendoli che era più conveniente andar con l'habito che senza; et con questo pensiero andai a Bergamo. Et mi feci far una vesta di panno bianco di buon mercato, et sopra essa vi posi il scapulare, che io havevo conservato quando partì da Roma; [...] Onde voltai alla volta de Genevre; et arrivato là, andai ad alloggiar all'hosteria; et pocco doppo il marchese de Vico napolitano, che stava in quella città, me domandò chi ero et se era andato lì per fermarmi et professar la religione di quella città. [...] Et persuadendomi in ogni caso a demetter quell'habito ch'io havevo, pigliai quaei panni et me feci far un paro di calce et altre robbe; et esso Marchese con altri Italiani mi diedero spada, capello, cappa et altre cose necessarie per vestirme [...]." (Firpo, *Le Procès*, pp. 45–47).

9   W. Shakespeare, *Othello, The Moor of Venice*, Act 1, Scene 1.

10   On the Prologue to *Gargantua*, see F. HALLYN, *Trois variations sur le Prologue de Gargantua*, in idem, *Le sens des formes. Études sur la Renaissance* (Geneva: Droz, 1994), pp. 9–32. The *Silène* evokes Plato's *Symposium* (215a–b), where Alcibiades praises Socrates by comparing him to the Silenus statues which, when opened, are found to contain images of gods. The Silenus was a commonplace. Cf. Erasmus, *Adages* (3.3.1), "Sileni Alcibiadis," in *Collected Works of Erasmus*, trans. R.A.B. Mynors (Toronto: University of Toronto Press, 1982–92), 34:262–82.

monarchs Ferdinand and Isabella, established the Inquisition in Castile, refer-
ring to those who, despite regeneration in Christ through the holy water of
baptism, had returned secretly to the practice of Jewish superstition.[11] Thus
the Holy Office arose to eradicate crypto-Judaism among the *conversos*, new
Christians of Jewish origin. Crypto-Judaism is only one manifestation of reli-
gious dissimulation in this period, and stands somewhat apart from the other
forms, all of which relate to the confessional divisions within Christian society
and the enforcement of orthodoxy by one denomination upon the members of
another.[12] Certain groups and individuals lived in outward conformity with the
Catholic Church, but had inwardly broken with the foundations of Catholic
belief. For instance, the Lollards – English heretics who sprang from the teach-
ings of John Wycliffe – continued to attend their parish churches in order to
avoid suspicion and, while receiving the communion, inwardly rejected the
official teaching concerning this rite.[13] Crypto-Protestantism became an oft-
discussed issue, and most Protestant reformers condemned this sort of com-
pliant conduct, prescribing that no concessions to Catholic idolatry be made,
and that the true Christian must give undisguised testimony of his faith. The
reformer who discussed this matter most fully was John Calvin. A significant
portion of his work is directed at those whom he calls the Nicodemites, after
the Pharisee Nicodemus, a believer in Christ who kept his faith hidden out of
fear (John 3:1–2).[14] In Calvin's view, Nicodemism is a betrayal of Christ, and his
criticisms attack every aspect of dissimulation.[15]

At the crucial moments of Inquisitional trials, much attention was
paid to possible dissimulation. This can be seen in Eymerich's *Directorium
Inquisitorum*, an Inquisitorial manual composed around 1376, first printed in
1503, and enlarged in 1578 at the order of the Roman Inquisition. This revi-
sion became the standard handbook for papal inquisitors in the late 16th and
17th centuries. It lists ten tricks heretics use to respond without confessing,

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11   G. Testas and J. Testas, *L'Inquisition* (1966; repr. Paris: Presses Universitaires de France,
      1983), pp. 69–70.

12   Zagorin, *Ways of Lying*, p. 39.

13   Zagorin, *Ways of Lying*, p. 67.

14   The neologism Nicodemites was introduced by Calvin in his strife against religious dis-
      simulation. Later, it was adopted as a general term for the theory and practice of religious
      dissimulation. See Zagorin, *Ways of Lying*, p. 68.

15   See the chapter "Calvin and Nicodemism" in Zagorin, *Ways of Lying*, pp. 63–82; see also
      C. Ginzburg, *Il Nicodemismo. Simulazione e dissimulazione nell'Europa del '500* (Turin:
      Einaudi, 1970).

alongside ten ways the inquisitor can overcome these dissimulating tactics.[16] Campanella, who spent time in the prisons of the Inquisition in Rome at the same time as Bruno, seems to have made use of one of these tricks during his trial. From the Inquisitorial documents, it appears that he feigned insanity – claiming he had to pee, shit or drink urgently – which is one of the tricks indicated in the manual.[17]

Likewise, in the documents of Bruno's trial, the concern for dissimulation is omnipresent. The interrogators, who distrusted the sustained innocence of the Nolan, regularly set traps for the philosopher, although most of the time he skilfully avoided them. A good example is given in his last declaration before the Venetian Inquisition on 30 July 1592. At the beginning of the interrogation, Bruno is requested to "tell the truth better (*di dire meglio la verità*), now that he can easily remember better those things which he had previously declared in his other depositions."[18] The accused responds that he has nothing to add, and that in his previous depositions he related everything according to what he remembered. He declares that "he has not shown any suspicion of heresy".[19] The interrogator now tries to throw Bruno off balance by asserting that, since arriving in Venice, "he has taught false and heretical dogmas and doctrines."[20] But this is in vain, for Bruno replies that he has never taught heretical doctrines or dogmas, but only reasoned on philosophical topics.[21] The interrogation ends

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16   Nicholas Eymerich, *Manuale dell'inquisitore*, a cura di R. Cammilleri (Spa: Edizioni Piemme, 2000), pp. 150–54: "le dieci astuzie degli eretici per rispondere senza confessare".

17   In a note Camilleri refers to Campanella's case. Eymerich, *Manuale dell'inquisitore*, pp. 154–55: "Il domenicano Tommaso Campanella si finse pazzo per sfuggire alla corda. Dal verbale: 'E poiché diceva "Mo mi piscio" e voleva esser calato a tale effetto, venne calato; e poi disse: "Mo mi caco", e venne tradotto alla lattrina'. Ancora: 'E poiché chiese da bere, dicendo: "Dàtemi a bevere vino", gli fu dato da bere del vino'. Di più: 'E dato che chiedeva delle uova, ordinarono di dargliele, e così gli furon date tre uova da bere'. Non bastò: 'Disse poi all'aguzzino di spostare più in alto la fune che gli legava i piedi, perché se li sentiva in fiamme, e ordinarono che si facesse quanto chiedeva'. L' 'aguzzino', tal Giacomo Ferraro, mentre lo riconduceva in cella gli sentì dire: 'Che si pensavano che io era cognione, che voleva parlare?'".

18   Firpo, *Le Procès*, p. 137: "Interrogatus se, havendo havuto commodità di pensare, se sia rissoluto di dire meglio la verità, raccordandosi facilmente meglio hora di quello che si è riccordato nelli altri suoi constituti."

19   Firpo, *Le Procès*, p. 139: "[…] de non haver data mediocre sospitione de heresia; […]".

20   Firpo, *Le Procès*, p. 141: "[…] venuto in Venetia, non solo non havete scoperto simil disposizione, ma insegnato ancora dogmi et dottrine false et heretiche."

21   Firpo, *Le Procès*, p. 143: "In Venetia poi, doppo che son venuto, non ho mai insegnato dottrine né dogmi heretici; ma solamente ho discorso con molti gentilhomini di cose di filosofia, come da loro medisimi si potrà aver informazione."

with a theatrical gesture by Bruno, who, kneeling, humbly begs pardon for all the errors he has committed. After a time the Holy Office orders him to stand up, as he has remained on his knees after several requests to get to his feet.[22] Obviously, we cannot know what was going on in the Nolan's mind during his gesture of repentance. But his writings make his statement that he never taught heretical doctrines a little unconvincing.

An example of deceit in natural philosophy is offered by Galileo, who in the dedicatory letter of his *Dialogo sopra i due massimi sistemi del mondo* asserts that he wants to demonstrate the Italian – and especially Roman – superiority in astronomy over Northerners. He pretends that this is why he has collected all the speculations about the Copernican system, to defend Copernicus as a rhetorical exercise, proceeding with a mere mathematical hypothesis.[23] The irony of this passage is so transparent that it was unmasked by the Inquisition. In his report, the Jesuit Melchior Inchofer uncovers the astronomer's stratagem, concluding that

> [...] the reason which he pretends motivated him to write, namely that the ultramontanists have whispered against the decree [condemning heliocentrism] and that the consultants of the Holy Congregation have argued ignorantly with regard to astronomy, is empty and frivolous, and insufficient to conduct a sensible man to start such a work.[24]

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22 Firpo, *Le Procès*, pp. 145–47: "Postquam genuflexus dixit: Domando humilmente perdono al Signor Dio e alle Signorie Vostre illustrissime de tutti li errori da me commessi; [...] Postquam sanctum Tribunal eidem iniunxit ut elevetur a terra prout pluries eidem iniunctum fuit."

23 G. Galilei, *Dialogo sopra i due massimi sistemi del mondo tolemaico e copernicano*, 2 vols. (Padua: Editrice Antenore, 1998), 1:5: "Per tanto è mio consiglio nella presente fatica mostrare alle nazioni forestiere, che di questa materia se ne sa tanto in Italia, e particolarmente in Roma, quanto possa mai averne imaginato la diligenza oltramontana; e raccogliendo insieme tutte le speculazioni proprie intorno al sistema Copernicano, far spere che precedette la notizia di tutte alla censura Romana, e che escono da questo clima non solo i dogmi per la salute dell'anima, ma ancora gl'ingegnosi trovati per delizie degl'ingegni. A questo fine ho presa nel discorso la parte Copernicana, procedendo in pura ipotesi matematica, cercando per ogni strada artifiziosa di rappresentarla superiore, non a quella della fermezza della Terra assolutamente, ma secondo che si difende da alcuni che, di professione Peripatetici, ne ritengono solo il nome, contenti, senza passeggio, di adorar l'ombre, non filosofando con l'avvertenza propria, ma con solo la memoria di quattro principi mal intesi."

24 H. De L'Epinois, *Les Pièces du procès de Galilée* (Rome: Palmé, 1877), pp. 80–81: "Quia causa illa, qua se permotum ad scribendum praetendit Ultramontanos scilicet obmurmurasse decreto, et Consultores S. Congregationis ignorantiae Astronomiae arguisse, vana est

Another founding father of modern science, Francis Bacon, was also concerned with dissimulation. In his *Essay Of Simulation and Dissimulation* he distinguishes three degrees of "this Hiding, and Vailing of a Mans Selfe"[25]: secrecy, dissimulation, and simulation.

> The first *Closenesse*, *Reservation* and *Secrecy*; when a Man leaveth himself without Observation, or without Hold to be taken, what he is. The second *Dissimulation*, in the *Negative*; when a man lets fall Signes, and Arguments, that he is not, that he is. And the third *Simulation*, in the *Affirmative*; when a Man industriously, and expressely, faigns, and pretends to be, that he is not.[26]

After having defined these three gradations at greater length, Bacon explains the advantages of simulation and dissimulation. The first of these advantages is "to lay asleep Opposition, and to Surprize. For where a Mans Intentions, are published, it is an Alarum, to call up, all that are against them."[27] Bacon's essay provides a well-defined semantics of secrecy, simulation, and dissimulation. It is noteworthy that the practice of dissimulation as a way to mislead opponents, as a way not to publish one's intentions so as to prevent "all that are against them" from taking action, is clearly described in relation to censorship.

All these observations show that dissimulation was widespread in the early modern world, and its omnipresence holds a mirror for those looking at the roots of Western rationalism in writings of the period. Even Descartes, who based his claims on *idées claires et distinctes*, could write: "Just as comic actors put on a mask so that no shame would appear on their face, so I, ready to mount the stage of the *theatrum mundi*, [...] come forward masked (*larvatus prodeo*)".[28]

The examples listed above show that dissimulation was present in many areas of early modern culture, sometimes in a positive way (as in the case of the courtier), but mostly as a necessary precaution in an intolerant climate.

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    et frivola, nec sufficiens ut moveat virum cordatum ad tantum laborem suscipiendum." Quoted by Hallyn, *Descartes*, p. 20.

25 Sir F. Bacon, *The Essayes or Counsels, Civill and Morall*, edited with introduction and commentary by M. Kiernan (Oxford: Clarendon Press, 1985), p. 21.

26 Bacon, *The Essayes*. The italics are original.

27 Bacon, *The Essayes*, p. 22.

28 R. Descartes, *Cogitationes privatae*, in *Oeuvres de Descartes*, eds. C. Adam and P. Tannery (Paris: Vrin, 1996), 10:213: "Ut comoedi, moniti ne in fronte appareat pudor, personam induunt, sic ego hoc mundi teatrum conscensurus, [...], larvatus prodeo."

Now did Bruno, like Descartes, come forward masked? Did the author who advised forging magical bonds "while dissimulating it", dissimulate himself while writing? This would, of course, increase our difficulty in interpreting his work. Maybe Bruno was safeguarding himself by stating that his mnemonics had nothing to do with magic? But why, then, did he spice up his mnemonic works with magical allusions?

To answer these questions, it is worth looking at *Spaccio*, probably Bruno's most offending book against the fundaments of Christian (and especially Protestant) thought. In this dialogue Discernment (*Sagacità*) is invoked "to erase his footsteps after following him so that he will not be found by his enemies, nor be saddled with their fury."[29] Bruno was doubtless an adroit actor on the literary stage. He possessed all the necessary skills to change costumes in his books, just as he had done with his Dominican habit in order to get out of Italy. But did he actually employ his skills to this aim? That is highly improbable, for despite the presence of dissimulation, which is said to be the "shield of Truth" (*scudo della Veritate*), the "truth" of *Spaccio* must have exploded like a bomb. This can be seen from the exemplar of the book, preserved in the Biblioteca Nazionale di Napoli and containing the contemporary annotations of an anonymous reader, whose marginalia testify to the offensiveness of the anti-Christian passages.[30]

In *Spaccio* Momus pleads that Orion, "who can walk on the waves of the sea without sinking, without wetting his feet", should not be allowed to perform his tricks any more – acting as if he were Jove himself – to make himself superior to the gods in reputation.[31] The anonymous reader wrote in the

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29 G. Bruno, *Lo Spaccio della bestia trionfante*, in BOeuC, 5:311: "Sagacità, […] tu medesima (acciò ch'io non sia ritrovata da nemici, et il furor di quelli non mi s'avente sopra) confondi seguendomi gli miei vestigi." On Bruno's use of dissimulation, see J.-P. Cavaillé, "Théorie et pratique de la dissimulation dans le *Spaccio della bestia trionfante*," in *Mondes, formes et société selon Giordano Bruno*, eds. T. Dagron and H. Védrine (Paris: Vrin, 2003), pp. 47–63.

30 The annotations of the anonymous reader, indicated as "Postillateur de Naples", are inserted in the notes of Bruno, *Lo Spaccio*.

31 To give a sense of the ferocity of the passage, we reproduce a part of the gods' discussion of Orion: "Appresso dimanda Nettuno: "Che farrete, o dèi, del mio favorite, del mio bel mignone, di quell'Orione dico, che fa per spavento (come dicono gli etimologisti) orinare il cielo?"; "Qua" rispose Momo, "lasciate proponere a me, o dèi. Ne è cascato (come è proverbio a Napoli) il maccarone dentro il formaggio. Questo, perché sa far de meraviglie, e (come Nettuno sa) può caminar sopra l'onde del mare senza infossarsi, senza bagnarsi gli piedi; e con questo consequentemente potrà far molte altre belle gentilezze: mandiamolo tra gli uomini; e facciamo che gli done tutto quello che ne pare e piace, facendogli creder che il bianco è nero, che l'intelletto umano, dove li par meglio vedere, è una cecità; e ciò

margin: "*De Orione; sed, o Christe, mutato nomine de te Fabula narratur*". Also, John Toland, a 17th-century philosopher and admirer of Bruno, commented upon this passage in the margin of his manuscript of *Spaccio*: "*Falsissima in Christum satyra, sub Orionis persona*".[32] Some utterances were perhaps difficult to overlook. Bruno was well aware of the offensive nature of his book, and wisely never breathed a word about it during the Inquisitorial interrogations. Nevertheless, at the end of his trial the existence of *un libro di Trionfante bestia* is known, although a copy of it was probably not available.[33] Despite the fact that its existence had only recently been discovered, it appears as one of the motives for the Nolan's condemnation in a letter by Gaspar Schoppe, written on the day Bruno was burnt. From this letter it appears that Schoppe believed the beast to be an allusion to the pope.[34]

Apart from the blasphemy present in *Spaccio*, the book is offensive for another reason. It contains a paean to Egyptian magic, which worshipped the divinity in nature (*natura est deus in rebus*). Momus relates how

> [...] those wise men [...] had the power to make intimate, affable, and friendly toward themselves, the gods, who, by means of cries they sent forth through statues, gave these wise men advice, doctrines, divinations, and superhuman institutions; whence with magic and divine rites they rose to the height of Divinity by the same ladder of Nature by which

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che secondo la raggione pare eccellente, e buono et ottimo: è vile, scelerato et estremamente malo; che la natura è una puttana bagassa, che la legge naturale è una ribalderia; che la natura e divinità non possono concorrere in uno medesimo buono fine, [...] Ma con timore (o dèi) io vi dono questo conseglio, perché qualche mosca mi susurra ne l'orecchio: atteso che potrebbe essere che costui al fine trovandosi la caccia in mano, non la tegna per lui, dicendo e facendoli oltre credere che il gran Giove non è Giove, ma che Orione è Giove: e che li dèi non son altro che chimere e fantasie. Per tanto mi par pure convenevole che non permettiamo, che *per fas et nefas* (come dicono) vaglia far tante destrezze e demonstranze, per quante possa farsi nostro superiore in reputazione." Bruno, *Lo Spaccio*, pp. 461–65.

32   R. Sturlese, "Postille autografe di John Toland allo *Spaccio* del Bruno," *Giornale critico della filosofia italiana*, 65/1 (1986), 27–41; p. 40. On Toland and Bruno, see also S. Ricci, "Il Bruno di Toland: aspetti politici," in *Giordano Bruno 1583–1585: The English Experience*, eds. M. Ciliberto and N. Mann (Florence: Olschki, 1997), pp. 101–16.

33   See document 66 (dated on 8 February 1600, nine days before Bruno's execution) of Firpo, *Le Procès*, p. 481. See also the notes on pp. 631–32.

34   Firpo, *Le Procès*, p. 503: "Postea Londinum profectus, libellum istic edit De bestia triumphante, hoc est de Papa, quem vestri honoris causa "bestiam" appellare solent." This reading is similar to Mocenigo's reading of *Cantus Circaeus*. He interprets the swine as if it represented the pope (ibid., p. cxxiv).

Divinity descends even to the lowest things in order to communicate herself.[35]

Thus, the famous statues are evoked, known from the Hermetic writings, which were believed to be capable of summoning the gods. It is not surprising that this passage also offended the anonymous reader, who noted in the margin: "He seems to justify, no rather to praise, the old intercourse of demons with humans during the demonic oracles. A despicable discourse."[36]

In fact, Bruno's *Spaccio* is exemplary. In general, he did not use his literary skills to disguise himself, nor did he use them to hide his dangerous ideas somewhere "between the lines". On the contrary, they are not employed to "come forward masked", but to put *Iordanus* or *Il Nolano* on stage as a heroic philosopher, bravely defending his offending ideas. This is the case in *Spaccio* and the Italian dialogues, but it is equally true for his mnemonic works, where the mnemonic art is said to be perfected by the somewhat divine invention of the author. On the literary stage Bruno does not step back but forward, dressed up as himself. This does not diminish the fact that sometimes dissimulating strategies are present in his works, without which it would simply have been impossible to publish.[37]

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35   Bruno, *Lo Spaccio*, p. 415: "'È vero quel che dici,' rispose Momo, 'perché in fatto vedo come que' sapienti […] erano potenti a farsi familiari, affabili e domestici gli dèi che per voci che mandavano da le statue gli donavano consegli, dottrine, divinazioni et instituzioni sopraumane: onde con magici e divini riti per la medesima scala di natura salevano a l'alto della divinità, per la quale la divinità descende sino alle cose minime per la communicazione di se stessa." See G. Bruno, *The Expulsion of the Triumphant Beast*, trans. and ed. A.D. Imerti (New Brunswick, NJ: Rutgers University Press, 1964), p. 236. Thus, Bruno evokes the animated statues of *Asclepius* 24a, foretelling the future, which were central to Yates's interpretation of Bruno (*Giordano Bruno*, pp. 39, 234) For the passages in *Asclepius*, see *Corpus Hermeticum*, 2:325–26. Cf. also H.C. Agrippa, *De occulta philosophia libri tres*, ed. V. Perrone Compagni (Leiden: Brill, 1992), p. 249; M. Ficino, *Three Books on Life*, a critical edition with translation and notes, by Carol V. Kaske and John R. Clark (New York: Center for Medieval and Early Renaissance Studies, 1989), p. 388; Cf. *De civitate Dei* (VIII, 23), in Saint Augustine, *Oeuvres* (Paris: Desclée de Brouwer, 1959–60), vols. 33–37; vol. 34, pp. 308–14.

36   Bruno, *Lo Spaccio*, p. 568: "Videtur excusare, imo laudare vetus commercium daemoniorum cum hominibus in oraculis daemoniacis. Discorso detestabile."

37   Cf. Cavaillé, "Théorie et pratique," p. 48: "En outre, le modèle proposé par Strauss apparaît très difficilement applicable à des auteurs comme Bruno, dont l'hétérodoxie n'est pas d'abord cryptée, ou secrètement insinuée, mais bien plutôt éclatante, tout en restant prise dans des dispositifs de protection, sans lesquels il leur aurait été impossible de publier leur pensée."

2.2   The Contradictions in the Mnemonic Works in View of Bruno's Conception of Magic

2.2.1   *Magic and Censorship: Prints and Manuscripts*

Bruno has the tendency to establish himself in almost all his areas of interest. As we are interested in the fields of magic and mnemonics, it is necessary to take a look at the contemporary writing practices in those fields. For writing on magic, an important issue, for example, is the distinction between publications and manuscripts. It was less risky to circulate writings on magic in clandestine manuscripts, that is, among a small group of confidants. Besides, without a powerful patron, publishing on magic would simply be asking for trouble.

Recent scholars have stressed the importance of demonic magic (often of medieval origin),[38] the presence of which in the Renaissance has generally been neglected because writings of this nature predominantly circulated in manuscript. As a consequence, the current idea of a refined and high-standard Renaissance natural magic may not be fully representative, for it relies too heavily on the study of printed works.[39] This leads to the hypothesis that the distinction between natural and demonic magic is reflected in the difference between publications and manuscripts. This hypothesis, however, cannot be justified by an absolute rule for two reasons. First of all, the distinction between natural and demonic magic is rather ambiguous in itself. Natural magic claims to operate by means of hidden properties of natural objects or impersonal and natural planetary spirits, whereas demonic magic addresses demons. But the distinction between these natural spirits and demons (both seen as spiritual substances) was, as we will see, somewhat hazy.[40] Secondly,

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38   By writings on "demonic magic" we do not mean demonological treatises, but rather treatises containing the necessary ingredients (images, conjuring fomulae, etc.) for establishing ceremonies by which the magician was believed to obtain certain effects through an intercourse with demons or angels.

39   The distinction between printed works and manuscripts in the field of magic, reflecting natural and demonic tendencies, respectively, is fiercely stressed by Zambelli, *Magia bianca, magia nera*, p. 18. Clucas also emphasizes the necessity of a serious reassessment of the medieval magical tradition – containing less elegant and non-natural magic – and its manuscript transmission in the Renaissance. See S. Clucas, "John Dee's Angelic Conversations and the *Ars notoria*," in *John Dee: Interdisciplinary Studies in English Renaissance Thought*, ed. S. Clucas (Dordrecht: Springer, 2006), pp. 231–73, p. 237.

40   This ambiguity was already stressed by D.P. Walker, under the heading "Ficino and the Demons" in *Spiritual and Demonic Magic*, pp. 45–53, and was later elaborated by P. Zambelli in her *L'ambigua natura della magia. Filosofi, streghe, riti nel Rinascimento* (1991; repr. Venice: Marsilio Editore, 1996).

among the enormous quantity of early modern magical manuscripts are many which deal purely with natural magic, such as Jacques Lefèvre d'Etaples's *De magia naturali*, written in 1493 and left unpublished.[41] On the other hand, elements from demonic magic sometimes appear in such publications as the pseudepigraphic *Elementa Magica*, ascribed to Pietro d'Abano.[42]

Although the division is not absolute, then, it may serve as a general rule of thumb: Renaissance scholars were much less inclined to publish on demonic magic. In brief, the correlative terms *natural/demonic* and *publication/manuscript* provide a compass equipped with a degree of historical authenticity to navigate the misty field of Renaissance magic. Besides, the terms directly relate to our central problem about two corpora of texts which, on a formal level, could hardly be more divergent. On the one hand, we have a corpus of mnemonic treatises laced with magical allusions, dedicated to men in power. The insertion of puzzling poems to be solved by the reader, accompanied by unusual figures, often woodcuts made by Bruno's hand, doubtless made these works a curious acquisition for many personal libraries. On the other hand, we have a corpus of manuscripts on magic, very simple in form and style.[43] Therefore, by focusing on the formal characteristics and the writing strategies present in both corpora, we may try to get a firmer grip on both.

First of all, it must be stressed that, except in the field of magic, the distinction between manuscript and printed works is very difficult to make in most

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41   See E.F. Rice, "The *De magia naturali* of J. Lefèvre d'Etaples," in *Philosophy and Humanism* (New York, Columbia University Press, 1976), pp. 19–29. For a long time, only one manuscript – apart from a fragment conserved in the Royal Library in Brussels – was known, bearing the title *De magia naturali ad clarissimum virum Germanum Ganaum regium gubernatorem libri sex*, and containing only four of the six promised books. This belonged to the collection of Queen Christina of Sweden and is preserved in the Vatican Library (Regin. Lat. 1115, ff. 1–96). P.O. Kristeller discovered another manuscript of the *De magia* in Czechoslovakia (Olomouc, Universiti Knihovna, MS I 119, ff. 174–342), dated 1538 and containing all six books.

42   Petrus Aponensis *Elementa Magica*, Parisiis, ex officina Iacobi Dupuys, 1567.

43   Bruno's magical works (*De magia mathematica, De magia naturali, Theses de magia, De vinculis in genere, De rerum principiis*) are preserved in two manuscripts. The first is in Erlangen, Universitätsbibliothek, MS 493 (Irm. 1279), containing, apart from Bruno's comments on several Aristotelian works, *De magia naturali*, ff. 58r–74v, and *Theses de magia*, ff. 76r–89r. The manuscript was written by Hieronymus Besler, Bruno's secretary. The second manuscript is preserved in Moscow, Rossijskaja Gosudarstvennaja Biblioteka, MS Norov 36. This manuscript partly contains Bruno's autograph on ff. 1r–6r and 162r–168r, partly an unknown hand (ff. 168r–180r), and is partly in Besler's hand. It contains all the aforenamed magical works of Bruno, together with his *Medicina Lulliana* and his *Lampas triginta statuarum*. For an exact description of the manuscripts, see BOM, pp. XL–XLII.

fields of Renaissance intellectual life. Generally speaking, printed editions and manuscripts simply coexisted alongside each other.[44] Nevertheless, the printing press had a great advantage, which constituted its great danger as well. In a small space of time information could be spread uniformly all over Europe. Both the religious and state authorities were aware of the power of printing and reacted severely, by restricting free expression with regard to politics, religion, and natural philosophy. These repressive reactions certainly left their trace on writings on magic.

For a long time authors tried to legitimate natural magic by defining it in opposition to illegitimate demonic magic. The years 1484–89, immediately after the bull of Pope Innocent VIII – *Summis desiderantes affectibus*, against the witches – were crucial. In these years the *Malleus Maleficarum* saw the light of day, and Pico della Mirandola and Marsilio Ficino were both obliged to write an apology for their magical ideas (expounded, respectively, in Pico's *Theses* and Ficino's *De vita coelitus comparanda*). The *Malleus Maleficarum* acquired extra weight from Innocent's bull, added as a preface to the manual, which would see at least fourteen editions before 1520.[45] In Pico's famous *Oratio de hominis dignitate*, intended as the preface to his theses, the young philosopher already alludes to the distinction between natural and demonic magic, condemning the latter and praising the former as the fulfilment of natural philosophy.[46] This distinction is repeated *verbatim* in his *Apologia*.[47] Eventually Pico altered his theses and was absolved by Alexander VI in 1493.

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44   J.F. D'Amico, "Manuscripts," in *The Cambridge History of Renaissance Philosophy*, (1988; Cambridge: Cambridge University Press, 2003), pp. 11–24, indicates several reasons the distinction is blurred between manuscripts and prints. Sometimes texts were transcribed from a printed edition for very ordinary reasons, for example, when small runs limited the circulation of a text. For further diffusion, the printed text might be copied by hand, a practice which was especially the resort of students who could not afford a printed book, or who needed only a particular section of it. With regard to scientific texts, manuscripts remained important for technical reasons: the printed reproduction of complicated designs sometimes required a technical development unavailable in the first century of printing. Therefore, scientists continued to make use of handmade copies.

45   See the introduction of *The Malleus Maleficarum of Heinrich Kramer and James Sprenger*, translated with introductions, bibliography and notes by Montague Summers (New York: Dover Publications, 1971). This is a reprint of the work published by John Rodker, London, in 1928.

46   Pico della Mirandola, *Oratio de hominis dignitate*, 1:327: "Proposuimus & Magica theoremata, in quibus duplicem esse magiam significavimus, quarum altera daemonum tota opere & authoritate constat, res medius fidius execranda, et portentosa. Altera nihil est aliud cum bene exploratur quam naturalis philosophiae absoluta consummatio."

47   G. Pico della Mirandola, *Apologia*, in *Opera omnia*, 1:120.

Ficino's magical ideas, in turn, are expressed in the third book of his *Libri de vita*, namely the *De vita coelitus comparanda*, a supposed commentary on the *Liber Plotini*.[48] It contains an exposition of the sympathetic astrological magic of Plotinus and is based on the conception of impersonal planetary spirits which, in a medical context, can influence man's spirit and body. No personal spirits (i.e. demons), who could act directly on human reason, are involved.[49] But it is difficult to characterize the magic present in this third book as purely natural. Walker came to the conclusion that Ficino's attitude toward demons in *De vita coelitus comparanda* is ambiguous.[50] For, apart from his reference to the animated statues of the *Asclepius*, angels or *animae caelestes* (i.e. good demons) are said to influence the human soul directly.[51] Besides, some of his primary Neoplatonic sources, like Proclus and Iamblichus, were clearly demonic. In brief, some elements in Ficino's third book certainly raise the suspicion of demonic commitment.

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48   In the dedication of this book, Ficino (*Three Books on Life*, p. 236) states that it is a commentary on "*librum Plotini de favore coelitus hauriendo tractantem*". Kristeller (*Supplementum Ficinianum*, 1:LXXXIV) indicated that by this "*liber Plotini*" Ficino meant *Ennead*, vol. 4, 3, 11. According to Walker, on the other hand, the more likely reference is *Ennead*, 4, 4, chapters 30–42, dealing more elaborately with astral influence (Walker, *Spiritual and Demonic Magic*, p. 3).

49   Walker, *Spiritual and Demonic Magic*, p. 45.

50   Walker, *Spiritual and Demonic Magic*, p. 53, concludes his third chapter, "Ficino and the demons", in the following way: "The magic that Ficino practised, and which is partially described in the *De vita coelitus comparanda*, was addressed to good planetary demons. But in the *De vita coelitus comparanda*, which is the only work where he recommends magic that he evidently practised himself, he puts forward, with some lapses, a programme for a non-demonic magic, utilizing the *spiritus mundi* and reaching no higher than the human spirit. This magic, which from now on I shall call 'spiritual magic', was the only one he could have openly recommended, both for reasons of personal safety, and because he truly believed that good demonic magic, if it went outside a small intellectual aristocracy, would be distorted by the ignorant into idolatry. His vacillations and hesitations when discussing demonic magic are due, I think, not only to prudence, but also to real doubts in his own mind; he was both attracted by it and afraid of it."

51   Walker, *Spiritual and Demonic Magic*, p. 45. For the animated statues of *Asclepius*, see Ficino, *Three Books on Life*, p. 388: "Addit [Hermes] sapientes quondam Aegyptios, qui et sacerdotes erant, cum non possent rationibus persuadere populo esse deos, id est, spiritus aliquos super homines, excogitasse magicum hoc illicium, quo daemonas allicientes in statuas esse numina declararent." For the direct influence of the *animae coelestium* on the human soul, see Ficino, p. 368: "[...] animarum coelestium bona partim in eundem spiritum per radios prosilire atque hinc in nostros animos redundare, partim ab animis eorum vel ab angelis in animos hominum illis expositos pervenire [...]."

This is why, in his *Apologia quaedam, in qua de medicina, astrologia, vita mundi; item de Magis qui Christum statim natum salutaverunt* (15 September 1489), added to the publication of his *Libri de vita*, Ficino safeguards himself against any possible demonic involvement in his magic, and asks his friend Piero Guiccardini to "reply to the intellectual busy-bodies that Marsilio is not approving magic and images but recounting them in the course of an interpretation of Plotinus." Ficino continues as follows: "Nor do I affirm here a single word about profane magic which depends upon the worship of demons, but I mention natural magic, which, by natural things, seeks to obtain the services of the celestials for the prosperous health of our bodies."[52] In brief, in his *Apologia* the Florentine clearly seeks to render natural the operations expounded in his *De vita coelitus comparanda* and to exclude any possible demonic influence from his practice. A little further on we find the standard distinction that would become a true *topos* in magical literature over the coming century.

> Denique duo sunt magiae genera. Unum quidem eorum, qui certo quodam cultu daemonas sibi conciliant, quorum opera freti fabricant saepe portenta. Hoc autem penitus explosum est, quando princeps huius mundi eiectus est foras. Alterum vero eorum qui naturales materias opportune causis subiciunt naturalibus mira quadam ratione formandas.[53]

Ficino asserts that, in some cases, magicians unite themselves with demons by a specific ritual (*certo quodam cultu*) and, relying on their help, contrive portents (*portenta*). This magic is considered demonic and was thoroughly rejected when "the Prince of this World [Satan] was cast out" (John 12:31). In other cases, Ficino claims, magic is practised by those who seasonally subject natural materials to natural causes to be transformed in a wondrous way. This magic is considered natural.

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52   Ficino, *Three Books on Life*, p. 396: "Surge post haec et tu, Guiccardine vehemens, atque curiosis ingeniis respondeto magiam vel imagines non probari quidem a Marsilio, sed narrari, Plotinum ipsum interpretante. [...] Neque de magia hic prophana, quae cultu daemonum nititur, verbum quidem ullum asseverari, sed de magia naturali, quae rebus naturalibus ad prosperam corporum valetudinem coelestium beneficia captat, effici mentionem."

53   Ficino, *Three Books on Life*, p. 398. Already two centuries before Pico and Ficino, Roger Bacon – known and cited by both Platonists – had written about the relationship between the magus and nature, and so discussed a discipline corresponding to natural magic. Cf. Zambelli, *Magia bianca, magia nera*, p. 37. For the medieval precursors of the defenders of natural magic, see also the first section, "Antefatti medievali", of Zambelli's second chapter.

Several remarks with regard to Ficino's defensive strategies in his *Apologia* will not be out of place, as they will recur in other authors. First, Ficino dissociates himself from his work by emphasizing that it is a commentary on Plotinus (*Plotinum ipsum interpretante*). In other words, it is not presented as his own doctrine. In the introduction of Bruno's *Spaccio* (the Italian dialogue in which magic is discussed elaborately) we find a similar dissociating stratagem, when the author insists that the persons in his dialogue voice their own opinions and not his.[54] Despite this shared dissociative tendency, the difference is considerable. The ideas uttered by the persons in Bruno's dialogue have ultimately sprung from the author's mind, whereas Ficino's exposition is necessarily linked to the treatise he is commenting upon. Secondly, Ficino relates "magic" to the Magi from the Scriptures, who bore gifts for the infant Christ, to justify his attempt to reconcile magic with Christian doctrine. Thirdly, the Florentine does not approve of images (*imagines*), which appear to be associated with demons. This is significant for Bruno too, whose *ars memoriae* concerns precisely images, an issue to be discussed later.

The writings of Ficino and Pico were published in a short span of time. Their definition of natural magic as opposed to demonic magic would continue to govern views on magic for at least the following hundred years. As Zambelli demonstrates, even the last version of Della Porta's magical encyclopaedia *Magia naturalis* (1589), published exactly one hundred years after Ficino's *Apologia*, remained loyal to the definition of the Florentines.[55]

> Bifariam μαγείαν ipsam dividunt, infamem alteram, ac immundorum spirituum commerciis inauspicatam, carminibus, et nefariae curiositatis arte concinnatam, […] Naturalem alteram sapientissimus quisque festo plausu excipit, colit, et veneratur, ut nil altius, nilve bonarum literarum candidatis plausibilius.[56]

Della Porta's presentation of the two kinds of magic repeats the distinction of Pico and Ficino. The first kind is said to be "evil and sinister through the

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54   Bruno, *Lo Spaccio*, p. 15: "Considere appresso che questi son dialogi, dove sono interlocutori gli quali fanno la lor voce, e da quali son raportati gli discorsi de molti e molti altri, che parimente abondano nel proprio senso, raggionando con quell fervor e zelo che massime può essere et è appropriato a essi."

55   Zambelli, *Magia bianca, magia nera*, pp. 42–43.

56   G.B. Della Porta, *Magiae Naturalis Libri XX*, Neapoli, Apud Horatium Salvianum, 1589, Lib. I, cap. 2, p. 2. The ideas of the Florentines, however, reached Della Porta through the works of Agrippa. See Zambelli, *Magia bianca, magia nera*, p. 42.

intercourse with unclean spirits, and established with chants and an art of nefarious curiosity." The other kind is called "natural, which every wise man receives with great approval, cultivates and venerates, as if there were nothing higher, nothing more praiseworthy for men of letters."

Thus, Ficino's and Pico's defence of natural magic was adopted by later writers to distinguish their interest in magic from the condemned interest in demonic magic. The fierce rejection of demonic magic implies that writings on this type of magic were hardly ever published, but predominantly circulated in manuscript. The following examples illustrate this fact.

Johannes Trithemius, abbot of the monastery of Sponheim, opted not to publish works that might raise suspicions of demonic magic.[57] Nonetheless, these texts were disseminated in manuscript. John Dee, for example, would later make use of Trithemius's *Steganographia* (published after its author's death), which in 1563 Dee copied personally in Antwerp, for his evocations of spirits.[58] The *Steganographia* discusses cryptography, but its third book seems to contain conjuring formulae.[59] It is certainly not an unwise decision by Trithemius not to publish his treatise. Even unpublished, it caused him problems, as is clear from his misfortunes with Charles De Bovelles.

In the year 1503 or 1504 the French philosopher and theologian De Bovelles visited Sponheim. When Trithemius became its abbot at the age of twenty-three, Sponheim was one of the poorest monasteries in the Palatinate. Its buildings were in a lamentable condition. But the young abbot had succeeded in reconstructing the monastery and enlarging its library in an admirable way. He put his monks to work, ordering them to copy and bind books, while he

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57   On Trithemius, see K. Arnold, *Johannes Trithemius (1462–1516)* (Würzburg: Kommissionsverlag Ferdinand Schöningh, 1971); and N.L. Brann, *The Abbot Trithemius (1462–1516): The Renaissance of Monastic Humanism* (Leiden: Brill, 1981). Trithemius and Reuchlin, together with other humanists, such as Conrad Celtis, Rudolf Agricola (before his premature death in 1486), and Johannes Vigilius, formed themselves into a kind of academy modelled on the Florentine Platonist circle of Ficino and Pico, the so-called *sodalitas literaria Rhenana*. See Brann, *The Abbot Trithemius*, p. 15.

58   D.E. Harkness, *John Dee's Conversations with Angels: Kabbalah, Alchemy, and the End of Nature* (Cambridge: Cambridge University Press, 1999), p. 47. On Dee's stay in Antwerp and the printing of his *Monas Hieroglyphica*, see my contribution: M. Mertens, "Willem Silvius: 'Typographical Parent' of John Dee's *Monas Hieroglyphica*," *Ambix* 64/2 (2017), 175–89.

59   Although J. Reeds has shown that the third book can also be read as dealing with cryptography (J. Reeds, "Solved: The Ciphers in Book III of Trithemius's *Steganographia*," *Cryptologia* 22/4 (1998), 291–317), it was interpreted as a book for conjuring spirits by authors like Dee and Bruno.

bought new exemplars and exchanged others with his humanist friends. The quantity of books increased amazingly. By 1502 the inventory counted 1646 titles instead of the 48 volumes owned in 1483, the year of his appointment.[60] Thus, Sponheim and its library had become a place of pilgrimage for humanists like De Bovelles. In a letter to one of his correspondents the abbot asserts that, for its great and rare philosophical belongings, his library could even compete with the famous library of Saint Victor near Paris.[61]

Yet De Bovelles's visit to the monastery was not an entirely positive experience. Later, in a letter to Germanus de Ganay, he would accuse his host of demonic conjuration. During his stay at Sponheim, for about two hours De Bovelles had leafed through the manuscript of the *Steganographia* at the author's request. In his letter, De Bovelles relates his reaction as follows: "I instantly cast it away out of my sight, because such wonders and unintelligible and unaccustomed names of spirits (should I not rather say demons?) began to terrify me."[62] Trithemius's full apology is lost. However, in the dedicatory preface of his *Polygraphia* of 1508, the abbot evokes the incident, lashing out at De Bovelles for ruining his good reputation. The abbot learned his lesson from this event and decided to leave some of his writings unpublished.

> Enim vero quantum ad me attinet, mallem aemulos meos placare silentio, quam litteris irritare, vel scripturis ad insaniam provocare. Satius enim iudicavi, omnia mirabiliter inventa perpetuo damnare silentio, quam magicae vel necromanticae perniciosae superstitionis notam, falsa etiam hominum aestimatione incurrere. Lateat ergo Steganographia in

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60 See Arnold's fifth chapter, "Trithemius als Büchersammler und die Bibliothek von Sponheim", *Johannes Trithemius*, pp. 56–73.

61 As stated proudly by Trithemius himself in a letter of 1499 to Cornelius Aurelius: "Magna et rara videbis philosophiae pignora, ita ut cum bibliotheca sancti Victoris apud Parisios, quam carmine celebrasti magnifico, certare non pudeat." The letter of Trithemius to Aurelius, (hs. Vulc. 98 G, University Library of Leiden) is reproduced in an article of P.C. Molhuysen, "Cornelius Aurelius," *Nederlandsch Archief voor Kerkgeschiedenis – Nieuwe Serie* 2 (1903), 1–35. For the passage quoted, see p. 30.

62 De Bovelles to Ganay, S. Quentin, 8 March, 1509 (?). See C. de Bovelles, *Epistolae*, in *Liber de intellectu* [...], Paris, in aedibus Francisci de Hallewin, 1510; facsimile edition (Stuttgart/ Bad Canstatt: Friedrich Frommann Verlag, 1970), sig. 172r; quoted by Brann, *The Abbot Trithemius*, p. 29. The date of De Bovelles's letter, 1509, leads to an anachronism with respect to Trithemius's answer in the preface of his *Polygraphia* from 1508. On this episode, see Arnold, *Johannes Trithemius*, pp. 183–85. The letter has alternatively been dated to 1506 (see I.P. Couliano, *Eros and Magic in the Renaissance* (Chicago: The University of Chicago Press, 1987), p. 169).

tenebris, nec fiat Bovillanae societati mendaci communis, quae de rebus iudicare consuevit incognitis, et depravare famam boni viri sola libidine pravitatis.[63]

Trithemius had judged it preferable to condemn to perpetual silence all his marvellous discoveries, rather than to incur the stigma of pernicious magical or necromantic superstition through the false beliefs of others. Therefore, he declares that the *Steganographia*, which De Bovelles clearly associated with demonic magic, will remain hidden in the shadows and that it will not be made accessible to bovine society (*bovillina societas*) – an allusion to his misadventures with De Bovelles – which is accustomed to passing judgement on things of which it is ignorant and to ruining (*depravare*) the reputation of a good man out of its own desire for depravity.

However, already before the incident with De Bovelles, Trithemius was cautious as to how and to whom he communicated his knowledge. In a letter of 1499 to the Dutch canon regular Cornelius Aurelius, who desired to be introduced to the abbot's secrets, he had replied that none of these secrets could be revealed in letters or by scribes, as these matters are not of the kind that can be taught in any way other than *viva voce*. Therefore, "it is necessary for you to be personally present here", by which he meant in the Sponheim cloister.[64] De Bovelles was indeed present in the abbey. But perhaps the abbot's appraisal of the philosopher's interests was mistaken, and he should not have allowed De Bovelles to look through his *Steganographia*. What is certain is that Trithemius would not repeat his mistake. Moreover, he warned his friends as to the possible dangers of spreading magical knowledge.

This advice was adopted by his disciple Agrippa, whose *De occulta philosophia* circulated for more than two decades in manuscript before it was printed in 1533.[65] Although this work does not explicitly discuss demonic magic, its third book contains many ingredients which could be used for the conjuring of spirits, and therefore could be brought under suspicion of containing demonic

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63   Ioannis Trithemii, *Polygraphiae Libri VI*, Coloniae, apud Ioannem Birckmannum, 1571, p. 26.

64   Molhuysen, "Cornelius Aurelius," pp. 29–30: "Postremo de arcanis quorum te fieri participem flagitas, nihil per litteras aut tabelliones fieri posse scias. Non enim talia sint, quae sine vivae vocis magisterio cuiquam tradi possint, […]. Quod si vel videre vel legere placet, praesens sis personaliter oportet, eritque mihi tuus adventus non minus iucundus quam tibi utilis."

65   A partial edition was already printed in 1531 in Antwerp by Johannes Graphaeus. See Perrone Compagni's introduction in Agrippa, *De occulta philosophia*, p. 51.

magic. From his letters it is clear that Agrippa deliberately opted not to publish his text yet, but rather circulated it among a number of friends.[66] Thus, as in Trithemius's case, a treatise containing suspicious elements was circulated in manuscript.

In any event, Agrippa's work on magic *was* published. But the numerous writing strategies employed testify to the risks of this publishing enterprise. The work is introduced by three letters. In the first Agrippa addresses the reader, admitting that the title of his work might be seductive for its rarity, but also offensive. Just like Ficino he refers to the Magi who were the first to worship Christ.[67] In accordance with Ficino's emphasis that his work is a commentary on Plotinus, Agrippa insists that he narrates rather than approves (*multa me narrando potius quam affirmando scripsisse*), and that he owes many arguments to the Platonists.[68] Agrippa proceeds by stating that, if anything is found to be wrong, or formulated too freely, the reader should forgive these errors, because they are due to his youth – for he was a teenager at the moment of the book's composition.

> Dum eram parvulus, loquebar ut parvulus, sapiebam ut parvulus; factus autem vir, evacuavi quae erant parvuli ac in libro nostro *De vanitate ac incertitudine scientiarum* hunc librum magna ex parte retractavi.[69]

Agrippa makes an appeal to his youth and lack of wisdom in order to rectify possible scandalous assertions in his work. He also refers to one of his former books, *De incertitudine et vanitate scientiarum et artium*, which he did write at a mature age and in which demonic magic is fiercely condemned.[70]

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66 Agrippa, *De occulta philosophia*, pp. 3–4, where Perrone Compagni quotes these letters, and adduces the fact that his *De occulta philosophia* circulated in manuscript on the advice of his master Trithemius to exercise caution in divulging his works.

67 Agrippa, *De occulta philosophia*, p. 65: "[…] iam vero et Magos ex mirabilibus mundi arcanis ipsius mundi autorem Christum cognovisse natum omniumque primos venisse ad illum adorandum […]".

68 Agrippa, *De occulta philosophia*, p. 66.

69 Agrippa, *De occulta philosophia*, p. 66.

70 See H.C. Agrippa, *De incertitudine et vanitate scientiarum atque artium*, apud Florentissimam Antverpiam, 1534 (first published in 1531), p. 60: "Verum de magicis scripsi ego iuvenis adhuc, libros tres amplofatis volumine, quos de occulta Philosophia nuncupavi, in quibus quidquid tunc per curiosam adolescentiam erratum est, nunc cautior hac palinodia recantatum volo. […] Quicunque enim non in veritate, nec in virtute Dei, sed in elusione daemonum, secundum operationem malorum spirituum, divinare et prophetare praesumunt et per vanitates magicas, exorcismos, incantationes, amatoria,

Thus, Agrippa refers to his former *De incertitudine* in his *Epistola ad lectorem* to guarantee against possible errors in the present work. This reference reflects the difficulties he encountered in trying to get his work published. When the final version of *De occulta philosophia* was ready, and the Cologne printer Johannes Soter had already begun typesetting, the book was denounced by the Dominican inquisitor Conrad Köllin of Ulm as "*doctrina haereticus et lectione nefarius*". The city's senate ordered the printing to be suspended, whereupon Agrippa sent the senate an apologetic letter to emphasize the importance of his work. Eventually an intervention by Archbishop Hermann von Wied, under whose protection Agrippa had come to Cologne, was necessary. *De occulta philosophia* appeared in July 1533 without an indication of the printer's name or the place of publication, accompanied by an appendix, containing several chapters of *De incertitudine* in which demonic magic is denounced.[71]

The second preliminary letter of *De occulta philosophia* is addressed to Trithemius. Agrippa discusses their conversations on chemical, magical, and kabbalistic sciences, raising the question of why magic was praised by the ancient philosophers and subsequently, with the rise of the Catholic Church,

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agogima et caetera opera daemoniaca et idololatriae fraudes exercentes, praestigia et phantasmata ostentantes, mox cessantia miracula sese operari iactant, omnes hi cum Iamne et Mambre et Simone mago aeternis ignibus cruciandi destinabuntur." Studies on the contradictions in Agrippa's works include P. Zambelli, "A proposito del *De vanitate Scientiarum et Artium* di Cornelio Agrippa," *Rivista di Storia della Filosofia* 15 (1960), 167–81; M.H. Keefer, "Agrippa's Dilemma: Hermetic Rebirth and the Ambivalences of *De vanitate* and *De occulta philosophia*," *Renaissance Quarterly* 41 (1988), 614–53; M. Van der Poel, *Cornelius Agrippa, the Humanist Theologian and his Declamations* (Leiden: Brill, 1997); V. Perrone Compagni, "Astrologia e filosofia occulta in Agrippa," *Rinascimento* 41 (2001), 95–111. See also Perrone Compagni's introduction in her critical edition of Agrippa's *De occulta philosophia*.

71   In the sequel of this first *Epistola ad lectorem*, Agrippa offers another example of dissimulative writing, pretending that his manuscripts were intercepted beyond his will. He states that he composed his books in his youth with the intention of publishing them later, in a corrected and completed form. For this reason he offered them to Trithemius to be corrected. But the work was intercepted before he could finish it, and was carried about, imperfect and unpolished, in corrupted exemplars, and flew abroad in Italy, France, and Germany through many hands: "Fateor, iuvenis admodum hos libros scribere aggressus sum, spe tamen illos aliquando correctiores locupletioresque emissurus atque ea causa Ioanni Tritemio abbati Peapolitano quondam Spanhemensi, viro arcanum rerum admodum industrio, primum illos obtuli corrigendos. Contigit autem postea ut interceptum opus, priusquam illi summam manum imposuissem, corruptis exemplaribus truncum et impolitum circumferruntur atque in Italia, in Gallia, in Germania per multorum manus volitaret; […]" (Agrippa, *De occulta philosophia*, p. 66).

considered suspect by the holy Fathers. In this letter the young Agrippa proposes his project "to recover that ancient magic and teaching of all wise men from the errors of impiety, to purify and adorn it with its proper lustre, and to vindicate it against the insults of its accusers."[72]

The third letter contains Trithemius's answer, dated 8 April 1510. The abbot approves of Agrippa's work and encourages him to continue towards even greater heights (*ut studio pergas in altiora quo coepisti*). However, one rule must be observed: "that you communicate common secrets to common friends, but higher and more hidden ones to higher, and intimate friends only. Give hay to an ox, sugar to a parrot only; understand my meaning, lest you be trampled under the oxen's hooves, as happens to many."[73] Once again, Trithemius alludes to his misadventures with De Bovelles, punning on *bos* (ox).

At the beginning of the third book of *De occulta philosophia*, Agrippa announces that he will proceed towards greater heights (*nunc ad altiora nos convertere*), by which he seems to mean the higher levels towards which Trithemius had encouraged him.[74] This third book deals with ceremonial magic and contains the most offensive matter, on the basis of which it could be associated with demonic magic. It is not surprising, then, that in the second chapter ("de silentio et occultatione eorum quae secreta in religione sunt") Agrippa underlines the necessity of silence with regard to the secrets of the science, and recalls the famous verse from the Scriptures (Matt. 7:6) that "holy things should not be given to dogs, nor should pearls be offered to swine."[75]

To recapitulate: the frontier between natural and demonic magic was demarcated by Pico and Ficino in the 1480s and lasted for at least a century. As writings containing demonic magic were considered wholly forbidden, they were seldom published. Trithemius's *Steganographia* circulated in manuscript.

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72   Agrippa, *De occulta philosophia*, p. 70: "Hinc concitus est in me spiritus meus atque propter ipsam cum admirationem tum indignationem volui et ego philosophari, non illaudabile opus me facturum existimans (qui ab ineunte aetate semper circa mirabilium effectuum et plenas mysteriorum operationes curiosus intrepidusque extiti explorator) si magiam ipsam vetustam sapientumque omnium disciplinam ab impietatis erroribus redimitam purgatamque et suis rationibus adornatam restituerem et ab iniuria calumniantium vindicarem."

73   Agrippa, *De occulta philosophia*, p. 72: "Unum hoc tamen te monemus custodire praeceptum, ut vulgaria vulgaribus, altiora vero et arcana altioribus atque secretis tantum cummunices amicis: da foenum bovi, saccarum psitaco tantum – intellige mentem, ne boum calcibus (ut plerisque contingit) subiiciaris."

74   Agrippa, *De occulta philosophia*, p. 402.

75   Agrippa, *De occulta philosophia*, p. 406: "praecipiens insuper non dandum sanctum canibus, nec margaritas exponendas porcis."

For twenty years Agrippa's *De occulta philosophia* "flew through many men's hands". The reader might wonder about Agrippa's decision to publish his *De occulta philosophia* after all. And was Trithemius's *Steganographia* not printed, albeit posthumously?[76] I must agree. As I indicated at the outset, the effort to turn this rule of thumb into an absolute rule would be pointless. On the other hand, the correlatives of natural/demonic and publication/manuscript are useful for the historian of Renaissance magic, for authors sometimes preferred to circulate their findings in manuscript to avoid persecution. And this counts all the more for writings which contained elements of demonic magic.

Apart from this distinction between manuscripts and publications, some other observations have been made with regard to writing strategies in the field of magic. Firstly, authors writing on magic dissociated themselves from the topics presented in their treatises. In his *Apologia* Ficino minimizes his own share in the magical doctrines presented by asserting that he is commenting upon a work by Plotinus. In a similar way, Agrippa states that he is narrating, not affirming, and that he owes most to the doctrines of the Platonists. These strategies conform to Bruno's statement at the beginning of *Spaccio*, where he insists that the reader not identify the opinions of his characters with the position of the author. Given Bruno's art of memory, it is noteworthy that Ficino associates images (*imagines*) with demonic magic. Secondly, the bad reputation of magic is sometimes mitigated by evoking the Magi and their worship of Christ. Thirdly, after serious opposition Agrippa's *De occulta philosophia* was finally published without indication of the printer's name or the place of publication, and it was accompanied by several chapters of his *De incertitudine* that condemned demonic magic. These examples illustrate how authors safeguarded their magical interests.

The authors cited above were well known to Bruno when he decided to discuss magic. This leads to the question of which strategies he took over from his predecessors. Is the corpus of Bruno's manuscripts on magic unpublished, so as to avoid persecution? Does he respect initiatory silence as prescribed by Trithemius? Does Bruno refer to the Magi to justify his interest in magic? Does he contradict his own reasonings on magic by adding condemnatory passages, as does Agrippa?

Before answering these questions, however, it must be pointed out that the intellectual climate in which Bruno wrote (the second half of the 16th century) was even more suffocating than the one faced by his predecessors,

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76   The treatise would, in fact, be published, long after Trithemius's death, in Frankfurt in 1606, and put on the *Index librorum prohibitorum* in 1609.

for the organization of censorship was prompted by the activity of Luther. Immediately after the beginning of the Reformation, Catholic states sought to stop the spread of Protestantism, and one way of reaching this objective was press censorship. The papal brief *Exsurge Domine* of 15 June 1520 condemned Luther's writings. In May 1521 Emperor Charles V included a "Law of Printing" which prohibited the printing, sale, possession, reading, or copying of Luther's books anywhere in his empire. This example was followed by other Catholic governments in the 1520s and 1530s.[77] The Protestant side reacted in exactly the same way, suppressing books by Catholics and representatives of rival Protestant movements. Sometimes committees were appointed to exercise prepublication censorship, and bookshops were inspected.

It still took some decades before press censorship was truly coordinated. As observed by Grendler, this well-organized and effective censorship contained three elements: (1) a catalogue of offending books, authors, and ideas; (2) prepublication censorship in the writer's own state; and (3) control of the international book trade. These measures were in use by both Catholic and Protestant authorities by the middle of the 16th century.[78]

It goes without saying that the organization of censorship implies a less tolerant climate, which is well illustrated by the burning of the Talmud and other Hebrew books throughout Italy in 1553. In these years the first Index of prohibited books was published. In early 1559 Pope Paul IV promulgated the *Index librorum prohibitorum*, the so-called Pauline Index, prescribing which books could not be printed or read by Catholics. In a first class (*series*), the *Opera omnia* of about 550 authors were prohibited, among whom were Aretino, Erasmus, Machiavelli, and Rabelais. A second class contains condemned works with the names of their authors. A third class lists titles of books, composed by unnamed heretics, containing pernicious doctrines.[79]

Within the third class, some general condamnations are incorporated, like "all books and writings on chiromancy, physiognomy, aeromancy, geomancy, hydromancy, oneiromancy, pyromancy or necromancy" and books containing "sorcery, divination, magical arts or astrological prognostications, with the exception of natural observations written down for the sake of the advancement

77   P.F. Grendler, "Printing and Censorship," in *The Cambridge History of Renaissance Philosophy* (1988; repr. Cambridge: Cambridge University Press, 2003), pp. 25–53, 43–44.

78   Grendler, "Printing and Censorship," p. 45.

79   See F.H. Reusch, *Der Index der verbotenen Bücher: Ein Beitrag zur Kirchen- und Literaturgeschichte*, 2 vols. (Bonn, 1883–85), 1:263–64.

of navigation, agriculture or medicine."[80] Thus, the Pauline Index makes no explicit distinction between natural magic and demonic magic. However, the fact that astrology is allowed when natural observations are concerned with the advancement of medicine, leaves the door open for treatises on natural magic (like Ficino's *De vita coelitus comparanda*), for natural magic often makes use of astrology with the aim of improving medicine.

The Pauline Index was so repressive that it was widely criticized even within Catholic circles. Paul IV's successor, Pius IV, quickly announced his intention to relax the Pauline policy, promulgating the Tridentine Index (authorized by the Council of Trent) in 1564, which was immediately accepted throughout the Catholic world. Although this new Index repeats 99 per cent of the condemnations found in the Pauline Index, it also contains crucial changes. Instead of banning the *Opera omnia* of Erasmus, for example, it forbids only six of his works, leaving the rest of his oeuvre to be expurgated (among which are his numerous editions of classical and patristic authors and the New Testament). This practice of expurgation seeks a new balance and allows some books containing errors, but not considered dangerous in their totality, to be retained after the errors are removed. Numerous surviving copies of 16th-century volumes with passages inked out by hand, or pages cut out or glued together, document the practice of expurgation.[81]

Although the Tridentine Index forbids all works on magic and other occult arts, this prohibition was largely ignored, and publications on magic continued to appear. Moreover, a recent and serious look into the archives of the Roman Congregations of the Holy Office and the Index shows that magic was

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80 See Reusch, *Der Index* (1:265), whose deserving and already ample work does not contain the original Latin texts which are directly translated into German: "Das […] Verbot der Bücher über Geomantie, Nekromantie u.dgl. wird hier [in the Pauline Index] ausgedehnt auf 'alle Bücher und Schriften über Chiromantie, Physionomie, Aeromantie, Geomantie, Hydromantie, Onomantie [Oneiromantie], Pyromantie oder Nekromantie' und auf Bücher 'welche Zaubereien, Wahrsagereien, magische Künste oder Astrologische Weissagungen über künftige zufällige Ereignisse enthalten (astrologiae judiciariae divinationes circa futuros contingentes eventus aut eventuum successus sive fortuitos casus), mit Ausnahme der natürlichen Beobachtungen, welche zur Förderung der Schiffart, des Ackerbaus oder der Heilkunst aufgeschrieben sind'." See also U. Baldini, "The Roman Inquisition's Condemnation of Astrology," in *Church, Censorship and Culture in Early Modern Italy*, ed. G. Fragnito (Cambridge: Cambridge University Press, 2001), pp. 79–110, p. 83, who underlines that already in Aquinas's *De judiciis astrorum* the practice of a natural astrology was justified when useful for medicine and agriculture. The legitimate use for navigation, on the other hand, is an addition.

81 Grendler, "Printing and Censorship," p. 47.

certainly not the primary concern for inquisitors dealing with learned authors (like Cardano, Bruno, or Della Porta) whose broader philosophical or theological heresies were considered much more important.[82] This does not mean, of course, that writings on magic did not cause problems. The prohibitions of the magical works of Cardano and Della Porta, for example, speak volumes.[83] Besides, someone's magical interests could be a motive for further investigation, bringing dangerous philosophical ideas to the surface. More than once the possession of magical works was among the charges.

In any event, although we have seen that Ficino and Agrippa clearly employed certain dissimulating strategies, by the time Bruno started writing on magic, intolerance had assumed such proportions and censorship was organized in such a way that for writers on delicate topics these techniques became even more essential than they were before the Reformation.[84]

2.2.2   *Bruno's Reading, Writing, and Reception in Relation to Censorship*
To a certain degree, the Index influenced Bruno's reading, his writing, and even the reception of his works. As a monk the Nolan personally experienced the consequenche of his curiosity about forbidden books. However, this was not to diminish his zeal for reading them. At first sight it may be surprising that the library of San Domenico Maggiore, the monastery where the young Bruno resided, possessed the works of forbidden authors like Erasmus.[85] But as the guardians of orthodoxy, the Dominicans were supposed to read and study

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82   U. Baldini and L. Spruit, *Catholic Church and Modern Science: Documents from the Archives of the Roman Congregations of the Holy Office and the Index* (Rome: Libreria Editrice Vaticana, 2009), 1:586–95.

83   For Cardano, see Baldini and Spruit, *Catholic Church and Modern Science*, vol. 1 (2), p. 1033; for Della Porta, p. 1507.

84   A recent study has shown that magic was not a primary issue for the Roman inquisitors. Baldini and Spruit, *Catholic Church and Modern Science*. As we have mentioned, a more threatening heresy than magic was, most evidently, Protestantism. Also, the discussions on astrology – which could be linked to the topic of predestination and free will – were more vivid, compared to the debate on magic. But notwithstanding this minor focus of the inquisitors, magic remained a dangerous topic to write about, magical books were prohibited, and people possessing books on magic were condemned.

85   At least, the *Epistolae familiares* of 1541 and the *De duplici copia verborum ac rerum* of 1542. See E. Canone and G. Landolfi Petrone, "Contributo per una ricostruzione dell'antica 'libraria' di S. Domenico Maggiore. Manoscritti, incunaboli, cinquecentine conservati nelle biblioteche napoletane," in *Giordano Bruno. Gli anni napoletani e la "peregrinatio" europea. Imagini, testi, documenti* (Cassino: Università degli Studi, 1992), pp. 191–246 (where the preserved inventories of the monastery's library are reproduced), p. 235. See also S. Ricci, *Giordano Bruno nell'Europa del Cinquecento* (Rome: Salerno Editrice, 2000), p. 82.

heretical doctrines in order to fight them. Despite this, the monastic rules did not permit such novices as Bruno to read these dangerous works.

From Bruno's trial we know that in the monastery he had secretly made use (*mi servivo occultamente*) of the works of John Chrysostom and Jerome, accompanied by the *scholia* of Erasmus, which had been "cancelled". When Bruno fled the convent in 1576, he hid these works in the latrines so that they would not be found. Later in Rome, when he learnt from a letter that they had been discovered, he decided to flee again.[86] Why were these works still considered suspect, if they had been expurgated (*se ben erano scancellati*)? Did Bruno succeed in tearing loose some glued pages? Obviously, we cannot know for sure. But a probable interpretation would be that the passages to be expurgated were indicated, without truly being expurgated, which could happen, for example, with exemplars used for study. Thus, Bruno decided to leave Rome when informed about the discovery of the books, which illustrates the impact these suspect works had on the young Bruno's life.

At the end of his career, Bruno was still a fierce reader of forbidden books. At the moment of his arrest he owned a "copia d'un libretto di congiurationi".[87] On his second denunciation on 25 May 1592, Mocenigo – a Venetian nobleman who had invited Bruno to teach him the art of memory but, dissatisfied with the results, denounced him to the Inquisition – relates that Bruno, whom he had locked up in his house, had decided to teach him what he had promised, something he had refused before. Bruno begged Mocenigo to free him, saying that if he did so, he would teach him all he knew and reveal to him alone the secrets of the works he had once written. Bruno would also leave all the belongings that he had with him in Mocenigo's house, if the Venetian wanted, because the Nolan had received everything from him. All Bruno needed was a copy of a little conjuring book that Mocenigo had found among his papers.[88] By Mocenigo's account, Bruno was clearly concerned with this book. Apparently Bruno's concern did not go unnoticed by the inquisitors, for the passage in

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86 Firpo, *Le Procès*, p. 127: "et fuggì da Roma, perché hebbi lettere da Napoli et fui avvisato che, doppo la partita mia da Napoli, erano stati trovati certi libri delle opere di san Chrisostomo et di san Hieronimo con li scholii di Erasmo scancellati, delli quali mi servivo occultamente, et li gettai nel necessario quando mi partì da Napoli, acciò non si trovassero, perché erano libri suspesi per rispetto de detti scholii; se ben erano scancellati."

87 Ricci, *Giordano Bruno*, p. 489. Firpo, *Le Procès*, pp. 11–13.

88 Firpo, *Le Procès*, pp. 11–13: "se lo mettevo in libertà, mi haverebbe insegnato quanto sapeva, et che a me solo sariano stati scoperti i secreti di quante opere havesse mai fatto; […]; et che se io volevo tutto quello ch'egli havea nella mia casa, me lo lasciava, perché in ogni modo havea havuto ogni cosa da me; e che gli bastava solo che io gli desse almeno copia d'un libretto di congiurationi, che io ho trovato tra certe sue carte scritte."

the original documents is underlined from "libretto di congiurationi" to "carte scritte".[89] It is not surprising that the interrogators returned to this matter, for a conjuring book belongs to the domain of illicit demonic magic. On 2 June 1592, Bruno had to hand over a list of all his works, both published and unpublished. When the interrogator asked whether all the printed books and manuscripts were composed by Bruno and contained his doctrine, he answered:

> Tutti sono stati composti da me; et quel che si contiene è mia dottrina, salvo l'ultimo in lista, che non è stampato, intitolato *De sigillis Hermetis, Ptolemei et aliorum*, non è mia dottrina; ma io l'ho fatto trascrivere da un altro libro scritto a mano che era appresso de un mio scolaro alemano de Norimberga, che si chiama Hieronimo Bislero, che stava pocco fa in Padoa et m'ha servito per scrittor forse dui mesi.[90]

Thus, Bruno declares immediately that the copy of *De sigillis Hermetis, Ptolemei et aliorum* – beyond doubt the "libretto di congiurationi" – does not contain *sua dottrina*.[91] Beyond doubt this was a wise deposition, for just possessing a book of this kind was already an offence. Della Porta, for example, was condemned for possessing the conjuring book *Clavicula Salomonis*, as is revealed in the minutes of the 20 April 1592 meeting of the Holy Office.[92] Campanella, too, was charged for the possession of a book on geomancy.[93] For our discourse it is noteworthy that the *libretto* in Bruno's possession was copied by his secretary Besler from another manuscript. Like the *Clavicula Salomonis*, this conjuring book circulated as a manuscript, and as such provides a good example of how demonic magic was "spread".[94] Bruno, thinking of his own interests, clearly stated that this transcription did not contain his doctrine.

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89   Firpo, *Le Procès*, p. 535.

90   Firpo, *Le Procès*, p. 63.

91   Firpo, *Le Procès* (p. 535) identifies the conjuring book from Mocenigo's denunciation with the *De sigillis Hermetis, Ptolemei et aliorum* from Bruno's declaration. This is indeed plausible, for why else would Bruno add a suspicious treatise to the list, if it was not already in the possession of the Inquisition?

92   L. Spruit, "Magic and the Roman Congregations of the Holy Office and the Index," in Meroi, *La magia nell'Europa moderna*, 1:363–80, p. 377.

93   See Baldini and Spruit, *Catholic Church and Modern Science*, vol. 1 (2), p. 975 (Campanella) and p. 1511 (Della Porta).

94   A remark by Girolamo Cardano in his *Contradictiones Medicorum* (1548), in which he criticizes Nifo's use of Avicenna's *De necromantia*, shows that the practice of ascribing necromantic treatises (in manuscript) to famous philosophers could actually be a good business. Cardano, *Opera* 6:659 a: "Sed qui pecuniae causa tales conscribunt libros

Besides these episodes, his acquaintance with suspect literature also appears from the authors echoed in his own writings, such as Lucian, Erasmus, Trithemius, Agrippa and Paracelsus.[95]

Like his reading, Bruno's writing becomes more comprehensible when seen in relation to the climate of intolerance. Even some of his academic writings caused misadventures. Illustrative of this is an episode from 1579, when he was residing in the Calvinist bastion of Geneva. He was matriculated into the academy as a professor of theology (which does not imply that he ever taught there).[96] In a pamphlet he accuses the professor of philosophy Antoine de la Faye of incompetence, by indicating twenty faults in one of his lectures. Both Bruno and Jean Bergeon, the printer, were arrested.[97] Some days later Bruno was released after being forced to destroy the pamphlet. In addition, Bergeon had to pay a fine of fifty florins.[98]

This episode did not prevent the philosopher from producing other offensive material. Some caused true scandals, such as his dialogues (1586) on Mordente, an Italian mathematician who invented a new compass. Bruno admired Mordente's invention, a possible forerunner of Galilei's proportional compass, and since Mordente did not know Latin, Bruno proposed to publish his invention in Latin on his behalf.[99] But his Latin version was not loyal to the original content. He patronizes the inventor for not having grasped the

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hominum ab ea arte non abhorrentium imponunt: Salomonis, Alberti Magni, Petri Aponensis, Avicennae, Artesii, et talium: quamvis nec Salomon, nec Albertus, quoque tale cogitaverint. Illi tamen eo nomine venduntur." Cardano refers to Nifo, *In librum Destructio Destructionum Averrois commentarii cum expositione A. Niphi*, Lyon, 1527, f. 103r: "Ut narrat Avicen[na] in sua negromantia invocasse demones et fecisse effectus mirabiles adeo quod homo rapitur de provincia in provinciam, de loco ad locum et multa alia mirabilia, quae non possunt nisi ex daemone fieri."

95 For Lucian and the Index, see Reusch, *Der Index*, 1:228; for Paracelsus, 1:497; for Agrippa, 1:121, 508; for Erasmus, 1:347–54 and passim; and for Trithemius, 2:182.

96 Ricci, *Giordano Bruno*, p. 132.

97 This episode is illustrated by a document in the state archives of Geneva. Cf. E. Canone, *Giordano Bruno 1548–1600, Mostra storico documentaria* (Rome: Biblioteca Casanatense, 2000), p. LXXXIII: "Philippe Jordan, dit Brunus, Italien, détenu pour avoir faict imprimer certaines responses et invectives contre Mr de la Faye, cottans 20 erreurs d'iceluy en une de ses leçons. A esté arresté qu'on l'ouye après disner en présence de savans et de Mr le secrétaire Chevalier."

98 Canone, *Giordano Bruno 1548–1600*.

99 We know this from Cotin, the librarian of the Abbey of St-Victor, who in his personal annotations reports his discussions with Bruno. See V. Spampanato, *Documenti della vita di Giordano Bruno* (Florence: Olschki, 1933), p. 43: "Jordanus m'a dit que Fabricius Mordentius Salernitanus est à Paris, aagé de 60 ans, dieu des géométriens, et surpassant

deeper meaning of his own invention. Unsurprisingly, Mordente was enraged, and bought up the entire run of the dialogues to destroy them.[100]

Although we can hardly blame De la Faye and Mordente for taking action against Bruno, these incidents testify to the intolerance at work in academic circles. Bruno's dedicatory epistle to Rudolph II in his *Articuli adversus mathematicos* bears witness to this intellectual experience in a Europe torn apart by religious strife, "counting more disparate sects than there had ever been or would be human generations on the earth".[101] Bruno describes his situation to the emperor in the following words:

> We see, and do not pretend (*dissimulamus*) not to see, nor do we fear to confess openly; and as there is a continual war between light and darkness, knowledge and ignorance, so we have experienced everywhere hatred, dispute, shouting and insults (not even without mortal danger) from the brutish and stupid mob, incited by the senate of graduates, fathers of ignorance, and we have triumphed by the hand of truth and with the guide of the divine light.[102]

But notwithstanding the atmosphere in academic circles in which Bruno's provocative writing was not without risk, and his claim to Rudolph that he does *not* dissimulate his own understanding, the philosopher sometimes proceeds more cautiously. Of course the practice of dedicating books to men in power, implying a certain degree of protection, was not unfamiliar to Bruno: almost all his publications subscribe to this rule. Indicating a false printer, or simply no printer at all, is equally frequent with him. On the front pages of all

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en cela tous ceux de devant luy et de maintenant, ne sçachant latin; Jordanus fera en latin imprimer ses inventions."

100   On this episode, see Yates, *Giordano Bruno*, pp. 323–27; and Ricci, *Giordano Bruno*, pp. 380–90. Only two copies have survived Mordente's rage. See G. Bruno, *Due dialoghi sconosciuti e due dialoghi noti. Idiota triumphans – De somni interpretatione; Mordentius – De Mordentii circino*, a cura di G. Aquilecchia (Rome, 1957).

101   Bruno, *Articuli adversus mathematicos*, BOL, vol. 1, part 3, p. 3: "Itaque de tam variis et diversimode sectis opinantibus longe pluribus quam sint atque fuerint in mundo generationes, [...]."

102   Bruno, *Articuli adversus mathematicos*, BOL, vol. 1, p. 7: "Videntes ergo videre non dissimulamus, et aperte profiteri non veremur; utque continuum bellum est inter lucem atque tenebras, doctrinam et ignorantiam, ita ubique odium, convitia, clamores et insultus (non sine etiam vitae periculo) a bruta stupidaque multitudine, concitante senatu graduatorum patrum ignorantiae, sumus experti, manuque veritatis diviniorique lumine duce superavimus."

of his Italian dialogues false places of publication are indicated (Paris, Venice). *Cabala* and *De gli eroici furori* display a false printer's name (Antonio Baio). We know that in fact these works were printed by John Charlewood, one of a group of London printers who profited from the Index, printing banned works destined for the Continental market.[103] The Pauline Index, however, had forbidden "all those writings – no matter the content or the language in which they are written, even if belief and religion are nowhere discussed – which in the last forty years are printed without indication of the author or the printer or the time and place of publication".[104] It is not surprising, then, that during Bruno's trial these false indications, acknowledged by one of the witnesses, a bookseller, are brought up: "[...] I have seen another book under the name of this Bruno entitled *De gli eroici furori*, printed, as I believe, In England, although it says Paris; and another entitled *Dell'infinito, universo e mondi*, printed, as I believe, in England, although it says Venice."[105] When the interrogators returned to this issue, Bruno justified himself by asserting that these false indications had been a commercial decision made by the printer.[106]

In *De imaginum compositione* Bruno refers to one of his own works, *L'Asino Cillenico*, a dialogue added as an appendix to his *Cabala.* "The image and figure of the animal is known", writes Bruno with regard to the ass, "about which many authors have written, and we have written about it in a particular style. As it displeased the majority and even the wise could not appreciate it for its sinister meaning, the work has been suppressed."[107] Despite Bruno's assertion

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103   Ricci, *Giordano Bruno*, p. 237; G. Aquilecchia, "Lo stampatore londinese di Giordano Bruno e altre note per l'edizione della *Cena*," in idem, *Schede Bruniane (1950–1991)* (Rome: Vecchiarelli Editore, 1993), pp. 157–207.

104   Reusch, *Der Index*, p. 265.

105   Firpo, *Le Procès*, p. 21: "Oltra il suddetto, ho visto un altro libro intitolato De gli eroici furori sotto il nome del detto Iordano, stampato, come io credo, in Inghilterra, si bene dice Parisi, et un altro intitolato Dell'infinito universo e mondi, stampato in Inghilterra, come io credo, se ben dice in Venetia." The witness is Giovan Battista Ciotti, who owned a bookshop in Venice.

106   Firpo, *Le Procès*, p. 63: "Interrogatus se li libri stampati sono in effetto stati stampati nelle città e luochi secondo l'impressione loro o pur altrove. Respondit: Tutti quelli che dicono nella impression loro che sono stampati in Venetia, sono stati stampati in Inghilterra; et fu il stampator che volse metterve che erano stampati in Venetia per venderli più facilmente et acciò havessero maggior esito, perché, quando s'havesse detto che fossero stampati in Inghilterra, più difficilmente se haveriano venduti in quelle parti; et quasi tutti li altri ancora sono stampati in Inghilterra, ancor che dicano Parisi o altrove."

107   G. Bruno, *De imaginum compositione*, BOMNE, 2:730: "*Asinus Cyllenicus.* [...] Animalis imago et figura nota est, de quo varii scripserunt et nos particulari stylo de illo scripsimus,

that his work on the ass has been suppressed (*quod opus est supressum*), this passage testifies to the author's awareness of the work's possible danger and therefore admits the idea that the work *should* be suppressed. In *Cabala* and the appended *L'Asino Cillenico* the theory of metempsychosis is expounded, and this would be one of the crucial points of heresy during his trial.[108] Thus, Bruno was fully aware of the danger implied in publishing certain ideas of his, and this leads to the assertion in one work, of the suppression of another work – a strategy somehow similar to the one encountered in Agrippa, who contradicted in one of his works (*De incertitudine*) the findings of another (*De occulta philosophia*).

On 8 February 1600, still before his execution, "the books and writings" of Bruno were put on the Index.[109] As a consequence, apart from his own reading and writing, the reception of his work also bore the marks of a suppressive climate. Elsewhere we have drawn attention to the reception of his Lullism, which neatly illustrates this issue.[110] At the beginning of the 17th century, Mario Massani, who compiled a collection of Lullian sources (Ambrosian MS A 229), was clearly using Bruno's works on the subject. However, Massani, who insisted that he rejected whatever had been rejected by the Church, declaring himself always prepared to obey,[111] never mentioned the philosopher by name. Certain passages of Bruno's Lullian works are reproduced verbatim in this compilation. Massani, however, removed both Bruno's name and his most provocative statements.[112]

Another example is offered by the *Physiologiae Stoicorum* (1604) of Justus Lipsius who, when discussing the Stoic view of the stars as living and intelligent beings, obscurely referred to Bruno as "someone in our times" (*quidam nostro aevo*) who audaciously (*audacter*) asserted the stars were celestial

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quod, quia vulgo displicuit et sapientibus propter sinistrum sensum non placuit, opus est suppressum."

108   In *Cabala* Bruno had equated the human soul with those of flies, mussels, and plants. G. Bruno, *Cabala*, BOeuC, 6:93–95: "Quella [l'anima] de l'uomo è medesima in essenza specifica e generica con quella de le mosche, ostreche marine e piante, e di qualsivoglia cosa che si trove animata o abbia anima." For the importance of the doctrine of metempsychosis during Bruno's trial, see Firpo, *Le Procès*, pp. CXL–CXLIII.

109   Reusch, *Der Index*, vol. 2, book 1, p. 66.

110   Mertens, "A Perspective."

111   MS Ambros. A 229, f. 156v: "Quae omnia ego Marius Massanius approbo quatenus S. Romanae Ecclesiae non contradicant, et ab eadem approbentur. Omnia enim quae universalis Mater Ecclesia damnat et reiicit, ego quoque damno et reiicio, qui obedire semper paratus sum."

112   See Mertens, "A Perspective," p. 524.

animals (*animalia caelestia*) and the world itself was animated (*ipsum mundum animatum*).[113] It is not surprising that when discussing the ideas of a suspicious author par excellence, whose works were immediately put on the Index, Bruno was referred to in an obscure way, or was simply not mentioned at all.

2.2.3 *Bruno's Conception of Magic*

This section explores Bruno's conception of magic by applying our "rule of thumb" to his work. I will therefore formulate an answer to the following three questions: (a) Does Bruno follow the then-current distinction between natural and demonic magic? If so, (b) were the manuscripts on magic meant to be published? And, (c) to what extent is the distinction between natural and demonic magic reflected in the distinction between manuscripts and printed books?[114]

With regard to the first question, a passage from *Sigillus sigillorum* is significant. Here we find Bruno's first elaborate view on good and bad magic. This "seal of seals" is added to the mnemonic treatise *Explicatio triginta sigillorum*, and is strongly inspired by Ficino's *Theologia Platonica*.[115] The second part of *Sigillus sigillorum* presents four guides to perfecting the soul and its internal acts: love, art, magic, and mathesis. The section on magic gives us a specific and original idea on magic, several years before the redaction of his truly magical works. From the following passage it appears that Bruno's conception of good and bad magic does not entirely conform to the current distinction between natural and demonic magic.

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113 J. Lipsius, *Physiologiae Soticorum libri tres, L. Annaeo Senecae aliisque scriptoribus illustrandis*, Antwerp, 1604, p. 109: "Posteriores Iudaei et rabini talia, aut deteriora. Quos secutus quidam nostro aevo 'animalia caelestia' audacter asseruit et ipsum 'mundum animatum'." The identification of this mysterious "quidam" with Bruno is argued at length by G. Paganini, "Les enjeux de la cosmobiologie à la fin de la Renaissance: Juste Lipse et Giordano Bruno," in *Justus Lipsius and Natural Philosophy*, eds. H. Hirai and J. Papy (Brussels, 2011), pp. 81–95.

114 We here focus on the magic present in the publications on the art of memory. As mentioned, *Lo Spaccio*, for example, also contains references to magic. Likewise, in other Italian dialogues, like *Candelaio* and *Cena*, and in a Latin didactic poem like *De monade* we find passages concerned with magic. However, in accordance with our central problem, we here focus on the mnemonic publications.

115 For a meticulous analysis of the presence of Ficino in *Sigillus sigillorum*, see R. Sturlese, "Le fonti del *Sigillus sigillorum* di Bruno, ossia: il confronto con Ficino a Oxford sull'anima umana," *Nouvelles de la République des Lettres* 13/2 (1994), 89–168.

Quid de magia, quae cum media mathesi fere in eadem ab extraemis phy-
sicis atque methaphysicis aequidistantia consistit? Haecque duplicis est
generis: altera, quae vel per credulitatem et fidei vim vel per alias non
laudabiles contractionis species sensum mortificat, quo propria ratio per
aliquod extrinsecum paenitus absorbeatur, ut natura melior in alicuius
deterioris imaginem transformetur – et haec apud reprobos magos usu-
venit, qui hominem vel aliud de animantium genere ad quoddam spi-
rituum influentialium simbolum promovent, quorum virtuti vel etiam
substantiae cum fuerint patratae uniones, mirabilia in corporibus, in af-
fectibus, in artibus et in mundi partibus atque regionibus alterando, com-
movendo, transformando, occultando, manifestando, ligando, solvendo,
educendo, inducendo vere vel apparenter operantur – ; altera vero est,
quae per regulatam fidem et alias laudandas contractionis species tan-
tum abest ut sensus perturbatione quandoque utatur, ut eumdem clau-
dicantem fulciat, errantem corrigat, imbecillem et obtusum roborat et
acuat.[116]

This passage contains the answer to our first question on the distinction be-
tween natural and demonic magic. First of all, Bruno specifies that the magic
concerned here stands between the physical and the metaphysical world,
just like mathesis. In other words, the magic discussed here seems to point to
mathematical magic, in accordance with Agrippa's division of magic. Whereas
in their apologies Ficino and Pico distinguished natural from demonic magic,
Agrippa more subtly divided the magical discipline in accordance with the
threefold world (natural, celestial, and divine), discussed in his three books
of *De occulta philosophia* (the first being on natural, the second on celestial or
mathematical, and the third on ceremonial magic).[117] However, when Bruno
indicates that he will discuss the kind of magic situated in between the natu-
ral and metaphysical worlds, he means magic belonging to the rational world,
rather than the celestial one. For, in opposition to Agrippa, Bruno's threefold

116   Bruno, *Sigillus sigillorum*, BOMNE, 2:262–64. Cf. Bruno, *De umbris idearum*, BOMNE, 1:123.
117   Agrippa justifies his division in the first chapter of book 1: "Quomodo a triplici mundo
       magi virtutes colligant in tribus his libris monstrabitur". See Agrippa, *De occulta philoso-
       phia*, p. 85: "Cum triplex sit mundus, elementalis, coelestis et intellectualis, et quisque
       inferior a superiori regatur ac suarum virium suscipiat influxum […], non irrationabile
       putant magi nos per eosdem gradus, per singulos mundos, ad eundum ipsum archetypum
       mundum, omnium opificem et primam causam, a qua sunt omnia et procedunt omnia,
       posse conscendere […]. Horum omnium ordinem et processum tribus his libris nunc
       tradere conabor, quorum primus contineat magiam naturalem, alter coelestem, tertius
       ceremonialem."

world comprehends successively the archetypal, natural, and rational (according to the scholastic distinction between *ante rem*, *in re*, and *post rem*).[118] This rational world is what Bruno names the world of the shadows. And although the shadows in the human mind are derived from the natural beings (*post rem*, and thus seem to come after the natural world), they constitute the intermediary world between the physical and metaphysical in the sense that it is through the shadows that man's ascendancy is realized (as explained in *De umbris idearum*). In view of this, his subsequent definition of good and bad magic in *Sigillus sigillorum* relates to this intermediary rational field. Similarly, later in his *De magia naturali*, the magic relating to the natural and divine worlds is called necessarily good, whereas mathematical magic can be either good or bad, according to the way it is employed by the magician.[119] Knowing that the magic concerned belongs to the intermediary world, let us proceed to Bruno's further specifications. He states that this magic is of a twofold kind. But instead of distinguishing types of magic on the basis of intercourse with demons, his criterion seems to focus on the kind of belief (*fides*) and the species of contraction (*contractionis species*) implied. The distinction he makes is between credulous belief connected to bad contractions and regulated belief linked to good contractions.[120]

It will be worth clarifying this remark. What Bruno exactly understands by *contractio* is clear from the first part of *Sigillus sigillorum*, where fifteen species of contractions are discussed, both good and bad.[121] These fifteen species can be described as different states of consciousness, modes of psychic concentration, or, in Bruno's own words: "From these you have a place to consider in how many ways you can contract the spirit in a sober, useless, or pernicious way, summon powers, stretch forth the mind to speculation, speculations to understanding, and understandings to memory; and form and conceive new

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118   Bruno, *De magia naturali*, BOM, p. 172: "Iuxta tres praedictos magiae gradus tres mundi intelliguntur: archetypus, physicus et rationalis."

119   Bruno, *De magia naturali*, BOM, pp. 166–68: "Haec praehabita distinctione generaliter magiam triplicem accipimus: divinam, physicam et mathematicam. Primi et secundi generis magia est necessario de genere bonorum et optimorum, tertii vero generis et bona est et mala, prout magi eadem bene et male utuntur."

120   In the fourth chapter, "*de duobus ceremonialis magiae adminiculis, religione et superstitione*", of his third book, Agrippa makes a somewhat similar distinction between religion and superstition. See Agrippa, *De occulta philosophia*, p. 409.

121   Bruno, *Sigillus sigillorum*, BOMNE, 2:226–52. An ample study on this issue is L. Catana, *The Concept of Contraction in Giordano Bruno's Philosophy* (Aldershot: Ashgate, 2005).

impressions by yourself."[122] The fact that "states of consciousness" are referred to as "contractions of the spirit" conforms to the way the cognitive process was understood, the physical aspect of which was thought of as a flux of spirits inside cognitive faculties like the intellect or memory.[123]

Some examples will be helpful in explaining these "contractions of the spirit". The first species of contraction, for example, pertains to the concentration achieved in solitude, which is proper to inventors of sciences and arts, or leaders and shepherds of the people. "Jesus of Nazareth", writes Bruno, "is said to have started to speak and operate wonders only after his conflict with the devil in the desert." "Raymond Lull," he continues, "at first a foolish and uncultivated man, became a profound thinker with many inventions after his seclusion."[124] Clearly this isolated consciousness is of a good kind. The fourteenth species, on the other hand, illustrates well a bad kind of contraction. It concerns the *ars notoria* – a medieval magical practice still current in the Renaissance – which sought to acquire higher knowledge by mediated or unmediated revelation, gained through the contemplation of figures in combination with fasting and prayers.[125] Bruno himself has observed that "often simple, credulous and superstitious minds are made wise by the *ars notoria*. In these minds, however, the wise spirit is not their own, but a governing spirit coupled to them."[126] The

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122   Bruno, *Sigillus sigillorum*, BOMNE, 2:252: "Ex his habes contemplandi locum, quot modis frugaliter, inutiliter et perniciose spiritum contrahere, vires accire, animum intendere ad speculandum, speculata intelligendum et intellecta retinendum novasque per temet formandum et concipiendum impressiones valeas, […]."

123   The importance of the *spiritus* in the cognitive process will be discussed in my final chapter. The fifteen species of contractions in *Sigillus sigillorum* are inspired by the thirteenth book of Ficino's *Theologia Platonica* (chapter 2), where seven such states of consciousness are discussed. See M. Ficino, *Platonic Theology* (Cambridge, Mass.: Harvard University Press, 2004), 4:150–68.

124   Bruno, *Sigillus sigillorum*, BOMNE, 2:226: "Iezus Nazarenus non prius caepisse mirabilia dicere et operari fertur quam post conflictum cum diabolo in deserto habitum. Raymundus Lullius apprime stultus et idiota ex heremo in pluribus inventionibus se profundum exhibuit."

125   On the *ars notoria* in the Middle Ages, see C. Fanger, *Conjuring Spirits: Texts and Traditions of Medieval Ritual Magic* (State College: The Pennsylvania State University Press, 1998); and J. Véronèse, *L'ars notoria au Moyen Age. Introduction et édition critique* (Florence: Sismel, 2007), where the list of manuscripts (pp. 297–98) shows the art still raised a lot of interest in the 16th century. See also Clucas, "John Dee's Angelic Conversations," pp. 231–74.

126   Bruno, *Sigillus sigillorum*, BOMNE, 2:248: "Hac ratione, […] repente per artem notoriam sapientes efficiuntur simplices, creduli et superstitiose contemplavi, sed in iis sapiens spiritus non est proprius, sed proprio imperiose copulatus."

state of consciousness in the *ars notoria* is caused by the manipulation of one's own spirit by a dominating foreign spirit.

Thus, when Bruno refers to "species of contractions" while defining good and bad magic, he means the states of consciousness treated in the first part of *Sigillus sigillorum*, which in accordance with their physical nature are indicated as "contractions of the spirit". Now that we have an idea of what Bruno means by contraction, let us return to the question of whether Bruno's vision on magic in *Sigillus sigillorum* reflects the traditional distinction between natural and demonic magic. We have established that Bruno's criterion reflects the kind of belief and the species of contraction.

The bad kind of magic mortifies the senses (*sensum mortificat*) with credulity, the power of faith, or bad contractions. In these cases, a person's inner reason (*propria ratio*) is absorbed by something external (*per aliquod extrinsecum paenitus absorbeatur*), which results in the transformation of a better nature into the image of something worse (*ut natura melior in alicuius deterioris imaginem transformetur*). In other words, credulity, the power of faith, or bad contractions can infect sense perception and harm human reason. Regrettably, Bruno does not specify how reason can absorb bad contractions. Given the fourteenth contraction about the *ars notoria*, "something external" may well denote a dominating foreign spirit. However, it may also be the "symbol" used by these bad magicians, presented in the subsequent passage, where Bruno states:

> They [the bad magicians] spur a man or another animate being on to a symbol of inflowing spirits, by whose power – or when the unifications are realized – they operate wonders in bodies, in affections, in arts and in parts and regions of the world by alternating, moving, transforming, occulting, manifesting, binding, releasing, leading away or inducing, truly or only in appearance.[127]

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127 Thomas Aquinas drew a clear distinction between "wonders" (*mirabilia*) and "miracles" (*miracula*) in *Summa Theologiae*, 60 vols. (London: Blackfriars eds., 1963), 15:15–17. As is pointed out by Clark, *Thinking with Demons*, pp. 153–54, this distinction was endlessly elaborated in the demonology of the 16th and 17th centuries. Demons and angels were thought capable of operating wonders, since something could only be properly called a miracle if it took place entirely outside the natural order, within which the powers of all angels and demons, being creatures, were necessarily circumscribed. Therefore, only God could operate true miracles, whereas demons and angels performed wonders.

Thus, the "bad" magician can work wonders – not by his own powers, but by the power of inflowing spirits.

On the other hand, magic based on regulated belief (*regulatam fidem*) and praiseworthy kinds of contractions (*laudandas contractionis species*) "is so far removed from perturbing the senses, that it supports the cripple, corrects the fool, strengthens the weak and sharpens the dull-witted." This description of good magic is analogous to a passage in Bruno's *Ars memoriae*, where he defines his art, residing under the shadows of ideas (i.e. belonging to the rational world), as rectifying the possible shortcomings of nature, "inciting nature when paralysed, correcting and guiding it when deviated and exorbitant, strengthening and supporting it when weak and exhausted, correcting it when erroneous, following its perfection and emulating its industry."[128] The effects of "good magic" are in fact defined in almost exactly the same terms as the aims of his art of memory. Hence the Nolan's good form of magic is good not because it is natural in the traditional non-demonic sense, but because it is based on correct belief and conducted with the right form of contraction. This psychological concern is a truly original addition, evidently derived from the field of mnemonics. My opinion will be reinforced in my last chapter, where it will be argued that the specific aim of the art of memory, for Bruno, is precisely to "regulate" belief and to control the traffic of spirits inside the cognitive faculties in order to avoid bad kinds of contractions.

Noteworthy in this passage is how two categories which are distinct from our perspective (magic and epistemology) are assimilated by Bruno. This is important because the recent editions of Bruno's mnemonic works stress the distinction between these and his magical texts, exactly by characterizing the latter in relation to operation and the former in relation to knowledge.[129] However, from the passage above it seems that the two fields overlap. The good kind of magic is far from misleading the senses, whereas the bad kind of magic, related to credulous belief, misleads the senses and degrades reason.

A bad contraction, linked to bad magic like the *ars notoria*, where a foreign spirit takes possession of the mind, is related to false knowledge. This connection between cognition and magic is further illustrated by Bruno's exposition of the thirteenth contraction, where he writes that he once cured a monk in Brescia, "who by this art [*ars notoria*] suddenly seemed to have become a

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128   Bruno, *Ars memoriae*, BOMNE, 1:122: "Tunc artem sub umbra idearum degere arbitramur, cum aut torpentem naturam antecedendo sollicitat, aut deviam exorbitantem dirigit et perducit, aut deficientem lassamque roborat atque fulcit, aut errantem corrigit, aut perfectam sequitur et industriam emulatur."

129   See chapter 1 above, note 71.

prophet, a great theologian and an expert in all languages." Thereupon the wise monk was thrown into prison – since the other monks linked such wisdom with a wicked principle – and given the right medicine so that the melancholic humours and the spirit left. As a result, he appeared to be the same donkey he had always been.[130]

Bruno later stated in his *De magia naturali* that "there are as many significations of magic as there are magi."[131] Thereupon a list of definitions of magic is given, including natural magic, mathematical magic, *ars notoria* and theurgic magic, necromancy, poisonous magic, pyromancy, hydromancy, and geomancy.[132] After a brief explanation of these types of magic, it is stated that "among philosophers, 'magician' means a wise man with the power to operate", a definition of magic which once again clearly unites operation (*cum virtute agendi*) and cognition (*sapiens*).[133]

Before proceeding to the second question raised at the beginning of this section, it is worth pausing at the definition of *ars notoria* given in *De magia naturali*, for the numerous negative references to this art betray Bruno's concern. This concern is justified because his *ars memoriae* bears a resemblance to the condemned art. First of all, the practitioners of both arts focus on images. Secondly, this fixation on images is supposed to lead the soul to higher cognitive abilities, such as polyglotism – one of the precise aims aspired to by his inventions for *memoria verborum*.[134] These resemblances can only have made Bruno's art suspect. Notwithstanding these correspondences I shall argue in my last chapter that Bruno's art aims to exclude the possible influence of dominating spirits on the cognitive process, and thus stands exactly in opposition to the *ars notoria*.

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130   Bruno, *Sigillus sigillorum*, BOMNE, 2:250: "Et monachus Brixiae, me praesente ipsumque curante, qui hac arte repente prophaeta, magnus theologus et linguarum omnium peritus videbatur effectus, ipse, cum monachorum tantam sapientiam ad malum principium referentum consilio fuisset in carcerem detrusus, virtute acetabuli cum polipodii contusi succo temperati, humoribus melancolicis atque spiritu evacuatis, talis, qualis semper extiterat, asinus apparuit."

131   Bruno, *De magia naturali*, BOM, p. 160: "totidem autem sunt significata magiae quot et magi."

132   Bruno, *De magia naturali*, BOM, pp. 160–66.

133   Bruno, *De magia naturali*, BOM, p. 166: "A philosophis ut sumitur inter philosophos, tunc magus significat hominem sapientem cum virtute agendi."

134   The similarities of *ars memoriae* and *ars notoria* are acknowledged by J. Boudet, in his introduction to Véronèse, *L'*ars notoria *au Moyen Age*, p. 10. In general, I believe suspicion of *ars memoriae* can be explained by its correspondences with the heavily condemned *ars notoria*.

The discussion of the *ars notoria* in *De magia naturali* comes after the description of mathematical magic, and it is very close to the exposition of the thirteenth contraction in *Sigillus sigillorum*. However, it more explicitly condemns the *ars* as the magic of the hopeless, who "contract the spirit in themselves" to become the vessels of evil demons (*vasa malorum daemonum*). This type of magic is opposed to the magic which makes use of prayers and ceremonies to control lower demons with the authority of higher demons, which is called theurgy.

> Si isti [mathematical magic] accessit cultus seu invocatio intelligentiarum et efficientum exteriorum seu superiorum, cum orationibus, consecrationibus, fumigiis, sacrificiis, certis habitibus et ceremoniis ad Deos, daemonas et heroäs; tunc vel fit ad finem contrahendi spriritus in se ipso, cuius ipse fiat vas et instrumentum, ut appareat sapiens rerum, quam tamen sapientiam facile pharmaco una cum spiritu possit evacuare – et haec est magia desperatorum, qui fiunt vasa malorum daemonum, quae per artem notoriam exaucupatur – aut est ad finem imperandi et praecipiendi daemonibus inferioribus cum authoritate superiorum daemonum principum, hos quidem colendo et alliciendo, illos vero coniurando et adiurando, constringendo; et haec magia est transnaturalis seu metaphysica, et proprio nomine appellatur theurgia.[135]

First, a qualification has to be made. While the good and bad magic in *Sigillus sigillorum* concerned the field in between the physical and the metaphysical world (i.e. the rational world of the shadows), the discussion here implies higher beings like gods, demons, and heroes, and therefore could be defined, in Agrippan terms, as ceremonial magic.[136] Although in this quotation from *De magia naturali* Bruno does not speak of a good and a bad type of magic, it is

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135   Bruno, *De magia naturali*, BOM, p. 162.

136   On the difference between gods, demons, and heroes, see the chapter "de ordine superiorum" in Iamblichus, *De mysteriis*. We use the following collection of Ficino's translations: Iamblichus, *De mysteriis Aegyptiorum, Chaldaeorum, Assyriorum*, Proclus, *In Platonicum Alcibiadem de Anima atque Daemone*; idem, *De sacrificio et Magia*; Porphyrius, *De divinis atque daemonibus*; Psellus, *De Daemonibus*; Mercurii Trismegisti *Pimander Eiusdem Asclepius*, Lugduni, Apud Ioan. Tornaesium, 1549, pp. 10–12: "Animae nostrae in divinorum generibus conputantur. Heroës sunt maiores hominibus, ergo multo grandiores sunt daemones. Primum divinorum est ipsum bonum, diique sequentes. Ultimum particulares animae rationales: horum mediae duo sunt scilicet heroës prope animas, & daemones prope deos, sicut inter ignem, ac terram est aër & aqua." See also his chapter "quo differant daemones, heroës, animae", p. 45 ss.

clear that the *ars notoria* is rejected as the latter kind. As with Bruno's experience of the Brescian monk, he says here that the apparent wisdom of the *ars* disappears, together with the spirit, after the right treatment. The rejected art is thus opposed to theurgy, in which rituals are used to "command and control lower demons with the authority of higher demonic spirits, by worshipping and attracting the latter while restricting the former with conjurations and oaths." Despite this, it is not explicitly said that theurgy is a good kind of magic.

It is remarkable, however, that theurgy is exactly the kind of magic portrayed in the first dialogue of *Cantus Circaeus*, Bruno's second book on the art of memory, in which the sorceress Circe tries to invoke the higher spirits to control the lower demons.[137] Might it be that Bruno, after his art of memory (as depicted in *De umbris idearum*) had been suspected of being an *ars notoria*, now dissociated himself from this kind of magic by linking it instead to its theurgical counterpart in *Cantus Circaeus*? We cannot know for sure. On the other hand, it is certain that Bruno was concerned with rejecting the *ars notoria* and showing several correspondences between theurgy and his art of memory.

Now that Bruno's unusual distinction between good magic and bad magic has been clarified, we can proceed to the second question raised at the beginning of this section: "Were his manuscripts on magic intended for publication?"[138] It is worthwhile to consider the reason for Bruno's choice not to publish his writings on magic. On this topic, the recent edition of his magical works states that, "Of course, it remains peculiar that he did not publish these writings, preferring to keep them locked away; neither is it easy to give an explanation for such a choice." However, an attempt is made. "In fact, unfinished works are concerned, which are still works-in-progress. [...] It is therefore very probable that Bruno himself intended to come back to these works, to deepen and perfect them, before allowing them to be printed."[139] This suggestion has

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137   Circe's magical ritual, however, is presented as a mnemonic exercise. *Cantus Circaeus* will be discussed at length in my fourth chapter.

138   By Bruno's magical writings I mean *De magia mathematica, De magia naturali, Theses de magia, De vinculis in genere*, and *De rerum principiis*. Although they are included in the new edition of Bruno's *Opere magiche, Medicina Lulliana* is a Lullian work, and *Lampas triginta statuarum* concerns the *ars inventiva*, not magic.

139   BOM, p. XII: "Certo, resta singolare che non abbia pubblicato questi scritti, preferendo tenerli chiusi nel casetto; né è facile dare una spiegazione di tale scelta. Ma una risposta, forse, si può dare proprio studiando gli apparati che accompagnano i testi pubblicati in questo volume: si tratta, in effetti, di lavori incompiuti, ancora in via di elaborazione. [...] È dunque assai probabile che Bruno stesso si riproponesse di tornare su questi lavori, di approfondirli, di perfezionarli prima di darli in stampa."

been fiercely rebuffed by Zambelli, who emphasized that these unpublished writings were not destined to be printed at all, considering the danger of such writings in the post-Tridentine era. Besides, as she observes, the fact that only two manuscripts are extant (both from the hand of Bruno's personal secretary Besler) point to a very limited circulation.[140]

In the face of this controversy, it is first necessary to make some further qualifications. I do not want to exclude the possibility that Bruno may have intended to publish *some* of his magical texts, since there are considerable differences between the magical writings themselves. In line with the central focus of this chapter, I might ask which treatises then are marked with writing strategies and which are not. In some of them the author is clearly freely at work without suspicion: no dissociation, no justifications, no dialogues, no mystifications, no contradictions, no vague suggestions, but instead specific indications of forbidden sources. In fact, some are surprisingly monotonous for a literary virtuoso like Bruno. *De magia mathematica*, for example, is in great part a compilation of the writings of Agrippa and Trithemius, whose *Steganographia* Bruno specifies as one of his sources.[141] In the same treatise Bruno even refers to his own experience with regard to the names of angels governing planets or constellations, who may be named after those bodies if their proper names are not

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140   Zambelli, *Magia bianca, magia nera*, p. 184. Due to the vehement tone of Zambelli's review of the *Opere magiche*, she suffered a form of censorship herself. It took her many years to publish her critical pages, containing many valid remarks, while the preprint of her review was already in circulation. She had delivered her criticism during a lecture in the congress *Autour de l'oeuvre de Frances Yates*, held at the Sorbonne in Paris (28–29 September 2001), organized by Antoine Faivre and Wouter Hanegraaff. Her contribution, however, was not published in the acts of the congress, nor was it published by the journals to which it was sent. Next, it was refused by the editors of the acts of the congress *Giordano Bruno nella cultura del suo tempo*, Naples, Città del Sole, 2004, who had stopped the printing of the preprint in July 2003. Finally, in 2004, it saw the light of day as a chapter in her book *Magia bianca, magia nera*, pp. 175–91. For a critical perspective on the totality of Zambelli's contributions, see J.-M. Mandosio, "Problèmes et controverses: à propos de quelques publications récentes sur la magie au Moyen Âge et à la Renaissance," *Aries. Journal for the Study of Western Esotericism* 7 (2007), 207–25. Mandosio regrets Zambelli's suggestion that magic must be studied in relation to religion rather than in relation to science (ibid., pp. 223–24). However, he agrees with her criticism of the new edition of Bruno's *Opere magiche* (ibid., pp. 218–19).

141   Bruno, *De magia mathematica*, BOM, p. 12: "Verum tamen quod arduum dicimus esse, est nominum advocandorum noticiam habere, pro diversis negotiis atque diversis effectibus diversorum; quae quidem nomina multae industriae viro et in hac arte felicissimo Trithemio Abbati fuere revelata, et nos redegimus in hoc compendium ea quae in sua *Steganographia* dispersa proposuit."

known. "And we ourselves have experienced the power of these names", writes Bruno, "which – when the other names are unknown – are as efficacious as the proper names."[142] This is a most striking confession, for it suggests that Bruno has performed rituals (something that often has been denied) in which he has experienced the power of these names. It goes without saying that this treatise lacks prudence and was not meant to be published.

A very different treatise is *Theses de magia*, in which the content of *De magia naturali* seems to be organized in preparation for a discussion. This is apparent from the comments accompanying the theses, which offer specifications to be used for further argumentation in a debate. Bruno even refers explicitly to the possible intervention of a listener.[143] In *De vinculis in genere*, on the other hand, a more prudent Bruno reappears when he discusses the substance of that which can be bound. After having indicated knowledge and desire as two necessary causes for binding, he refrains from discussing other types of bonds. "I will not speak of the other types of bonds", he writes, "because I would not want to say anything unsuitable to those of limited vision, who are numerous."[144] From this remark it seems Bruno had a wider audience (and maybe a publication) in mind, in contrast to his free attitude in *De magia mathematica*. Besides, the theory developed in *De vinculis in genere* introduces magical theory in a political context, and therefore may well have been of interest to men in power. Thus, although some of the magical treatises clearly belong together (like *De magia naturali* and *Theses de magia*), it is necessary to make further qualifications before deciding whether they were intended to be published or not.

Somewhat similar to his writings on magic, and illustrative for my purposes, is Bruno's *Artificium perorandi*, posthumously published by the young Johann Heinrich Alsted in 1612. This work contains Bruno's exposition of the pseudo-Aristotelian *Rhetorica ad Alexandrum*, which was believed to contain

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142 Bruno, *De magia mathematica*, BOM, p. 40: "Praeter data nomina, sunt quaedam quae ex rebus omnibus desumuntur, quibus proprium angelum ipsis praefectum nominamus, unde stellarum animas non temere appellabimus Sabatiel, Veneriel, Ioviel, et ita de caeteris. Similiter et signorum dominos Ariel, Tauriel, Geminiel et ita deinceps. Et nos experti sumus virtutem horum nominum, quae – aliis ignoratis nominibus – non minus quam propria pollent." This passage is inspired by Agrippa, *De occulta philosophia*, p. 488. The confession "nos experti sumus [...]", however, is not taken from Agrippa's text, but was added by Bruno.

143 After the thirtieth thesis is written (BOM, p. 364): "Illud si praestabit argumentator, nos libenter docebimur ab ipso."

144 Bruno, *De vinculis in genere*, BOM, p. 84: "De reliquis non loquor vinculorum modis, quia parum videntibus – qui sunt plures – inconvenientiora dicere viderer."

Aristotle's esoteric teachings on rhetoric.[145] In his magical writings the Nolan refers explicitly to this treatise, linking the art of incantation to rhetoric.[146]

From Alsted's dedicatory letter to the Polish count Abraham Wrsotzky, we understand that the treatise circulated in manuscript. It ended up in the posession of Alsted, who transcribed it and introduced only the most necessary corrections. Of the poor style, Alsted states: "There is no one who would seek out its oral characteristics or its elegance of style; neither of these, however, were of any importance to the author."[147] Thereupon Alsted asserts that if he had wanted to rewrite the treatise, it could have resulted in a clearer version, but he preferred to present the doctrine in the author's own words.[148] In other words, Alsted preserves the original style in this form, as it was dictated by Bruno himself. That this treatise lacks style, just like some of his unpolished magical writings, is suggestive. The *Artificium perorandi* was originally directed at a group of listeners in a lecture. At least, this is what we can establish from the title of the first part of the treatise: "Explicatio Rhetoricae Aristotelis ad Alexandrum privatim a Iordano Bruno Nolano Italo dictata Wittembergae anno 1587". Thus, Bruno's *Artificium perorandi* shows two major correspondences with most of his magical writings. It circulates in manuscript, and it lacks elegant style. The style is clearly not Bruno's concern because the treatise functions in a private context (*privatim*) of oral teaching (*dictata*). It is tempting to suppose that several of Bruno's magical manuscripts functioned in a similar context of private teaching. On the other hand, there is nothing to exclude the possibility that Bruno intended to publish some of his magical writings (like *De vinculis in genere*) later on.

Bruno's teaching activity is well known and has been discussed with regard to his art of memory (in Paris, Frankfurt, and Venice) and his geometry (in

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145   On the *Rhetorica ad Alexandrum*, see M. Patillon, "Aristote, Corax, Anaximène et les autres dans la Rhétorique à Alexandre," *Revue des études grecques* 110 (1997), 104–25; P. Chiron, Introduction to Pseudo-Aristote, *Rhétorique à Alexandre* (Paris: Les Belles Lettres, 2002), pp. VII–CLXVIII.

146   Bruno, *De magia naturali*, BOM, p. 268: "Ad incantationis ergo artem spectat et eam vinculi spiritus speciem, quae est per cantus seu carmina, quicquid tractant oratores faciens ad persuadendum et dissuadendum seu ad movendos affectus; [...] quam tamen Aristoteles in *Rhetorica ad Alexandrum* magna ex parte complexus est, [...]."

147   Bruno, *Artificium perorandi*, BOL, vol. 2, part 3, p. 328: "Pervenit iste liber ante biennium ad manus meas, quem curavi describi et ipse correxi, ita enim ut Bruni paucula immutaverim, quae mendosa esse suspicabar. Non est quod quis vel ordinem acroamaticum, vel styli elegantiam quaerat; neutrum enim horum propositum fuit authori."

148   Bruno, *Artificium perorandi*, ibid., p. 328: "Quod si novum ex hoc tractatum facere mihi libuisset, limatior equidem prodiisset. Sed malui authoris, viri non inerudii, doctrinam cum oratoriae facultatis studiosis communicare, quam novum ipse tractatum concinnare."

Padua).[149] On the possible use of his texts on magic in limited circles, on the other hand, we remain in the dark. However, it is not irrelevant to recall that Besler, whom Bruno named at his trial as his secretary, and who had copied the *De sigillis Hermetis, Ptolemaei et aliorum* (the *libretto di congiurationi*), was named procurator of the association of German students (*natio Germanica*) in Padua in July 1591 – the association, that is, where Bruno is known to have taught geometry. If the procurator was the copyist of his magical texts, it is not impossible for Bruno's magic to have been discussed among other members of the association too. But for now this remains a hypothesis requiring further investigation.[150]

After having made some qualifications with regard to the question of whether Bruno did or did not intend to publish his writings on magic, I can now proceed to the third question raised at the start of this section: Do the magical elements in Bruno's publications follow the prescriptions of natural magic, and do his manuscripts contain elements of demonic magic? I have already partly answered this question while stressing that the magical allusions in *Cantus Circaeus* are of a theurgical nature. However, for a more complete answer, let me first consider Bruno's manuscripts on magic. We have already seen that Bruno's *De magia mathematica*, for example, lists prescriptions for conjuring spirits, a practice linked to demonic magic. But *De magia naturali*, despite its title, is also clearly concerned with demons.[151] The comments in the new edition of Bruno's magical works, however, present his magical project as an endeavour to render all magical operations natural, which involves setting

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149 In the final section I will return to Bruno as a teacher in the art of memory. For his geometry, his teaching in Padua is important. Here the philosopher taught a circle of German students in 1591. His *Praelectiones geometricae* and *Ars deformationum* – preserved in a manuscript at the Universitätsbibliothek of Jena and discovered only in the 1960s by Giovanni Aquilecchia – are texts derived from these lectures on geometry, probably held in autumn 1591 (on the manuscript and the dating of Bruno's lessons, see Aquilecchia's introduction in G. Bruno, *Praelectiones Geometricae e Ars Deformationum* (Rome: Edizioni di Storia e Letteratura, 1964). At his trial reference was made to his lectures "a certi scholari tedeschi" (see Firpo, *Le Procès*, p. 27).

150 The same suggestion is made by Zambelli, *Magia bianca, magia nera*, pp. 189–90. E. Canone indicates some members of this *natio Germanica* in Padua, who knew Bruno from his former sojourns in Germany. Apart from Besler, whom Bruno had encountered in 1587 in Wittenberg, there was also Daniel Rindtfleisch, who met Bruno in Helmstedt, and Michael Forgáck (also known in Wittenberg). See Canone, *Giordano Bruno 1548–1600*, pp. 175–77.

151 Especially the chapters "de vinculis spirituum" and "de analogia spirituum" (BOM, pp. 222–50). The latter lists several ways in which spirits can be bound (such as conjuring them), after Bruno has stated that the complete doctrine of magic depends on these bonds.

aside the role of higher beings and concentrating on human activity. This thesis has been proposed by Bassi, who studied the Nolan's re-elaboration of certain passages – purifying them of demonic influence – throughout subsequent magical manuscripts, from *De magia mathematica* through *De magia naturali* to *Theses de magia*.[152] However, Bassi's characterization of this process as one of "naturalisation", implying an exclusion of demons, seems inappropriate. For, as Tirinnanzi has shown, the Platonic theory of transformation of human souls into demons in an ethical context remains a recurrent issue in the Nolan's writings.[153] "Man", in Tirinnanzi's words, "is properly a demon insofar as he has the capacity to become 'better' or 'worse'".[154] And this counts also for works written after *Theses de magia*, the treatise representing Bassi's final state, where all references to demons are suppressed.

Apart from Tirinnanzi's remark about the role of demons in an ethical context, there is also Bruno's continual occupation with communication with higher beings. In opposition to the continuity between the human race and

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152   The thesis that Bruno's magical project was one of *naturalizzazione della magia* runs through the comments of the *Opere magiche*, and is based on a previous study by one of the collaborators of this edition; S. Bassi, *L'arte di Giordano Bruno. Memoria, furore, magia* (Florence: Olschki, 2004), pp. 111–12: "Dal *De magia mathematica* al *De magia naturali* scompaiono i riferimenti all'attrazione degli angeli, i riferimenti astrologici, la lunga teoria degli oggetti e il lore uso per l'azione magica, l'uso di Tritemio per l'evocazione dei demoni 'presidenti'. Ma non solo: nel passaggio dal *De magia naturali* alle *Theses de magia* ogni riferimento ai demoni viene totalmente soppresso: in effetti questo è l'intervento più importante attuato dal filosofo nella redazione delle *Theses*, che sono una strutturazione in articoli del contenuto del *De magia naturali*." A similar reasoning is present in H. Gatti, "Scienza e magia nel pensiero di Giordano Bruno," in Meroi, *La mente di Giordano Bruno*, pp. 307–22, p. 307, who maintains that Bruno's central idea of infinity led to a deconstruction of magical themes. On the other hand, P. Rossi, *Il tempo dei maghi, Rinascimento e modernità* (Milan: Raffaele Cortina Editore, 2006), pp. 135–46, argues against this kind of *naturalizzazione* and *sdemonizzazione* of Bruno's magic.

153   N. Tirinnanzi, "Eroi e demoni tra Ficino e Bruno," in Meroi, *La magia nell'Europa moderna*, pp. 327–416, p. 411: "Dal *De magia matematica* al *De magia naturali*, dalla *Lampas triginta statuarum* al *De minimo*, la trasformazione delle anime umane in demoni continua a imporsi all'attenzione di Bruno, che in queste tesi di ascendenza platonica ravvisa l'unica possibilità di introdurre un principio di ordine etico nel ciclo di tempo." This question will be discussed further in my third chapter.

154   Tirinnanzi, "Eroi e demoni," p. 416. See, for example, Bruno, *De magia naturali* (BOM, p. 236): "Sic etiam, ut supra dictum est, alii spiritus aliis corporibus sunt inclusi, certo quodam ordine et iustitia gradus istos distribuente, et Origenes, Pythagoras et Platonici homines inter daemones annumerant, hosque non bonos, sed qui boni fieri possunt et peiores, unde ad meliorem vitam disponantur atque deteriorem."

demons in an ethical context, the communication between humans and demons is interrupted. In *De magia naturali*, Bruno underlines that occult intelligences do not understand all languages. Words of human devising are not picked up, as the language of nature is.[155] In the margin of the Norov manuscript it is written that human language – belonging to another temporal order – is too ephemeral, decays and renews as leaves on the trees and is therefore not suitable for the demon's understanding, because demons comprehend and learn by innate and internal species.[156] This concern for the communication between men and demons is expressed more than once in Bruno's mnemonic works as well, even in *De imaginum compositione*, written *after* his works on magic.[157]

The role of demons in an ethical context and Bruno's continual attention to the communication between man and demon make untenable the simple characterization of his magical project as one of rendering magical operations natural by means of a purification of demonic influence. Although it is true that Bruno wants to attune magic to his new conception of nature, this does not imply that his infinite universe lacks demons. Moreover, these demons are actually seen as the causes of natural phenomena, and therefore are considered to be physical causes. As a consequence, the magician has to take into account these "demonophysical" causes to operate on nature. In conclusion, it must be admitted that there are certain elements of demonic magic in his manuscripts. *De magia mathematica*, especially, contains the ingredients necessary to conjure spirits; *De magia naturali* is also concerned with demons and

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155   Bruno, *De magia naturali* (BOM, p. 192): "Ad haec illud quoque est observandum, quod intelligentiae occultae non ad omnia idiomata aures advertunt aut intelligentiam; voces enim, quae sunt ex institutione hominum, non ita attenduntur sicut voces naturales."

156   This note in the margin is included in the critical apparatus of BOM, p. 192: "quia daemones et intelligentiae separatae non per doctrinam et disciplinam, consuetudinem et experientiam discunt, sed per innatas et natura ipsa inditas species intelligunt et apprehendunt; ideo voces quae in nova institutione consistunt et pereunt, sicut folia in arboribus decidunt et renovantur, non sunt ad propositum."

157   In *De imaginum compositione*, the hieroglyphs are praised for their communicative function (BOMNE, 2:522): "Arcanas, Aegypte, notas divumque hominumque/Colloquio celebres quondam sacrata tulisti,/Queis duce natura sancte meliusque notari/Sensa valent vario quam sensu atque ordine nostrum./Hisce antiqua manent signis mysteria prompta/ Ut numeris natura suis sese explicat, hisce/Coram oculosque hominum venere oracula divum." In *Ars memoriae* allusion was made to the difficulty of this communication (BOMNE, 1:130): "Sed non omnia parem a superis imbuunt vitam, cum non pariter omnia ad illos convertantur, ut manifeste patet in nobis, qui per nos ipsos a illorum communicatione divellimur."

lists the ways in which they can be bound. Other treatises, like *Theses de magia* and *De vinculis in genere*, on the other hand, contain less provocative forms of magic.

As to the magical suggestions in Bruno's publications on the art of memory, it must be noticed that these are of a mathematical or, as already mentioned, a theurgical kind. In his *Ars memoriae* Bruno named seals, notes, and images which work beyond, above, or against nature, which is all but a confession of natural magic. Moreover, seals, notes, and images belong to the field of mathematical magic.[158] The list of astrological images in *Ars memoriae* also belongs within a context of mathematical magic.[159] They are partly taken from the second book of Agrippa's *De occulta philosophia*. It is no coincidence that Bruno refers to these images in his *De magia mathematica*, the most offensive of his magical writings in its allusions to conjuring spirits.[160] The first dialogue of his *Cantus Circaeus*, on the other hand, displays a conjuring ritual. Although the text is presented as a mnemonic exercise, it describes a ritual of theurgical magic as it should be performed according to the rules laid down by Agrippa in his third book (on ceremonial magic).[161] The higher planetary spirits are invoked to dominate the lower demons. *De imaginum compositione* – in fact, many necromantic manuscripts were circulating under a similar title – also lists the names of angels that are presented in *De magia mathematica*.[162] It is impossible to call these references to "natural" magic.

158　See, for example, chapter 19, "de notis Hebraeorum et Chaldaeorum et quibusdam aliis magorum notis", or chapter 35, "quomodo res quaeque artificiales, ut imagines et sigilla similiaque, virtutem aliquam sortiantur a corporibus coelestibus", of Agrippa's second book of *De occulta philosophia*.

159　See chapters 36 to 47 of the same book, listing the images of the planets and constellations.

160　Bruno, *De magia mathematica*, BOM, pp. 74–76: "In quibus viginti octo mansionibus latent multa secreta sapientiae antiquorum ad operanda mirabilia sub orbe Lunae, quorum singulis sua attribuebant simulachra et imagines et signacula et praesidentes. Quorum unus modus est apud Teuchrum Babilonicum, et nos attulimus eos fidelissime ad memoriae praxim applicando ex libro *De umbris idearum*." We emphasize that Sturlese's interpretation, arguing that these images only serve to translate a possible fifth syllable in a word, transposes them from their ceremonial context to a purely linguistic level.

161　See chapter 32, "quomodo alliciantur a nobis boni daemones et quomodo mali daemones a nobis convincantur", and chapter 33, "de vinculis spirituum eorumque adiurationibus et exterminiis", of Agrippa's third book.

162　Bruno, *De imaginum compositione* (BOMNE, 2:756), recalls the list of angelic names, found in *De magia mathematica* (BOM, pp. 38–40). Trithemius's necromantic bibliography (reproduced in Zambelli, *Magia bianca, magia nera*, pp. 118–29), for example, lists a "*volumen Hermetis de imaginum compositione*" (p. 124), a "*De compositione imaginum 7 planetarum*" ascribed to Balenus (p. 125), a "*Hermetis liber alius De compositione imaginum secundum*

This observation adds weight to the interpretation of Frances Yates, who has been censured for interpreting Bruno as a dangerous magician without conducting a deep study of his magical writings, basing her view almost exclusively on his mnemonic treatises and his Italian dialogues. It is true that this remark indicates a lacuna in her methodology. On the other hand, my observations show exactly why the mnemonic treatises led her to the image of a dangerous magician. As I have shown, the magical elements in *Ars memoriae, Cantus Circaeus*, and *De imaginum compositione* point indeed to a non-natural and ceremonial magic.

In formulating an answer to my third question – on the degree to which the distinction between manuscripts and publications reflects the distinction between natural and demonic magic – we come to surprising conclusions. First of all, his manuscripts do contain many elements of demonic magic that would be considered forbidden in the highest degree. On the other hand, the magical allusions in his mnemonic treatises are certainly not of a natural kind. They belong to mathematical or even theurgical magic.

2.2.4   *Out of the Impasse*

I have established the context of well-organized censorship in the later 16th century, in which dissimulative writing was anything but an exception. Bruno's reading, writing, and reception bear the marks of the *Index librorum prohibitorum*. Like many of his contemporaries, Bruno knew how to manoeuvre skilfully within his own society, although several episodes (in Geneva with Jean Bergeon, or in Paris with the mathematician Mordente, not to mention the Mocenigo episode) show that his ambition and temperament sometimes exceeded his prudence. Moreover, despite some necessary dissimulative practices, I characterized Bruno as an author who rather provokingly steps forward instead of hiding his dangerous ideas. Does this observation also relate to his magical ideas? Scholars of Renaissance magic have recently suggested that manuscripts often contain less cultivated forms of magic than the natural forms which are published. From the start of this chapter it has been stressed that this tendency cannot be generalized. It is certain, however, that it is a crucial decision for an author to publish or not, and that demonic magic is considered much more dangerous than natural magic. Following this logic, I have proposed Bruno's case as an occasion to verify to what extent the distinction between natural and demonic magic is reflected in the distinction between publications and manuscripts.

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24 horas diei et noctis" (p. 126), a "*liber Toczgraeci De compositione atque virtute imaginum*" (p. 126), etc.

From his first publications Bruno took an interest in magic. His Parisian mnemonic treatises are laced with magical allusions, even though the art is not explicitly linked to magic and is even explicitly distinguished from it. In *Sigillus sigillorum* his view becomes clearer, distinguishing good and bad magic in terms appropriate to the art of memory, as I have argued. Bad magic is based on credulity and bad contractions. Good magic, on the other hand, depends on good contractions and regulated belief, which Bruno believed the art of memory could bring about. Besides, like mnemonics, magic, too, is said to correct the shortcomings of nature.

Through *Spaccio*, Bruno's magical ideas are spread. It is worth noting that, despite minor dissimulating efforts, his magic is presented in a ravishing way. Likewise, the magical allusions in the mnemonic treatises are certainly not of a natural kind, but are rather derived from the fields of mathematical and theurgical magic. This explains why Yates came to the image of Bruno as an extreme magus via a reading of his works on the *ars memoriae*.

But this also throws a light on the initial contradiction in Bruno's *De umbris idearum* that left us an impasse. In his magical writings Bruno makes a clear distinction between mathematical and theurgical magic on the one hand, and *ars notoria* on the other. His mnemonics showing many correspondences with this heavily condemned art, Bruno's negation that those who perform extraordinary operations of memory are "magi or possessed persons or something of that sort" is exactly directed against *ars notoria* (working through possession). In other words, for Bruno the mnemonist who is able to repeat a great quantity of words (regardless of what language or in what order) and whose rhetorical skills reached unseen heights, is not to be confused with the Brescian monk who "often seemed a prophet, great theologian and specialist in all languages" by means of possession. The magical suggestions in his mnemonic books belong to, at least in Bruno's opinion, the *ars notoria*'s counterpart: theurgy (controlling lower spirits by invoking higher spirits, without any form of possession).

2.3   Writing on Memory: Cryptic Publications and Oral Teaching

2.3.1   *The Art of Memory in an Age of Printing*

At first sight it may appear to be contradictory that the last flowering of the art of memory occurred in the age of printing. Why would such an art thrive after the technical possibilities of conserving knowledge had improved so much? Although the new technologies made it possible to fix and spread information quickly and uniformly, the age-old memory tradition did not disappear at once.

The late success of the art of memory is not as surprising as we might suppose. It may even be attributed, in part, to the abundance of information produced by the printing press. An increased amount of information demands structured ways of saving and advanced search methods to recover specific content from within a great quantity of data. Just as search engines are used today to locate information on our hard disk or on the Internet, so the art of memory was used to select information, save it in a structured way, and relocate it.[163]

Apart from a general revival of mnemonics in early modern Europe, Yates noticed a magically inspired current, represented by such authors as Giulio Camillo, Bruno, and Lambert Thomas Schenkel. It is worth mentioning that this current is equally characterized by a writing strategy that shows similarities with magical literature. Mnemonic treatises by these authors are suggestive and cryptic, claiming that their true content is revealed only to disciples *viva voce*. In the introduction to his *Idea del teatro*, for example, Camillo justifies himself for not revealing all his secrets by referring to Hermes Trismegistus and the riddles of the ancients; to Christ's prescription not to throw pearls before swine, nor to give secrets to the dogs (Matt. 7:6); and to the initial silence of the kabbalists.[164] In my opinion, a brief glance at Schenkel will clarify the relationship of this writing strategy to the *ars memoriae*, with particular

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163   In an important study Bolzoni stresses the interaction between the inner mnemonic techniques and the outer possibilities of printing. L. Bolzoni, *La chambre de la mémoire. Modèles littéraires et iconographiques à l'age de l'imprimerie* (Geneva: Droz, 2005; first published in Italian in 1995), pp. 16–17.

164   G. Camillo, *L'idea del theatro*, a cura di Lina Bolzoni, Selerio Editore, Salerno, 1991. See pp. 48–50: "A questo habbiamo da aggiunger che Mercurio Trismegisto dice che il parlar religioso et pien di Dio, viene ad esser violato quando gli sopraviene moltitudine volgare. La onde non senza ragione gli antichi in su le porte di qualunque tempio tenevano o dipinta o scolpita una sphinge, con quella imagine dimostrando che delle cose di Dio non si dee, se non con enigmi, far publicamente parole. Il che in più maniere ci è stato anchora insegnato da Dio, che parola di Christo è che le margarite non si debbiano gittare a' porci, et che a' cani non vogliamo dar le cose sante. [...] Né tacerò io che i medesimi kabbalisti tengono che Maria, sorella di Mosè, fosse dalla lebbra oppressa, per haver revelate le cose secrete della divinità et che per lo medesimo delitto Ammonio morisse di sporca et misera morte." Yates interpreted Camillo in a hermetic-kabbalistic sense, in line with Pico, whom Camillo repeats almost verbatim in the above-quoted passage on the necessity of the veil of silence. See Yates, *The Art of Memory*, pp. 150–51: "Camillo brings the art of memory into line with the new currents now running through the Renaissance. His Memory Theatre houses Ficino and Pico, Magia and Cabala, the Hermetism and Cabalism implicit in Renaissance so-called Neoplatonism. He turns the classical art of memory into an occult art."

relevance for an understanding of Bruno. Despite the fact that a considerable number of articles have been dedicated to this Dutch humanist, his cryptic style has not received the attention it deserves. Firstly, Schenkel's case shows us the commercial motives for cryptic writing. Secondly, it also demonstrates the attitude of some inquisitors towards the art.

2.3.2   *Lambert Thomas Schenkel: Life and Career*

At the beginning of the 1590s Schenkel suddenly propagated unconventional methods, such as dictating letters to fifteen scribes at once, or learning and mastering Latin in a period of six months. These ambitious methods were certainly linked to the *ars memoriae*, which he must have acquired by that time. The amazing results of his art led to suspicions of magic and superstition in 1593, first in Antwerp, then in Louvain. However, this suspicion – underlining the almost suprahuman effects of his art – resulted in a propitious start for his new career. From then on he focused exclusively on teaching the art of memory. His doctrine was partly written down in his *Gazophylacium artis memoriae* (*Treasury of the art of memory*) – a treasury that would be filled, so to speak, over the years, for his teaching became a lucrative business. In later life he travelled through Europe to teach his art. In 1623, thirty years after his mnemonic debut, he returned to Antwerp, and two years later we lose sight of him. The happy outcome of the suspicions about him has hitherto been given little attention, despite its relevance for understanding the writing strategy to mnemonics.[165]

2.3.3   *Schenkel's Mnemonics, Suspected of Magic*

The marvellous effects of Schenkel's art of memory twice incurred suspicion, first in Antwerp, then in Louvain: these episodes are described in detail in his

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165   This includes Rossi, Yates, and Bolzoni. I may also correct some scholarly inaccuracies with regard to Schenkel. First of all, Schenkel died at an early age according to Yates, *The Art of Memory*, p. 300, and Bolzoni, *La chambre de la mémoire* (p. 222), both of whom date his death to 1603. However, we read in Sweertius's *Athenae Belgicae*, published in 1629, p. 509: "Adhuc vivit, valetque dum haec scribimus, annum agens LXXVII." Considering the year of Schenkel's birth (1547), it must be concluded that Sweertius wrote his text in 1624, when Schenkel was still alive and kicking. Secondly, Yates (p. 300) situates the accusations of magic against Schenkel after his publications on memory, which will appear to be untrue. Thirdly, Yates (p. 301) is convinced that the Dutch humanist does not mention Bruno by name. In opposition to Yates's assumption, Schenkel does call Bruno by name – and moreover with regard to his cryptic writing, as we shall see in note 184.

Refutatio.[166] In his account, the inquisitor M. Joannes Baxius showed a strong aversion to his art in Antwerp.[167] But after a meticulous investigation, it was declared free of magic and superstition.[168] According to the humanist, the results were affirmed on 1 February 1593 in a document drawn up by some prominent persons among the ecclesiastical authorities in Antwerp.[169] But Baxius would not let it rest. He was convinced of Schenkel's magical practice, and on the fourth Sunday after Epiphany he said the following: "I know that with regard to memory weed is sown in this city, but while it is sown, it is not recognized as weed. But once it has grown, it will be recognized as weed, and stemming from the devil."[170] This suspicion of magic and superstition clearly complies with the *Edictum regium ut ecclesiastici et saeculares iudices omni modo adnitantur*

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166 We make use of a collection of Schenkel's works, preserved at "Stedelijke Erfgoedbibliotheek" in Malines under the shelfmark M. O 5031 (a). This collection contains the following works of L.T. Schenkel: *Methodus sive Declaratio in specie quo modo Latina Lingua sex mensium spacio doceri,* [...] *His subiungitur Brevis Tractatus de utilitatibus & effectibus artis memoriae summa dignis admiratione* [...] *Elogia de eadem doctorum hominum, ex certa scientia & experientia ultro prolata*[...] *Brevissima Refutatio earum cavillationum que artem memoriae, a nonnullis vel prorsus ignorantibus, aut veram methodum nescientibus, temere solent efferri* [...] *Apologia in quosdam qui L.T. Schenckelii Libellum ipso inscio et invito falsis titulis et narrationibus, ac turpissimis erroribus refertos ediderunt*[...], Argentorati, impensis Eberhardi Zetzneri, 1619. Schenkel refers to his accusation of magic on pp. 72–73, 75–76. From p. 83, however, the episode is related in detail.

167 Joannes Baxius, father of the more illustrious Nicasius, is named as a loyal assistant in the prosecution of magic in *Disquisitionum magicarum libri Sex*, Lovanii, ex officina Gerardi Rivii, 1601, of the famous inquisitor Martinus del Rio (appendix of the fifth book, p. 139): "Denique quia mentio a me facta *sup. sect. 4. indicio 2.* Losei Callidii, qui librum in Lamiarum Patrocinium conscriptum, mille machinis conatus fuit in publicum protrudere; & metuunt nonnulli, ne tandem cacodaemon aliquis id perficiat; duxi pro antidoto *Palinodiam* eius adscribendam, cuius authenticum & originalem (ut vocant) exemplum est penes pium & honestissimum virum, I. V. Licent. Ioannem Baxium (cuius studium atque zelus contra nefariam hanc haeresim Deum aliquando remuneratorem experietur) ab eo acceptum transsumptum fidi Notarii manu est huiusmodi." On Baxius, see also A.C. Kors and E. Peters, *Witchcraft in Europe 400–1700: A Documentary History* (1972; Philadelphia: University of Pennsylvania Press, 2001), p. 315.

168 Schenkel, *Refutatio*, p. 84: "omnibus inquam diligenter examinatis & discussis, invenimus supradictam artem memoriae, ab omni superstitione et magia esse liberrimam."

169 Schenkel's assertion is affirmed by two letters (on 28 January and 9 June) to Cuyckius of the Antwerp bishop Laevinius Torrentius, who clears the mnemonist of any suspicion. See *Laevinius Torrentius: correspondances*, eds. M. Delcourt and J. Hoyoux (Paris: Les Belles Lettres, 1950–1954), vol. 2, letter no. 1032, p. 430, and letter no. 1083, p. 486.

170 Schenkel, *Refutatio*, p. 85: "Sequenti die domenico, qui erat quartus post Epiphaniae, cum de Zizaniis concionaretur, dixit; Intellego nunc in hac etiam urbe, zizania seminari, de

extirpare superstitiones et magias of Philip II in 1592.[171] Baxius, wanting to nip the threat in the bud, took the king's edict – demanding that all the judges uproot magic and superstition (*extirpare superstitiones et magias*) – to heart.

Nevertheless, Baxius's stubbornness was nothing compared to what awaited Schenkel in Louvain. This time, it was the royal and ecclesiastical censor M. Henricus Cuyckius, who – at least according to Schenkel – was informed by his Antwerp colleague Baxius.[172] Although none of his fellow citizens took offence at the *ars memoriae*, Cuyckius took the initiative and claimed that this art, after further investigation, had been condemned and was therefore not to be published.[173] Because of this censure Schenkel left Louvain and took refuge in Douai. It was only after these adventures that his first publications on memory appeared in 1593. He collected approving notices from bishops, princes, and doctors in theology, and these were published in his *Elogia*.[174]

Now, here we have Schenkel's first publications on the art of memory appearing *after* the accusation of magic. This is significant for two reasons. First of all, the fact that the humanist is suspected of magic and superstition before he has published so much as a word on the art of memory, illustrates once again the suppressive climate. Rumours in Antwerp must have put his mnemonic art in a bad light, and as such reflect the atmosphere Bruno must have encountered exactly ten years earlier in Paris, evoked by the Nolan in *De umbris idearum* through Magister Anthoc's assertions that those who perform extraordinary feats of memory are magi. However, the 1592 *Edictum* against magic and superstition probably deepened suspicion in Antwerp much more than had been the case in Paris. Unlike Bruno, who was supported by the French king, Schenkel was prevented from publishing his treatise. That he bore these accusations in mind when he published his first books on the art is clear from

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memoria, & dum seminantur, non internoscuntur, sed quando excreverint, tunc cognoscentur esse zizania & a diabolo."

171 An original exemplar is preserved in the diocesan archive of Antwerp, presently situated in the university library. See J. van den Nieuwenhuizen, *De archieven van het Bisdom Antwerpen 1559–1801 in het diocesaan en kathedraalarchief, Oud Antwerps Kerkarchief II* (Antwerp, 1971), p. 50. For the *Edictum* of Philip II against magic in 1592, see J. Laenen, *Heksenprocessen* (Antwerpen, 1914), pp. 32–34.

172 On Henricus Cuyckius, see *Biographie nationale*, Brussels, 1873, s.n.

173 Schenkel, *Refutatio*, p. 87: "Cuyckius videns se compelli via juris, intravit musaeum, arreptaque penna subscripsit his verbis: Tractatum hunc de arte memoriae, cum compluribus facultatis nostrae theologicae magistris communicatum, judico et judicant mecum iidem magistri, quibuscum eum examinavi, non posse utiliter in lucem emitti. Actum Lovanii 22 Iunii 1593. Henricus Cuyckius Pontificius ac Regius Librorum Censor."

174 Schenkel, *Refutatio*, pp. 60–74.

the many approving letters he collected. Secondly, it is remarkable that 1593 is the breakthrough year of Schenkel's career. It seems that his misfortunes were compensated by his prosperity during the following years. In other words, the suspicions of magic must have given him excellent publicity, highlighting the marvellous results of the art.

2.3.4   *Cryptic Writings on the Art of Memory*
Let us now consider Schenkel's publications on the art of memory. At the end of the first book of his *Traicté de la mémoire divisé en deux livres*, in which all the authors who have ever written on memory are praised, we read the following: "Le second livre est pour ceux là seulement qui auront appris l'art de l'Autheur."[175] Schenkel's writing strategy is perhaps a little faint-hearted here. Dividing a treatise on memory into two books, and then releasing only one of them, is not very subtle. In his *Gazophylacium*, on the other hand, Schenkel introduces a kind of cryptic writing, which he associates with the oral tradition of sages and the Jewish people:

> No one should be surprised that the art is hidden by this new kind of writing. For this is done after the example of the sages, and of God himself, who handed down many things plainly, some however in an obscure way, to the Jewish people. Besides, who does not know that the ancients have concealed the teachings of their wisdom in the wrappings of fables? Pearls must not be cast before the swine, nor excellent secrets before those who are incapable […]. The living voice taught the rest (*docuit vox caetera viva*).[176]

But which specific strategies does Schenkel employ to cover his art? As an example I shall examine a passage in which he sets out a method for what was traditionally called the *memoria verborum*. As we have seen, this part of

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175   L.T. Schenkel, *Traicté de la mémoire divisé en deux livres*, Arras, de l'imprimerie de Guilaume de la Rivière, 1593, p. 95.

176   L.T. Schenkel, *Gazophylacium artis memoriae, nunc vero ipsius permissu a Martino Sommero Silesio, in diversis Germaniae Academiis traditum et illustratum*. Venetiis, 1619 (Biblioteca dell'Università di San Marino, Fondo Young; first published in 1609: *Gazophylacium artis memoriae*, Argentorati, Antonius Bertramus), p. 58: "Deinde nemo mirari debet, novo quodam scribendi modo, celari artem, id enim factum exemplo sapientum, adeoque ipsius Dei, qui multa clare, quaedam vero obscure, populo judaico tradidit. Quis insuper nescit, veteres fabularum involucris abscondisse sapientiae dogmata? Non sunt margaritae porcis obiciende, neque excellentiora secreta incapacibus […] docuit vox caetera viva".

the art was considered useless in antiquity, but in the age of printing several mnemonists made serious contributions to this branch of the art. In *Rhetorica ad Herennium* the retention of words is problematic because translating each word into an image would lead to an infinite number of images to memorize.[177] But the Renaissance mnemonist began to cut words up into their elementary letters and to associate fragments of imagery with each letter. In the following passage Schenkel proposes his method, which is written in a cryptic style.

> Ut g. (*imago*) primae gaeretilae (*literae*) ponatur in S. (*loco*) et pro duabus aut tribus restantibus attribuatur toitcas (*actio*) tali botnemurtsnis (*instrumento*) quod in poitinis (*initio*) sui illas exhibeat; ut si exprimendum esset hoc vocabulum samos (*oma*) g. (*Imago*) primae est, Oliverius, qui matulam effundit vel frangit, capiturma, a matula; conjungitur g. (*imaginis*) gaeretilae (*literae*) primae, et effecit samos (*oma*).[178]

Although Schenkel's cryptic writing is not indecipherable, it remains obscure for those not acquainted with the *loci* and *imagines* of the traditional art of memory. The procedure presented here is rather easy. Suppose we have to memorize the non-existent word "*oma*" – Schenkel starts with a small example to clarify the principle. The first letter of this word will be memorized by the initial of a person's name. Thus, Oliver (a known Oliver is more effective than a purely imaginary one, as he can be imprinted in the memory in a more detailed and realistic way) is put on stage in the imagination to represent the letter "o". Next, Oliver performs an action with a certain item. He drops an earthen pot (*matula* in Latin), which breaks into pieces. The first two letters of this item are added to the first one so that the whole scene of *O*liver dropping a *ma*tula results in *oma*. Such is Schenkel's proposed method for the *memoria verborum*.

More interesting to us is the way in which this method is presented. Why hide the mnemonic trick with cryptography? Notwithstanding the fact that it makes little sense to us, it seems to support the suspicions of the inquisitors. The *ars memoriae* is surrounded by secrecy, as if there were something dangerous hidden within it. It has this mystifying feature in common with works on magic. Because not everything can be made public, the reader is encouraged

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177   Pseudo-Cicero, *Rhetorica ad Herennium*, 3:23 and 3:28.

178   Schenkel, *Gazophylacium*, p. 6. In italics I have "deciphered" the "cryptic" writing of Schenkel. At the end of his *Schenckelius detectus seu memoria artificialis hactenus occultata*, Lugdunum, 1617, Joannes Paepp added a key (*clavicula*), which helps in deciphering Schenkel's treatise. I have consulted the exemplar of Paepp's book, preserved in the Senate House Library, London, and bound with Bruno's *Artificium perorandi*.

to come to the master himself. If he is worthy enough, he might participate in the group of privileged disciples who are introduced to the secrets of the art. This initiatory rule is in force in both magic and mnemonics. This is illustrated by the fact that the maxim not to throw pearls before swine occurs equally in writings on magic (for example, in Agrippa), and on memory (as in Camillo and Schenkel).

Apart from this feature shared with magical writings, Schenkel's cryptic writing clearly serves an economic aim as well. In his *Apologia* we find a letter from Henri IV, dated 14 November 1601, forbidding the reader from spreading the art without the author's permission for a period of twenty years, "à peine de mil escuz d'amende".[179] Thus, after Camillo and Bruno, Schenkel, too, succeeded in gaining the interest of the French king with his art of memory, who granted him the monopoly on teaching this art in France by protecting his publications from being pirated.[180]

Schenkel's *Apologia* gives us an element of the humanist's accountancy, demonstrating the lucrative business into which his art had developed. The cryptic wording of his method, it seems, is there to ensure a healthy influx of disciples, who by themselves are not capable of fully penetrating the art of the master. Therefore, only a few disciples were given permission to spread the art in the master's name, on the condition of shared profit (*communi lucro*). One of those, Somerius Silesius, disappeared before sharing his profit, and he owed Schenkel more than two hundred golden ducats.[181] Other disciples broke their word about keeping the art secret, for Schenkel complains that sometimes his

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179   This privilege of Henri IV is reproduced in Schenkel, *Methodus*, pp. 35–36: "Nous avons permis & permettons audit Schenckel de monstrer & enseigner […] ledit art de memoire, & ses autres secrets, tant en nostre cette bonne ville de Paris, que par toutes les autres villes de nostre Royaume […]; Faisant tres expresses inhibitions & deffenses à toutes personnes de luy troubler & empecher en aucune maniere que ce soit; & à ceux qui auront esté ses auditeurs, de faire profession publique ou privée d'enseigner ledit art […] durant lesdits temps de vingt ans, sans son expres congé & permission, à peine de mille escus d'amende."

180   For Camillo and François I, see Bolzoni's article on Camillo in the *Dictionary of Gnosis and Western Esotericism*, ed. W. Hanegraaff (Leiden: Brill, 2006), 1:229.

181   Schenkel, *Apologia*, p. 122: "Sed tandem veniamus ad Ioannem Sommerium Silesium […] judicabamque illum valde feliciter posse artem docere […] communi lucro […]. Credo mihi debitam partem 200 aur. ducatos excedere non modo non scribit nil dat vel mittit, sed latet nec ut sciam ubiquam potest, operam dat".

secret writing is not respected.[182] Descartes's description of Schenkel's art as "lucrative folly" (*lucrosas nugas*) might therefore be well-chosen.[183]

Schenkel regularly stresses the innovative character of his own cryptic writing. However, he has seen the very obscure style of Bruno, and denies that the same difficulty exists in his own work.[184] First of all, this means that Bruno *is* mentioned by Schenkel, in contrast to what has hitherto been accepted. Secondly, it is to Bruno's cryptic writing, which is more obscure than his own style, that he refers. Although this secret aura made these memory teachers suspect, it had a commercial *cachet* as well. For the sake of their memory business (and a business it was) it would have been imprudent to publish the whole canon, because this could lead to a loss of disciples.

2.3.5   *Writing Strategy in Bruno's Mnemonic Treatises*

Bruno's cryptic style, even if it is impossible to ignore, has not been discussed in depth by modern scholars of the magical character of his mnemonics. Tocco, as we noted, was annoyed by *quel fare enimmatico*. In Yates's studies the enigmatic nature of Bruno's writings is used as part of her overall argument that his memory system contains a Hermetic secret, but she does not dwell on the subject independently. Rossi and Clucas also admit that the understanding of Bruno's mnemonics is made difficult by their cryptic style.[185] In my first chapter I pleaded for a further analysis of Bruno's cryptic style, because we located the cause of scholars' controversy about the magical character of Bruno's mnemonics in their contradictory statements on the *ars memoriae*.

It is clear that Bruno deliberately wraps his mnemonic teachings in puzzling language. In the first dialogue of *Cena* the philosopher invokes the Muses and asks Mnemosyne, "hidden under thirty seals and shut up in the bleak prison of the shadows of the Ideas", to whisper a little in his ear.[186] In this way he calls on memory, concealed in his former treatises *Explicatio triginta sigillorum* and

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182   Schenkel, *Apologia*, p. 104: "Antonius Bertramus Argentorati librum meum primum & secundum plane aperte, neglecto meo quo sum usus secreto scribendi modo [edidit]".

183   Descartes, *Cogitationes privatae*, 10:230.

184   Schenkel, *Apologia*, p. 113: "Dubito an ullus ante me secretae modo scripturae usus sit, sed obscuriores Iordanum Brunum Nolanum observasse vidi. Lectu difficilimum hactenus non vidi nec de meo hoc dici potest, ut alibi retuli. Sed ratione materiae, & defectus boni et ductoris periti, difficiles ut omnes aliae sententiae […] nisi accedat […] vox docentis viva captui discentis accomodata & evidens demonstratio."

185   Rossi, "Giordano Bruno," p. 28; Clucas, "Giordano Bruno's *De imaginum*," p. 97.

186   Bruno, *Cena*, BOeuC, 2:37: "Et tu, Mnemosine mia, ascosa sotto trenta sigilli, e rinchiusa nel tetro carcere dell'ombre de le idee, intonami un poco ne l'orecchio."

De umbris idearum. And concealed it is, as any reader who dared to "enter the labyrinth without a thread" will affirm.[187]

The references in *De umbris idearum* to the lost work *Clavis Magna* illustrate well that Bruno's cryptic writing also is to be seen in a context of teaching. This work is sometimes evoked as containing the necessary elements to explain certain obscure passages.[188] The suggestion is that those who had this "great key" at their disposal could further penetrate into the art, just like Schenkel's disciples, who had acces to his mysterious "second book". This treatise probably circulated as a manuscript among disciples, and might even have contained some "magical" matter. For, in the dedicatory letter of *Cantus Circaeus*, the circulation of "corrupted and contaminated writings on the art, leading to suspicion of the author", is indicated as the reason for its publication, the purpose of which is to purge the art of a bad name.[189] Of course, we cannot be certain that *Clavis Magna* was such a "contaminated writing" and that it brought the author under suspicion because it linked the art more explicitly to magical issues, but it is not unlikely.

The second dialogue of *Cantus Circaeus* – the first presenting Circe's conjuring ritual – testifies to the fact that cryptic writing was to be completed by teaching. At the beginning of it a novice admits that he "saw a great variety of things in Circe's dialogue; and many significations explicit on the surface". He therefore supposes that "there must be also innumerable intentions implicit in its deepness." However, of these he confesses "not to understand the

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187   In a puzzling poem at the beginning of *De umbris idearum*, Merlin will let in those who consider themselves adept diggers – and not at all unfit for flying, fishing, hunting, and chasing, and there be no laments about this – yielding because they entered the labyrinth without thread. BOMNE, 1:14: "Si vos sentitis aptos effosores/ Et minime non aptos ad volandum,/ Expiscandum, venandum et aucupandum,/ Atque idcirco non ind'esse lamenta,/ Concaedam vobis, concaedentibus quod/ Intrastis labyrinthum sine filo./".

188   See, for example, BOMNE, 1:140: "Unde nobis ita successisse presumimus, ut quicquid ab antiquioribus hac de re fuit consideratum, praeceptum et ordinatum [...] non sit conveniens pars inventionis nostrae, quae est inventio supra modo praegnans, cui appropriatus est liber *Clavis magnae*." and p. 148: "Hoc sane subiectum quam foelix extet atque nobile, melius ipsa experientia quam ulla vi potest iudicari. Verumtamen qui ex *Clavi magna* poterit elicere, eliciat: non enim omnibus dabitur hanc adire Corinthum."

189   Bruno, *Cantus Circaeus*, BOMNE, 1:588: "Adhaec artis istius editio ad eius famam et iustificationem pertinet: accidit enim eius exemplaria successu quodam fuisse vitiata et conspurcata circumferantur, quatenus et auctor reddatur vulgo suspectus et ars minus commendabilis." This statement reminds us of Agrippa, who asserted that his work was intercepted before he could finish it, and was carried about, imperfect and unpolished, in corrupted exemplars. See note 71 of chapter 2.

serious and excellent meaning."[190] The advanced student replies: "And you will not understand it easily."[191] What was it, then, according to the author, lying in the depth of these words, that was so difficult to understand? Naturally, the answer is not given. Instead, the advanced student underlines that it is the will of the gods that higher things are difficult to obtain.[192] Further, he states: "In fact there is only one difficulty: to be able to understand these things all alone. From the teacher all will understand."[193]

As we have seen, Schenkel considered Bruno's cryptic writing highly obscure. The example of Schenkel, who succeeded in turning his mnemonic teaching into a lucrative business, sheds light on Bruno's obscure style, too, for Bruno's mystifications do not miss their target. Several testimonies affirm that disciples were convinced by the mysterious character of his discourse.

Hans von Nostitz, who attended Bruno's lectures in a Parisian auditorium in 1582, reports on Bruno's teaching activity in the French capital. Thirty-three years later, in the preface to his *Artificium Aristotelico-Lullio-Rameum* (1615), he writes that he "remembers how Bruno, demonstrating the mnemonic and Lullian art in a magnificent way, bound many disciples and listeners to him in private (*privatim*)." Nostitz himself, however, "seeing that only a few became artists by his teaching, due either to the teacher's envy, to the obscurity of the art (*artis obscuritate*), or to the slowness of the students, laughed and scorned the idle efforts and costs (*sumtus*) incurred by the others for an art more difficult than useful", favouring instead the brevity and perspicuity of the Ramist method.[194] By this account, Bruno was living proof of the results achievable

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190   BOMNE, 1:654: "Ibi non modicam rerum conspicio varietatem, ibi multos in ipso verborum cortice sensus explicitos; intentiones quoque medullitus implicitas innumeras esse coniicio, de quibus omnibus id, quod seriosum est atque praecipuum, ignorare me fateor".

191   BOMNE, 1:654: "Nec facile intelliges."

192   BOMNE, 1:656: "omnia quippe optima, velimus nolimus, decreto deorum in arduis esse sita, non est quem lateat."

193   BOMNE, 1:660: "Unum tantummodo est difficile, ut aliquis haec ipsa per se ipsum possit intelligere. A docente omnes intelligent."

194   See Aquilecchia, *Schede Bruniane*, p. 283: "Annus nunc agitur tertius et trigesimus, cum Lutetiae Parisiorum primum Iordanum Brunum Nolanum, arte Lulliana et Mnemologica sive memorativa magnifice sese ostentantem, multos ad se discipulos atque auditores privatim allicere, memini. Quo factum, ut quia eo ipso tempore, peregrinationis et studiorum aliorumque exercitiorum causa illic agebam, ego quoque quid illud esset mirificae artis cogniturus, non semel auditorio eius interfuerim. Ac ipsius quidem Iordani peritiam et promptitudinem, quam postulato quovis disputandi et ex tempore copiose de eo perorandi argumento nonnumquam ostentabat, vehementer admirabar. Caeterum, cum paucos admodum ab hoc artifice artifices prodire animadverterem, sive quidem id

from his promising art, which he seems to have demonstrated beyond cavil. On the other hand, only a few succeed in reaching the level of the master. However, despite the obscure character of the art, many pay the teacher in the hope of achieving this level. In other words, it becomes tempting to interpret Bruno's obscure style in line with our commercial reading of Schenkel's works.

This reading is affirmed by Jakob van Brecht, an Antwerp bookseller who, testifying at Bruno's trial, asserts that "he wanted to see and talk to the Nolan after he had seen his curious books."[195] For exactly the same reason, the Venetian nobleman Mocenigo invited Bruno, hoping to be introduced to the secrets of his art of memory, after he had seen one of Bruno's works.[196] If this was indeed its purpose, Bruno's style met with some success. Without revealing its secrets, it attracts and convinces the curious, who are willing to pay to be introduced into the art. Thus, the commercial perspective on Schenkel's cryptic writing seems to be applicable to Bruno as well.

Apart from the commercial aspects of cryptic writing, Bruno's case must also be seen in relation to the correlative adjectives *esoteric* and *exoteric*.[197] Since antiquity the distinction between a superficial and a deeper meaning of certain texts or doctrines has played a role in Western intellectual culture. The Christian theologian Origen, for example, was convinced there was another meaning beyond the literal sense of the Scriptures, destined for only a small group of the elect.

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docentis invidia, sive artis obscuritate, aut tarditate discentium accidebat, risi, et contemsi aliorum in arte difficiliori quam utiliori inanes operas et sumtus; magis interea brevitati et perspicuitati Rameae favens."

195   Firpo, *Le Procès*, p. 27: "avendo visto prima alcune sue opera stampate et curiose, mi venne desiderio di vederlo et parlarli."

196   As is clear from the testimony of another bookseller, Giovan Battista Ciotti, Mocenigo had bought one of Bruno's books at his bookshop and asked Ciotti if he knew the author because he wanted him "to come to Venice to teach him the secrets of memory and the other secrets he professes in this book of his". See Firpo, *Le Procès*, p. 19: "Io vorrei ch'egli venisse a Venetia per insegnarmi li secreti della memoria et li altri che egli professa, come si vede in questo suo libro."

197   For "esotericism", see the *Dictionary of Gnosis and Western Esotericism*, ed. W. Hanegraaff (Leiden: Brill, 2006), s.v. esotericism. Although the adjective "esoteric" has often been attributed to Aristotle, he only uses the word "exoteric". It is in a satire of Lucian of Samosata (*Vitarum rustio* 26) that the word "esoteric" makes its first appearance and is opposed to exoteric. In Clement of Alexandria the term is for the first time associated with secrecy, and Hippolytus of Rome (*Refutation of all Heresies* 1.2.4) first applied the terminology to the pupils of Pythagoras, who are said to have been divided into two classes, one exoteric and one esoteric. The association with the Pythagoreans was to be repeated frequently.

> There is the doctrine that the Scriptures were composed through the Spirit of God and that they have not only that meaning which is obvious, but also another which is hidden from the majority of readers. […] The inspired meaning is not recognized by all, but only by those who are gifted by the grace of the Holy Spirit in the word of wisdom and knowledge.[198]

In other words, the Spirit of God composed the Scriptures in such a way that the inspired sense is only recognized by a few.

In the Renaissance, Giovanni Pico's introduction of the kabbalah is important in this regard.[199] For, in his view, the doctrine of the kabbalists contains the key to the Bible. The fourth dialogue of *Cena* is especially interesting with regard to Bruno's opinion of the esoteric reading of the Scriptures. Bruno states that the deeper understanding of the Scriptures, knowing how to distinguish between the metaphorical and the literal, is not given to all. Not everyone wants to see this distinction, nor is everyone *capable* of seeing it. As an example, he expounds a literal "cosmological" reading of the book of Job – a book "pieno di buona teologia, naturalità e moralità" – which Moses as a sacrament added to the books of his Law.[200] In the philosopher's view this book has been misinterpreted by the parrots of Aristotle, Plato, and Averroes (*pappagalli di Aristotele, Platone, et Averroe*), who, by means of a metaphorical approach, were capable of making it mean whatever they wanted it to mean.[201]

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198   Origen, *De principiis*, quoted in J. Quasten, *Patrology*, 4 vols. (Westminster: Newman Press, 1964–86), 2:92. Translation is taken from R.B. Tollinton, *Selections from the Commentaries and Homilies of Origines* (London, 1929), p. 8.

199   Cf. C. Black, *Pico's Heptaplus and Biblical Hermeneutics* (Leiden, Brill, 2006).

200   Bruno, *Cena*, BOeuC, 2:195–99: "Parlare con termini de la verità dove non bisogna, e voler che il volgo e la sciocca moltitudine dalla quale si richiede la prattica abbia il particular intendimento, sarebbe come volere che la mano abbia l'occhio: la quale non è stata fatta dalla natura per vedere, ma per operare e consentire a la vista. […] Ma questa distinzione del metaforico e vero, non tocca a tutti di volerla comprendere: come non è dato ad ogni uno di posserla capire. Or se vogliamo voltar l'occhio della considerazione a un libro contemplativo, naturale, morale e divino, noi trovaremo questa filosofia molto faurita e favorevole. Dico ad un *Libro di Giob*, quale è uno di singolarissimi che si possan leggere, pieno d'ogni buona teologia, naturalità e moralità, colmo di sapientissimi discorsi, che Mosè come un sacramento ha congionto a i libri della sua legge."

201   Bruno, *Cena*, BOeuC, 2:201: "se non che alcuni pappagalli de'Aristotele, Platone, et Averroe, dalla filosofia de quali son promossi poi ad esser teologi, dicono che questi sensi son metaforici, e cossì in virtù de lor metafore le fanno significare tutto quel che gli piace, per gelosia della filosofia nella quale son allevati."

For Bruno, Job (25:2: "He establishes order in the heights of heaven") should not be read metaphorically. In his literal reading this verse concerns cosmology. When, in describing the provident power of God, it is said that "he made peace among his eminent creatures, his sublime children, which are the stars, the gods", for Bruno this means that of all the stars, some are aqueous, others fiery (some are earths, others suns), and that, although they are opposed, they live in symbiosis, the one turning around the other.[202] In Bruno's view this distinction into fiery and aqueous celestial bodies conforms to the doctrine in Genesis dividing the lower and higher waters.[203]

Thus, just like Origen and Pico, Bruno, too, distinguishes between an exoteric and an esoteric reading of the Scriptures. Not everyone knows which passages should be read metaphorically and which should not. The fifth dialogue of *Cena* reports Bruno's fruitless endeavour to expound his vision of Copernicus to two doctors from Oxford, an attempt which was doomed to fail. When the Nolan's misfortunes in Oxford are evoked, one of the interlocutors answers: "Who gives pearls to the swine must not lament that they have been trodden upon."[204]

A similar distinction between exoteric and esoteric is made in *De monade*, where Bruno reveals the nine meanings of the divine word. This time it is not about a capacity to judge whether a scriptural passage should be interpreted metaphorically or literally, but about enigmatic passages accessible only to a small number of readers. Next to the historical, physical, metaphysical, ethical, legal, anagogical, prophetic, and tropological meanings, the mystical meaning of the Scriptures, "under enigmatic form and under a formula inaccessible to the former meanings, embraces those things which are revealed to nobody or to a few; this is the meaning the Jews call kabbalistic."[205]

The distinction between esoteric and exoteric implies a kind of hierarchical anthropology: some people are worthy of being introduced to higher

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202   Bruno, *Cena*, BOeuC, 2:199: "In quello un di personaggi volendo descrivere la provida potenza de Dio, disse quello formar la pace ne gli eminenti suoi, cioè sublimi figli, che son gli astri, gli dèi, de quali altri son fuochi, altri sono acqui (come noi diciamo altri soli, altri terre), e questi concordano: per che quantumque siino contrarii, tutta via l'uno vive, si nutre e vegeta per l'altro; mentre non si confondeno insieme, ma con certe distanze gli uni si moveno circa gli altri."

203   Bruno, *Cena*, BOeuC, 2:199–201.

204   Bruno, *Cena*, BOeuC, 2:215: "Chi dona perle a porci non si de' lamentar se gli son calpestrate."

205   Bruno, *De monade*, BOL, vol. 1, part 2, p. 457: "VIII Mysticus, qui sub aenigmate, et omnibus enumeratis sensibus impervio dictamine, claudit ea quae paucis vel nulli in praesentia revelantur: quem sensum Cabalisticum appellant Iudaei."

knowledge, and others are not. This perspective on knowledge plays a major role in the intellectual world of the 16th century and stands in contrast to the ideas that laid the foundation for the birth of modern science in the 17th century, of which the results can be achieved by following secure rules and calculations. It follows that this new science is not reserved for the "elect" few, but for the community of men as a whole. Noteworthy also is that the new scientific methods are rather marked by clarity and simplicity, in opposition to the complexity and deliberate obscurity of magical literature.

Esoteric writing, although it might serve commercial aims, was thought to be present in the Holy Scriptures themselves. In light of that, Bruno's cryptic style conforms to his conception of truth, which is destined only for a small number of initiates, as appears from many of his utterances. In *Spaccio*, for example, he writes:

> [Truth] hates the multitude, does not show herself before those who do not seek her for her own sake, and does not wish to be declared to those who do not humbly expose themselves to her, or to all those who fraudulently seek her; and therefore she dwells most high, whither all gaze, and few see.[206]

2.4   Conclusion

I started this chapter with a diagnosis. The reason for the different interpretations of the magical value of Bruno's art of memory is located in the contradictions present in his cryptic mnemonic works. Magical suggestions belie his claim that the art of memory has nothing to do with magic. Yates focused on the suggestions and ignored the denial, which more recent scholars have tended to take as more accurately reflecting Bruno's opinion. In the first section I argued that Bruno participated in a culture permeated with dissimulation, which left its marks on his writings. We noted that Bruno was a rather exceptional case. Despite some minor dissimulative practices, he put *Il Nolano* on stage and pointed the spotlight on him while he was defending his dangerous ideas.

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206   Bruno, *Lo Spaccio*, p. 185: "[...], e pero ama la compagnia di pochi e sapienti, odia la moltitudine, non si dimostra a quelli che per se stessa non la cercano, e non vuol essere dechiarata a color che umilmente non se gli esponeno, né a tutti quei che con frode la inquireno: e però dimora altissima dove tutti remirano, e pochi veggono." For the English translation, see Bruno, *The Expulsion*, p. 141.

In the second and third sections we took a closer look at the special features of Bruno's texts on magic and on mnemonics. With regard to the field of magic, I have established the context of intolerance in which manuscripts containing demonic magic often circulated secretly. Bruno's works on magic are preserved in two manuscripts only. We observed that most of the magical texts are not marked by any defensive strategy at all, whereas many other texts on magic (such as those by Ficino, Pico, and Agrippa) clearly denied being associated with demonic magic and employed other defensive strategies. Bruno, by contrast, is quite open. This does not lead us to conclude, however, that his writings were not meant to be published – an arduous question that can only be answered hypothetically. On the other hand, it is necessary to make further distinctions between the magical works themselves, for they are very different in nature and not all marked with the same degree of prudence.

I also argued that Bruno's distinction in *Sigillus sigillorum* between good and bad magic is original in the sense that it does not rely on the traditional dichotomy between natural and demonic, but on more psychological grounds (the kind of belief and species of contraction). In my opinion, this is a distinction proper to a mnemonist, a view which will be put forward at greater length in my fourth chapter. I also remarked that Bruno is concerned with dissociating his art from the *ars notoria* to which it bears a resemblance. This magical art seems to make simple minds wise by means of demonic possession and is rejected in both *Sigillus sigillorum* and *De magia naturali*, where it is opposed to theurgical magic.

The magical allusions in his mnemonic treatises were exactly of a mathematical and theurgic kind. We noticed that these treatises are at once both obscure and outspoken. Their cryptic character and the provocative magical suggestions were probably capable of seducing many students who were interested in attending his lessons. Schenkel's memory business was partly built on this kind of cryptic writing. Nevertheless, Bruno adheres to a vision of knowledge which is, in opposition to the universality of knowledge of the "new science", destined only for the few, in accordance with his view on the reading of the Scriptures, which reveal their true meaning only to a small number of worthy persons.

In summary, as a suspect author Bruno makes use of the dissimulating strategies suitable for his era, but they did not mitigate the offensiveness of his books. His mnemonic publications, for example, are laced with magical allusions, although the link with magic is never made explicit. A statement even denies the art has anything to do with magic. But this could not clear the author of suspicion. His elaborate ideas on magic, on the other hand, are known through only a few manuscripts. Today we are in a privileged position, having

at our disposal writings to which many of Bruno's contemporaries, equally fascinated with his mnemonics, had no access. And indeed, a passage from *De magia naturali* sheds light on that magic which Bruno believed had nothing to do with *ars memoriae*: the *ars notoria*. The mathematical and theurgic nature of his magical allusions points exactly to what Bruno believed to be its opposite.

The Concept of *Similitudo*

Quae quidem veteres contemplati, aliis coelestium alia terrenorum adhibuerunt, unde divinas virtutes in locum inferiorem ob quandam similitudinem deduxerunt. Nempe similitudo ipsa sufficiens causa est ad res singulas invicem vinciendas.

> *Proculi Opusculum de sacrificio interprete Marsilio Ficino Florentino*. Reproduced by
> B. Copenhaver, "Hermes Trismegistus, Proclus, and a Philosophy of Magic," in
> *Hermeticism and the Renaissance, Intellectual History and the Occult in Early
> Modern Europe*, eds. I. Merkel and A.G. Debus (Washington, DC: Associated
> University Presses, 1988), pp. 79–110, p. 106

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In my first chapter I questioned the separation between Bruno's mnemonic and magical works on the basis of a distinction between cognition and operation. Does such a distinction do justice to a philosopher for whom knowledge and action are indissolubly linked, as can be seen, for example, in his definition of the magus as "a wise man with the power to act" (*hominem sapientem cum virtute agendi*)?[1] Action *and* wisdom make a magus. Besides, can such a theoretical division deal with the fact that Bruno's works on the *ars memoriae* were dedicated to men in power, while his manuscripts on magic were never published? Would kings and noblemen not be more interested in a magical art that taught them how to manipulate nature, than they would in an art that improved their memory and cognitive skills? The magical interests of both Henri III and Rudolph II, to whom the Nolan dedicated treatises on, or at least containing, mnemonics, underline the paradox. Hence, it seems difficult to maintain a separation between the two corpora on the grounds of a theoretical distinction that was foreign to Bruno himself. I shall argue instead that mnemonics and magic are two sides of the same coin: the coin of the wise and operating soul or, as will be seen in the final chapter, the consciously acting soul that is not acted upon by external influences like deceptive demons.

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1 Bruno, *De magia naturali*, BOM, p. 166: "A philosophis ut sumitur inter philosophos, tunc magus significat hominem sapientem cum virtute agendi." Cf. chapter 2 above, note 133.

The art of memory embraces operation as much as magic implies knowledge. Instead of a theoretical distinction, a grasp of the difference between a corpus dedicated to kings and noblemen and a collection of manuscripts seems more useful and culturally appropriate.

In my second chapter, both corpora were analysed for their *formal* features. The simple form of the magical writings, void of dissimulative writing and containing "magical confessions", betrays their private use or use in rather limited circles. Bruno's mnemonic writings, on the other hand, contain magical denials alongside unexplained magical allusions, which beyond doubt were capable of attracting disciples. Quite apart from this possible "commercial aspect" of Bruno's style, he had a keen interest in magic. In view of this, the magical allusions in his books on memory might truly point to links between magic and mnemonics. Yet these links were, like Bruno's treatises on magic, left in the dark, according to the prescription that some kinds of knowledge, like pearls, "must not be thrown before swine".

Likewise, an analysis of the *content* of both corpora will draw together the magical and mnemonic currents in the sequel to this study. The first stage in reconstructing the bridges between them is carried out in this third chapter by focusing on a common philosophical principle: the concept of *similitudo*.

Discussing *similitudo* is all but pioneering, but it has not been explored in sufficient depth as a common principle of mnemonics and magic. The first section of this chapter offers an overview of past studies of similitude that are relevant to Bruno; the second, meanwhile, attempts a definition. Similitude turns out to be used in very different contexts. One question that guides this terminological quest is what these contexts tell us about the *meaning* of the concept and whether a significant shift exists between the magical texts and the books on memory. In the third section, the specific *function* of similitude is scrutinized. How does one practise the art of memory and perform magic through similarities? And again, what are the differences and similarities between the two corpora? In the fourth and last section, the *aim* of Bruno's mnemonic and magical art is illustrated by the words of Genesis that man is made *ad imaginem et similitudinem Dei*. For the Nolan, the preposition *ad* in this verse underlines, rather than his origin, man's final destination. To realize this deification both the *ars mnemonica* and *magica* have a role to play.

3.1   *Similitudo* from Foucault to Sturlese

In 1966 Michel Foucault stated that until the end of the 16th century, the concept of *ressemblance* played a constructive role for knowledge in Western

culture. It lay at the basis of exegesis and textual interpretation, organized the play of symbols, permitted the acquaintance of the visible and the invisible, and guided the art of representation. In his exposition, four essential forms of resemblance (*convenientia, aemulatio, analogie*, and *sympathie*) were completed by the signature. "Il n'y pas de ressemblance sans signature".[2] And thus the circle was closed. Resemblances need a signature, because they will never be noticed if they are not legibly marked. In turn, the signature derives its value as a "sign" by virtue of its resemblance.[3] According to Foucault this was the 16th-century *episteme* in its most general outline, with the consequence that the character of knowledge was "à la fois pléthorique et absolument pauvre".[4] It was overly full because the process of reference never stops. A resemblance is not stable, but depends on another resemblance, which in its turn recalls new similarities. Although this web of *similitudines* is endless, it explains the poverty of the system. After all, in this infinite circuit of references no term can ever be fixed. According to the French "archaeologist", knowledge in this period was a form of interpreting through resemblances, and the same was true of natural magic, which occupied a major position in 16th-century intellectual life. Signs and similarities were the common basis for the method of both knowing and natural magic, both cognition *and* operation.[5] Or, in the words of the Paracelsian Oswald Croll: "N'est-il pas vrai que toutes les herbes, plantes, arbres et autres, provenant des entrailles de la terre sont autant de livres et de signes magiques?"[6] Foucault understood well that similitude was the key to unlocking the world of Renaissance magic.

In the same decade that Foucault characterized *ressemblance* as the 16th-century *episteme* in its most general outline, Renaissance scholars were studying Bruno's art of memory, and they ascribed an equal importance to the concept of *similitudo* for entering his treatises on this subject. Cesare Vasoli focused on Bruno's combination of Lullism and traditional mnemonics. He placed the symbolism of the Nolan's first treatises in this context, emphasizing

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2 M. Foucault, *Les mots et les choses, une archéologie des sciences humaines* (Paris: Éditions Gallimard, 1966), p. 41.

3 Foucault, *Les mots et les choses*: "Il signifie dans la mesure où il a ressemblance avec ce qu'il indique (c'est à dire à une similitude)".

4 Foucault, *Les mots et les choses*, p. 45.

5 Foucault, *Les mots et les choses*, p. 48: "La forme magique était inhérente à la manière de connaître."

6 Foucault, *Les mots et les choses*, p. 42. Foucault quotes from O. Crollius, *Traité des signatures* (trad. Française, Lyon, 1624), p. 6. Foucault's central idea was elaborated in relation to natural history by W.B. Ashworth, "Natural History and the Emblematic World View," in Lindberg and Westman, *Reappraisals of the Scientific Revolution*, pp. 303–32.

the correspondence between symbols and *res*, and recalled the famous sentence of Ernst Cassirer that the use of images and symbols was not mere "exterior complement, occasional clothing", but rather "the vehicle of thought itself".[7] Paolo Rossi argued that Lull's logic was interested in the structure of the world and not only in the structure of discourse, as was the case in formal logic. The universe, then, was seen as a whole of symbols in which the similarities of the divine are imprinted on all lower creatures. In Lullism the *principia essendi et cognoscendi* were the same, and the ladder of being could be climbed and descended through the *similitudines* of the creatures with divine perfections.[8] The central idea of this logic through similarities returned in Bruno's art of memory or "fantastic logic".[9] Frances Yates situated the Nolan's mnemonics within the history of the art of memory, interpreting them from a magical perspective as an endeavour to realize the Hermetic similitude between microcosm and macrocosm.[10] While Vasoli spoke of a similarity between symbols and *res*, Rossi underlined the ascent and descent of the ladder of being through *similitudines* in Lullian logic, and Yates described the ultimate objective of Bruno's art as equalling the divine mind. Here we already have three forms of *similitudo* which are, although related, not the same.

The most complete view of *similitudo* was offered by the Dutch theologian and philosopher Leen Spruit in his accurate work on Bruno's epistemology.[11] He considered the theoretical theses in *De umbris idearum* (Paris, 1582) to be independent of the mnemonic context and placed them – severed from their magico-astrological frame as well – in a precise epistemological tradition.[12] Spruit carefully uncovered Bruno's eclectic use of the philosophical tradition for which he pleaded in *De umbris idearum*, when the latter stated that

> [...] not one and the same artisan will forge and perfect the helmet, the shield, the sword, spears, banners, the tambourine, the trumpet and all the other parts of the soldier's equipment. Hence, the workshops of Plato

7   Vasoli, "Umanesimo e simbologia," pp. 264–65. Some observations on the function of *similitudo* as a psychic law of association are made on pp. 285–98.

8   Rossi, *Clavis universalis*, pp. 68–72.

9   See Rossi's fourth chapter, "La logica fantastica di Giordano Bruno".

10   Yates, *The Art of Memory*, p. 224.

11   L. Spruit, *Il problema della conoscenza in Giordano Bruno* (Naples: Bibliopolis, 1988).

12   Spruit, *Il problema della conoscenza*, p. 40.

and Aristotle alone are not sufficient for those attempting the greater works of other discoveries.[13]

Spruit clearly distinguished the different streams of thought present in the philosopher's epistemology, where Thomism and Neoplatonism turned out to play a predominant role. Revealing the "principles of knowledge" in his first chapter, the Dutch scholar noticed that the continuity in Bruno's world, from the different cognitive faculties – both the senses and the intellect – to the reign of the ideas, is guaranteed by a *universalis similitudo*.[14] Although Spruit focused on the problem of knowledge – and not on memory or magic – my own analysis of the concept will take his valuable findings into account.

In her 1991 edition of *De umbris idearum*, Rita Sturlese interpreted the enigmatic system expounded in this book as a device to memorize words. Due to this new interpretation of Bruno's memory system, the main focus of research shifted to a detailed analysis of mnemo*technics*. As mentioned in the first chapter, Sturlese, forming a research team with such scholars as Matteoli and Tirinnanzi, got right to the bottom of the technical aspect of the art, which resulted in the two highly annotated volumes of the philosopher's *Opere mnemotecniche*. Unfortunately, by shifting her attention to the technical side of Bruno's memory systems, and especially the devices for memorization of words, the concept of similitude – central to earlier research – became less dominant. For Sturlese stressed that this branch of mnemonics (*memoria verborum*) used arbitrary signs, "symbols" that had no relation of similarity with their signification. These images did not look like the sounds they represented.[15] This was an appropriate judgement for symbols that indicate letters and syllables, but the concept of similitude unjustly lost its central role within Bruno's memory, a role which I believe can bridge the gap in our understanding of the philosopher's magical and mnemonic writings.

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13   BOMNE, 1:38: "Non idem, inquam, galeam, scuthum, ensem, hastilia, vexilla, timpanum, tubam, caeteraque omnia militis armamenta conflabit atque perficiet. Ita maiora aliarum inventionum tentantibus opera non solius Aristotelis Platonisque solius officina sufficiet."

14   Spruit, *Il problema della conoscenza*, p. 49.

15   BUI, p. LXXI: "Le 750 unità di espressione impiegate nelle cinque ruote prese in se stesse, una per una, non sono propriamente 'icone', ma segni arbitrari, 'simboli', che non hanno alcuna relazione di similarità con il loro denotato."

3.2 In Search of a Definition of *Similitudo*

Bruno always paid attention to finding the *mot juste*: in his view, in the atrium of philosophy no synonyms were permitted.[16] Yet the word *similitudo* appears in such different contexts throughout his oeuvre that it seems to escape the well-articulated description in *De imaginum compositione*, where it is defined merely as an external conformity, such as that between a man and his statue. These varying contexts in which the word occurs broaden our comprehension of it.

3.2.1 Similitudo *as an External Conformity?*

In the first, philosophical part of *De umbris idearum*, a Neoplatonic frame is established in conjunction with the symbolism of light. This book proposes a new kind of epistemic method that emphasizes the collaboration between will, memory, and intellect – following Augustine's three-way partition of the soul. Within this framework, the images used during the mnemonic practice are valued as the shadows of the Neoplatonic ideas. Practising the art of memory should lead the student gradually to the higher levels of being.[17] Playing with the shadows, the mnemonist interiorizes the Neoplatonic world structure and reproduces the relations between the several levels of being – an important influence from the art of Ramon Lull.

> Quem ordinem cum suis gradibus qui mente conceperit, similitudinem magni mundi contrahet aliam ab ea, quam secundum naturam habet in se ipso. Unde quasi per naturam agens, sine difficultate peraget universa.[18]

After a certain period of practice, when the student conceives the order and its gradations in his mind, he is said to acquire a similitude of the macrocosm (*similitudinem magni mundi*), which is different from the one he possesses by nature. By conceiving the world order, a similarity with the macrocosm is

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16 Bruno, *De imaginum compositione*, BOMNE, 2:490: "Ubi neminem praetereat velim me non nugas synonimizando tractare et logodedalorum – cum illa sensus inopia – copiam; [...] quoniam in curia philosophiae non ulla possunt esse synonyma, [...]." On Bruno's position on synonyms, see also BOMNE, 1:368 and 2:276.

17 Bruno, *De umbris idearum*, BOMNE, 1:64: "Umbra igitur visum preparat ad lucem. Umbra lucem temperat. Per umbram divinitas oculo esurientis sitientisque animae caliganti nuncias rerum species temperat atque propinat."; ibid., p. 104: "Ita ab umbris ad ideas patebit aditus et accessus et introitus." On the epistemic importance of *De umbris idearum*, see especially Spruit, *Il problema della conoscenza*.

18 Bruno, *De umbris idearum*, BOMNE, 1:88.

interiorized which makes the student capable of perfecting the entire universe (*universa peraget*). This is done with ease, as if he were acting through nature (*per naturam agens*). In this first context, then, a similitude is established between the inner and outer worlds, after which the art produces a capacity to *act*, not just an accumulation of knowledge. We will see that verbs such as acting (*agere*) and operating (*operari*) are often used to describe the final stage of the mnemonic practice, and this makes it difficult to maintain the separation between mnemonics and magic on the grounds of a dichotomy between cognition and operation.

In *De umbris idearum* Bruno is clearly not interested in studying the elements separately, but wants to understand them within the web that links all beings together. And this all-inclusive web is woven by threads of *similitudo*.

> Quoniam vero quod est simile simili, est etiam simile eidem similibus sive per ascensum sive per descensum sive per latitudinem, hinc accidit ut – infra suos limites – natura facere possit omnia ex omnibus et intellectus seu ratio cognoscere omnia ex omnibus. Sicut, inquam, materia formis omnibus informatur ex omnibus, et passivus – quem vocant – intellectus formis omnibus informari potest ex omnibus et memoria memorabilibus omnibus ex omnibus, quia omne simile simili fit, omne simile simili cognoscitur, omne simile simili continetur. Porro simile remotum ad suum distans per simile medium sibique proximum tendit.[19]

Similitude is the "cement" holding the Neoplatonic world together, horizontally as well as vertically. This is why nature can produce everything from everything (*omnia ex omnibus*), and why the intellect and reason can know everything from everything. Just as matter and the passive intellect are formed by all forms out of all (*formis omnibus ex omnibus*), so is memory formed by all memorable things from all (*memorabilibus omnibus ex omnibus*). In this second context *similitudo*, through which access is gained in all directions – horizontally as well as vertically – bridges distance by intermediary similarities (*simile remotum ad suum distans per simile medium sibique proximum tendit*). And this counts for the natural *and* the rational worlds, both being subject to the law of *similitudo*.

Not surprisingly, in this context Bruno recalls Homer's golden chain, which for the Platonists symbolized the connection between the highest and the lowest levels of being. "If a certain indissoluble concord", writes Bruno, "connects the ends of the higher with the beginnings of the lower and the heels of the

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19   Bruno, *De umbris idearum*, BOMNE, 1:56.

preceding with the heads of the proximate followers, you will be able to grasp that golden chain, which is conceived as stretching from heaven to earth".[20] In Bruno's view, the connections between "the ends of the higher and the beginnings of the lower" or "the heels of the preceding and the heads of the proximate followers" are exactly similitudes. However, these similitudes may not be seen as identities. Then there would be no hierarchy. Spruit characterized this vertical similarity as a *similitudo dissimilis*, where it is precisely the dissimilitude which guarantees the possibility of access. Despite the central role it fulfils in the two contexts mentioned so far, there is no well-articulated definition of the concept in *De umbris idearum*.

This is true also of *Ars memoriae*, the practical treatise appended to *De umbris idearum*. Yet here, too, we find some indications that help us get a better grip on the concept. The *Ars memoriae* first dedicates some paragraphs to the relation between art and nature. Bruno then recalls the evolution of writing through the centuries, which is compared to the history of internal writing, i.e. the art of memory (*scriptura interna*).[21] With regard to this internal writing, he offers a series of twelve wrappings (*indumenta*) by which one can write internally, which return regularly and will include *similitudo* in his later work. These are: *species, forma, simulachrum, imago, spectrum, exemplarium, vestigium, indicium, signum, nota, character*, and *sigillum*.[22] A "semiotic" interest is present in the following paragraphs, which discuss the different ways in which these "signifiers" can refer. However, this does not mean that they should be approached with a post-Saussurian idea of semiotics.[23] First of all, the term *indumenta* warns against this kind of reading. With this term Pico della Mirandola and Agrippa had translated the kabbalistic Hebrew term *sephiroth*: ten divine emanations that colour the pure light of the divine substance.[24] For the Nolan, too, *indumenta* sensibly colour and wrap something

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20   Bruno, *De umbris idearum*, BOMNE, 1:60: "Certe si quemadmodum indissolubilis concordia fines primorum connectit principiis secundorum et calcem eorum, quae antecedunt, capitibus eorum, quae proxime sequntur, cathenam illam auream, quae e caelo fingitur ad terram usque tensa, contrectare valebis, […]." Cf. Plato, *Theaetetus* (Cambridge, Mass.: Harvard University Press, 1966), 153c 8, referring to Homer's *Iliad* 8, 18 ff.

21   See subsection 3.3.1.

22   Bruno, *Ars memoriae*, BOMNE, 1:136.

23   As mentioned in the first chapter, Bruno's art of memory has been approached in this way by Sturlese and Wildgen (note 1). See also Clucas, "Giordano Bruno's *De imaginum*," pp. 86–87.

24   See K.S. De León-Jones, *Giordano Bruno and the Kabbalah: Prophets, Magicians and Rabbis* (New Haven: Yale University Press, 1997), pp. 32–36. This light symbolism applied to God distinguishes the kabbalistic tradition from the Torah, where God is in no way identified

beyond the senses. Secondly, Bruno's "semiotic" interest was formulated within a Neoplatonic context, where an exact position was reserved for these signifiers in the emanating movement of descent and ascent, as we shall see.[25]

In his exposition of the several *modi significandi* of these referents, one class, in which a magical allusion can be recognized, is considered especially appropriate for the use of his art. This class seems to sustain the natural realities themselves. The *indumenta* in question are *signum*, *nota*, *character*, and *sygillum*, in which so much power is present that they seem to act beyond nature, above nature, and, if required, against nature.

> Quaedam vero adeo arti videntur appropriata, ut in eisdem videatur naturalibus omnino suffragari: haec sunt signa, notae, characteres et sygilli, in quibus tantum potest, ut videatur agere praeter naturam, supra naturam et, si negotium requirat, contra naturam.[26]

Thus, the author appeals to his readers not only by means of the magically coloured *signa, notae, characteres*, and *sygilli*, but also by presenting such formulas as *agere supra* and *contra naturam*, terms often used to describe different kinds of magical operations. In Ficino's translation of Iamblichus's *De mysteriis Aegyptiorum*, for example, acting against nature is clearly linked to demonic influence.[27] Likewise, in Agrippa's *De occulta philosophia*, the formula *supra naturam* appears in the context of realizing marvellous works.[28]

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with light, which is instead his first creation. See G. Scholem, *Le Nom et les symboles de Dieu dans la mystique juive* (Paris: Cerf, 1983), pp. 154–55.

25   Further, in *Ars memoriae* (BOMNE, 1:172) the traditional mnemonic *imagines* or *adiecta*, from the outer senses poured into the inner senses (*a sensibus externis illapsa ad sensus internos*) count different sorts: *forma*, *similitudo*, *imago*, *figura*, *exemplar*, *character* and *signum*. Five of the former twelve wrappings reappear, which is not surprising, for memory images are of course a kind of wrapping. They sensibly dress the data that have to be memorized. This time, *similitudo* and *figura* are included.

26   Bruno, *Ars memoriae*, BOMNE, 1:136.

27   See Iamblichus, *De mysteriis Aegyptiorum, Chaldaeorum, Assyriorum*, p. 73: "Sicut enim per imagines firmas faciunt res, & eventus praesignant, sic & per nova ostenta, & qualiacunque signa, & interim acuunt ex eadem causa, & occasione sagacitatem nostram. Viscera in ostentis transmutantur contra naturam in animalibus ab anima eorum, & a daemone eis praesidente, & a motu aeris motuque coeli, praeter naturam & pro voluntate deorum ad homines admonendos." On this issue, see Clark, *Thinking with Demons*, pp. 251–58.

28   Agrippa, *De occulta philosophia*, p. 414: "Hinc pervenit nos in natura constitutos aliquando supra naturam dominari operationesque tam mirificas, tam subitas, tam arduas afficere, quibus obediant manes, turbentur sidera, cogantur numina, serviant elementa; […]."

The quote above once again suggests that Bruno's art leads to a form of *action*. And in this case, his writing suggests that the operations at stake are magical. For now, however, let us proceed with our quest through the contexts in which similitude is used. So far it has expressed a correspondence between microcosm and macrocosm. In a second context it constituted the web holding the Neoplatonic world together in all directions. We then arrived at the third "semiotic" context and its twelve *indumenta* – among which *similitudo* will appear in subsequent works – where one class was suggested to be appropriate to the *ars memoriae* and so powerful that it could act as *praeter*, *supra*, and *contra naturam*.

In his *Sigillus sigillorum* the twelve categories appear once again, and here their status as *indumenta* in an emanationist world view becomes more comprehensible. After Bruno's exposition of the four rulers (*amor, ars, mathesis*, and *magia*) that lead the soul and its internal acts to perfection, and the four objects (*lumen*, *color*, *figura*, and *forma*) to be considered, the emanative progress of the first form (*absoluta essendi forma et dans omnibus esse*) in the triple world is described. This "first form, also called *hyperousia* or – in the author's language – *superessentia*, stands on top of the ladder of nature and stretches itself to the lowest level of being and depth of matter." Bruno continues:

> It brings forth the ideas of the metaphysical world and, giving all forms and pouring seeds into the womb of nature of the physical world, prints the vestiges of the ideas in the back of matter, as if it multiplied one image, according to species, in a number of facing mirrors. It forms the shadows of the ideas – according to numbers for the sense, as species for the intellect – in the rational world. In so doing, it illuminates the shadows of the rational world according to its capacity and paints things and intentions with colours.[29]

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[29]   Bruno, *Sigillus sigillorum*, BOMNE, 2:274–76: "Prima forma, quam vel yperusiam vel nostro idiomate superessentiam dicimus, a summitate schalae naturae ad imum entium profundumque materiae sese protendens, in mundo methaphysico est fons idearum et formarum omnium elargitor et seminum in naturae gremium effusor; in physico idearum vestigia materiae dorso imprimit, velut unicam imaginem secundum speciem numero adversorum speculorum multiplicans; in rationali umbras idearum numerales ad sensum, specificas ad intellectum effingit, illius pro capacitate tenebras illuminando, rerum intentionumque colores impingendo." Also the scholastic distinction between *ante rem*, *in re*, and *post rem* is echoed here. See Spruit's chapter on *mundus triplex*, *Il problema della conoscenza*, pp. 101–12.

In other words, the *superessentia*, source of all being, emanates and brings forth the natural world, which in its turn is absorbed through the senses by the rational world of the human mind. Thereupon Bruno specifies that, departing from a physical level, where the divine ideas have left their vestiges in matter, the natural forms are now unfolded (*explicantur*) into the rational world in twelve different ways, and consequently take twelve different names. Here again, the list of *indumenta* (among which we now find *similitudo*) is given. The reader is then encouraged to meditate for himself and not follow the manner of grammarians and vulgar philosophers, from whom Bruno differs in that he denies the existence of pure synonyms.[30]

    First of all, it is noteworthy that, by positioning the twelve wrappings within the process of cosmic emanation (as the passage of the physical into the rational), he claims a specific function for them in the movement of ascent and descent. They sensibly "dress", in the rational world, what has its origin in the world of divine ideas. As such they are even further away from their divine origin than the natural beings in which the vestiges of ideas are imprinted. On the other hand, it is from this rational world of shadows that the inward ascent of the human soul to the divine ideas begins. Secondly, the use of the term *indumenta* also approximates the mnemonic practice to divine creativity, which, according to the kabbalists, manifested itself through the ten *sephiroth* in creating the world.[31] This parallel becomes even more relevant in the mnemonic practice, whereby *indumenta* are combined with letter combinations – the two equivalent ways of describing the divine creation for the kabbalists.[32] As to the characteristics of these twelve *indumenta* and the differences between them,

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30   Bruno, *Sigillus sigillorum*, BOMNE, 2:276: "Intrinsecae rerum naturalium formae duodec-
        im rationibus – secundum quas duodecim sumunt denominationes – explicantur: sunt
        autem species, figurae, simulacra, similitudines, imagines, spectra, exemplaria, indicia,
        signa, notae, characteres, sygilli; quorum differentiam et distinctionem non a gramma-
        tista nec a vulgari philosopho perquiras, sed per temet ipsum meditare. Nos etenim si
        haec per alia nomina explicare velimus, progressum numquam terminandum adoriemur:
        synonimiam enim puram in nominibus nullam esse credimus." *Forma* and *vestigium*, as
        found in *De umbris idearum*, are now replaced by *figura* and *similitudo*.

31   G. Scholem, *Major Trends in Jewish Mysticism* (1941; repr. New York: Schocken Books, 1995),
        pp. 10–11.

32   Scholem, *Le Nom et les symboles de Dieu*, p. 73: "Mais pour les kabbalistes les sefirot et les
        lettres, parties consitutives du verbe divin, ne sont que deux méthodes pour représenter
        symboliquement la même réalité. En d'autres termes, que l'on se représente le proces-
        sus de la manifestation, de l'exteriorisation de Dieu à l'aide du symbole de la lumière, de
        sa propagation et de réflexion, ou que l'on comprenne ce processus comme une activité
        du langage divin, du verbe qui se transforme et du nom divin qui se décompose dans la

they are not worked out here but left to the consideration of the reader. A more extensive discussion appears in his last work on the art of memory, where an exact definition of similitude will finally be found.

In the first chapter, "*de luce, radio et speculo*", of the first book of the *De imaginum compositione*, the threefold world is described in almost exactly the same words as it is in *Sigillus sigillorum*.[33] The difference is that by now the philosopher had acquired his doctrine of the infinite universe as expounded in his Italian dialogues.

> Postquam supranaturaliter unum ens infinitum, intensive totum ubique atque totaliter in immenso repertum intelleximus, unum item extensive infinitum universum, quod in partibus aliis atque aliis, alibi atque alibi corporaliter est perspicuum, ante oculos obiecimus rursumque species substantiae atque ea quae realiter in substantia reperiuntur accidentia, sequitur ordo mundi rationalis, qui est ad similitudinem naturalis cuius est umbra, qui est imago divini cuius est vestigium.[34]

The supernaturally infinite one, which inheres everywhere in its totality, comes before the universe, or extensively infinite one, which presents itself corporeally here and there, in ever-changing parts. After this extensively infinite universe comes the order of the rational world, which exists as a likeness to the natural world (*ad similitudinem naturalis*), of which it is the shadow (*cuius est umbra*). Thus, infinity is introduced into the threefold world. The rational world is said to be a likeness of the natural one, which in its turn is called the image and vestige of the divine. Similitude here is not the "cement" keeping the layers of the Neoplatonic world together, nor is it one of the twelve *indumenta*. This time it expresses a relation of the rational world with respect to the natural world, somehow similar to – although more general than – the

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creation, somme toute il ne s'agit pour les kabbalistes que d'une question de choix entre deux symbolismes equivalents, celui de la lumière et celui du langage."

33   Bruno, *De imaginum compositione*, BOMNE, 2:492: "Quae sane species ante naturalia appellantur idea, in naturalibus forma sive vestigium idearum, in postnaturalibus ratio seu intentio, quae in primam atque secundam distinguitur, quam nos aliquando idearum umbram consuevimus appellare." The threefold world is equally important and often invoked in Bruno's magical writings. See, for example, in *Theses de magia* (BOM, p. 340): "Regulariter loquendo, ideae sunt entia methaphysica, vestigia idearum sunt entia physica, umbrae idearum entia rationis; prima proportionantur sigillis imprimentibus, secunda formis impressis, tertia apprehensis oculo vel sensu."

34   BOMNE, 2:494: For "l'universo esplicato", see G. Bruno, *De la causa, principio et uno*, BOeuC, 3:207; G. Bruno, *De immenso*, BOL, vol. 1, part 1, p. 291.

first context, where it indicated the correspondence between inner and outer worlds when the philosopher interiorized a similitude with the macrocosm after he had conceived the world order and its gradations.

The author then proposes to focus on the third signification – the rational universe – which is a kind of living mirror (*speculum quoddam vivens*) where the image of the natural beings and the shadow of the divine reside.[35] For the purpose of discussing the ways in which the mirror receives the ideas, in Bruno's view it is justified to repeat the distinctions of the twelve names, despite the fact that they are generally confused, used without distinction by the learned, and that it is not always necessary to fix the terminology rigorously so long as the meaning is clear and evident. Thereupon he repeats his list made up in *De umbris idearum*.[36] The variations in the list show that rigour was not Bruno's strong point. The list is all but uniform through his subsequent works.[37] In this last version the three first names on the list (*idea, vestigium, umbra*) immediately evoke the threefold world. Subsequently he gives a careful description of each term and its features, so as to amplify further the third, recurrent "semiotic" context in which similitude has appeared.

The general *nota* is used for anything that indicates something else, without reference to means. The *character* makes use of drawn lines or points that, when put in a certain order, signify something. The *indicium*, like the *signum* and the *sigillum*, has the capacity not to represent or signify, but rather to show or guide (as does the index of a book). *Figura* differs from the previous terms. First, it can only refer externally, while the idea, the vestige, and the shadow can refer both internally and externally. Secondly, the *nota, character, signum,*

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35 BOMNE, 2:496: "Actum praesentis considerationis proponimus in universo iuxta tertiam significationem, quod est veluti speculum quoddam vivens, in quo est imago rerum naturalium et umbra divinarum".

36 BOMNE, 2:496: "Quarum nomina licet vulgo confundantur et etiam interdum a sapientioribus indiscrete usurpentur neque in omni proposito conveniens sit rigorem in ipsa dictione constituere, ubi rerum certa atque evidentior est significatio, tamen in praesentiarum, quod et in libro *De umbris idearum* fecimus, non iniuria repetendum ducimus esse, nempe uti distinguamus haec nomina: 1. ideam, 2. vestigium, 3. umbram, 4. notam, 5. characterem, 6.signum, 7. sigillum, 8. indicium, 9. figuram, 10. similitudinem. 11. proportionem, 12. imaginem." By comparison, *idea, umbra, figura, similitudo*, and *proportio* here replace *species, forma, simulachrum, spectrum*, and *exemplarium*, which occurred in the Parisian treatise.

37 On the other hand, the number of categories is constant in its agreement with the Lullian tradition reformed along kabbalistic lines, where serious attention was paid to the right number of divine predicates and the rhythm of combination. On this subject, see my article "A Perspective on Bruno's *De compendiosa architectura et complemento artis Lullii*."

sigillum, and *indicium* can denote points, lines, or non-closed spaces, while *figura* is a closed space.[38] *Similitudo* is also unlike the others because they can signify without an external conformity, which is necessary for a similitude. A human can be signified by letters and characters, as with signs, indications, and notes, without similitude. Similarity may be seen in a picture, a statue, or a perception that is preserved in the faculty of *phantasia*.[39] *Proportio*, next, is established between at least three terms (but most often four), and therefore is not like a similarity, for which two elements are sufficient, as in: "The mule is similar to the horse". Instead, in a simple proportion, such as "two is to four, as four is to eight", three terms are required.[40] The series of signifiers is closed with *imago*, also differing from similitude because it embraces a greater energy, emphasis, and universality. Being the image of something is more than resembling it. So the artefact is in a certain way said to be similar to the artist, but not made "to his image" or "in his image".[41] Thus, Bruno concludes his exposition of the twelve signifiers.

After the former contexts in which similitude appeared as a key concept of the Nolan's *ars memoriae*, the definition given in *De imaginum compositione* as

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38   Bruno, *De imaginum compositione*, BOMNE, 2:500: "Mox in hoc tertio genere [i.e. in mundo rationali] consistentibus convenit ulterius distincte aliorum nominum notiones usurpare, ut nota dicatur omne illud quod quomodocunque ex prima vel secunda, proxima vel remota, immediata vel mediata ratione aliquid demonstrat. Character quod certo linearum tractu vel punctorum situatione aliquid significat, sicut elementa. Signum est quodammodo genus ad omnia quae significant, sive ut idea sive ut vestigium sive ut umbra sive aliter. Sigillum – quod signi quoddam diminutivum est – signi partem notabiliorem vel signum contractius acceptum significat, sicut solo capite vel sola manu hominem vel hominis operationem significamus. Indicium, sicut et signum et sigillum, est cuius munus non tam est representare, significare, quam ostendere, sicut index non rem quam indicat per se significat vel notat, sed ad eius tantum intuitum seu obtutum invitat vel appellit. Figura differt ab omnibus praecedentibus, quia ideae, vestigia et umbrae sunt tum relata ad intrinsecum tum ad extrinsecum rerum, figura vero ad extrinsecum tantum."

39   Ibid.: "Similitudo vero differt ab omnibus praedictis, quia eorum non est necessario eadem species, quandoquidem significatur homo literis et characteribus tanquam signis, indiciis, notis, non tanquam simili; simile vero erit pictura vel statua vel species per sensum accepta et in phantasia reservata." "External conformity" seems to be the most appropriate translation in this context.

40   Ibid., p. 502.

41   Ibid.: "Imago tandem differt a similitudine, quia maiorem quandam energiam, emphasin et universalitatem complectitur; plus enim est esse ad imaginem quam ad similitudinem. [...] Sicut et artificium simile dicitur quodammodo artifici, non tamen ad eius imaginem vel in eius imagine dicitur, nisi vel in proximo genere vel in eadem sit specie."

merely one of twelve signifiers is rather disappointing. Therefore, this exploration of *similitudo* in the mnemonic works results in a certain ambiguity. On the one hand, in Bruno's "semiotic" search similitude does not obtain a privileged position. On the other hand, *similitudo* constitutes the web keeping both the natural and rational universes together and expresses the correspondence between the outer and inner worlds. In conclusion, the rather simple definition in *De imaginum compositione* seems disproportionate to its status in Bruno's other works on memory.

3.2.2 *"A qualification of* similitudo *should be pointed out"*

According to my central thesis, magic and mnemonics represent two sides of the same coin. Although they were separated into two corpora, I have proposed to focus on the concept of similitude to demonstrate their complementarity in Bruno's mind. We must therefore now ask whether there is a *meaning* of similitude articulated in the magical works, like there is in *De imaginum compositione*.

In *Theses de magia* (1591) Bruno discusses change and magical action. A basic rule is that "for every action, be it magical, physical or of any other sort, three components are required: an active power, a passive power, and the application of the one to the other."[42] The three subsequent theses deal with these three components. "Every action and every change is from one contrary into the other", writes Bruno, "and there is no change from the similar into the similar, nor from the identical into the identical."[43] Action and change do not occur when a similar turns into a similar. This would merely lead to continual sameness. "But there is no reason why", he continues in the next thesis on the passive component, "there cannot be certain affections or passions of the similar from the similar, or of the similar with the similar or dissimilar with the dissimilar, or even of the contraries with the contraries as with mixtures, compositions, and apprehensions."[44] Certain affections and passions can cause similar affections and passions, such as when a person can feel sad by looking at a weeping child, or when meeting a happy person can cheer someone

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42 Bruno, *Theses de magia*, BOM, p. 356: "In omni actione seu magica seu physica seu cuiuscunque generis illa sit, tria requiruntur: potentia activa, passiva et debita applicatio alterius ad alterum."

43 Ibid., p. 358: "Omnis actio et omnis mutatio est de contrario in contrarium; similis enim in simile non est mutatio, neque eiusdem in idem."

44 Ibid.: "Non obstat quasdam affectiones, seu passiones mavis dicere, esse similium a similibus, seu similium cum similibus et dissimilium cum dissimilibus, imo etiam contrariorum cum contrariis, ut admistiones, compositiones et apprehensiones."

up. Thus, passions are not only generated through contraries, as are actions or mutations. Passions are less restricted and can be from similars, with similars, with dissimilars, or even with contraries, as in mixtures, compositions, and apprehensions. Before proceeding to the third component, the application of the active power on the passive power, it is remarked that for these mixtures, compositions, and apprehensions a different kind of judgement is necessary than for actions or passions:

> De his enim aliud est iudicium quam de actionibus et passionibus. Et aqua aquae admiscetur melius quam cum vino, et vinum aquae melius quam oleum vel adiposum quiddam, quia magis est simile; et in luti compositione concurrunt aqua et pulvis, in oximelle mel et acetum. Apprehensio quoque sensitiva et intellectiva est per similitudines specierum abstractarum ab obiectis cum his quae sunt in eorum superficie. Notanda etiam distinctio similitudinis; est enim similitudo quaedam aequiparantiae, quaedam analogiae, quaedam proportionis, quaedam proprie: I qua homo similis est homini, II qua homo similis est Deo, III ut qua ita se habet sensus ad sensibile sicut intellectus ad intelligibile, IV ut species Socratis in imaginatione similis est speciei quae est in ipso subiecto naturali physico.[45]

The facility of the mixture is clearly bound to the law of *similitudo*. Water can be mixed with water more easily than with wine, and wine can be mixed with water more easily than with oil or fat, because wine is more similar to water. Most striking is that among these mixtures and compositions is placed the act of apprehension, both sensitive and intellectual. Thus, the process of perception and the formation of the intellectual species are understood in a material frame – as mixtures – and occur through the similarities of the effigy abstracted from the objects with their similars in the surfaces of those objects.[46] So, in this magical treatise a clearly cognitive interest in *similitudo* is introduced, translating the process of psychic abstraction into material terms. This serves as the basis for the magical practice of *fascinatio*, as will be seen later.

In this discussion of the *meaning* of similitude in the magical works, we find an interesting distinction between four different sorts of similarities. First,

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45   Ibid., pp. 358–60.

46   The material frame of the cognitive process will be elaborated in my fourth chapter. For the Thomistic origin and the importance in Bruno's epistemology of *species intelligibilis*, see Spruit, *Il problema della conoscenza*, pp. 39–97 and passim.

there can be equality between two humans. The similitude between man and God, by contrast, has to be understood in an analogical way. Thirdly, a proportional similarity can be established between a greater number of terms. And finally there is the proper resemblance, as when the effigy of Socrates in the imagination is the same as the effigy which is in the natural subject itself. These four sorts of *similitudo* seem to cover a semantic field larger than the one offered by the narrow definition in *De imaginum compositione*. The *similitudo analogiae* between man and God, for example, cannot be forced into the description of a reference according to an "exterior conformity". The *similitudo proportionalis* includes proportion, which in *De imaginum compositione* was different from similitude because at least three terms were needed. In brief, through these four sorts of *similitudo* the universe can still be crossed in all directions. The *similitudo aequiparantiae* – such as between humans – provides horizontal access, while the *similitudo analogiae* – such as between man and god – vertically links the lower to the higher levels of being. The *similitudo proportionalis* makes it possible to focus on order, and proper resemblance, in its turn, connects the external (physical) with the inner (mental) world. Thus, lower and higher, inner and outer are interconnected through this one concept, just as was the case in the books on memory, notwithstanding the definition in *De imaginum compositione*.

Therefore, we can conclude that despite a definition limited to external conformity in a painting, a sculpture, or a species in the perceptive faculty, the *meaning* of *similitudo* in the Nolan's mind goes far beyond this description. It also expresses a relation between the rational and the natural world; it is the "cement" linking the different layers of the Neoplatonic world and is presented as the key to complete all the realities of the universe. And this counts for both the mnemonic and the magical treatises, where the four sorts of similitudes imply omnidirectional access. In brief, the philosophical principle of *similitudo* is common to both the magical world and the universe of memory, opening all doors as if it were a master key.

3.3   The Function of *Similitudo*

3.3.1   *"An almost divine invention"*
This section focuses on the *function* of *similitudo*. First, before taking a look at Bruno's magic, I shall deal with the mnemonic practice. This is a perilous enterprise, for there is a genuine risk of losing our bearings in the complexity of his memory system. The author of *De umbris idearum* is well aware that his

book can be understood only with difficulty. In a prefatory poem, Merlin grants access to those who agree to enter the labyrinth without a thread.[47] Thus, the reader is warned about the maze he is about to enter.

The practice itself is presented for the first time in the *Ars memoriae*. This treatise is subdivided into three parts, of which the first begins with an exposition of the affinities between art and nature. Then, the author recalls the evolution of writing, which is compared to the history of mnemonics. Different materials were used through the centuries. In antiquity incisions were made on the bark of trees. Later, stones were inscribed, papyrus and parchment were written on with ink, paper was invented, and finally the printing press – far more useful than the other instruments – made its entrance. An analogous progress has occurred with the techniques of internal writing (*scriptura interna*), which make use of places and images – instead of paper and writing – to inscribe data to be remembered in one's internal book.[48] Within this evolution, the Nolan saw himself as a great innovator. Now, although it is too much to say that he devised a mnemonic printing press, it is plausible that his inventions for the memorization of words (*memoria verborum*) sprouted when the young Bruno worked as a proofreader in a printing office in Geneva. The principle of combining separate typographical characters, which led to the breakthrough of the printing press, stands at the core of the Nolan's new techniques. According to him, Cicero had ridiculed the Greek ambition of *memoria verborum*. An infinite number of words would lead one to remember an infinite number of images, a never-ending process.[49] The Nolan's inventions, on the other hand, did not translate entire words, but their constitutive letters, into images. Thus,

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47 Bruno, *De umbris idearum*, BOMNE, 1:14: "Concaedam vobis, concaedentibus quod/ Intrastis labyrinthum sine filo." Cf. chapter 2 above, note 187.

48 Bruno, *Ars memoriae*, BOMNE, 1:134: "Ideo – ut ad propositum intentionis nostrae spectat – cultris in arborum corticibus prior scripsisse perhibetur vetustas. Cui successit aetas in lapidibus celte excavatis inscribens; quam sequuta est papyrus sepiarum succis exarata. Inde pergamenae membranae atramento artificioso magis intinctae. Proinde charta et inchaustum, praeloque premendae in usum longe omnium aptissimum litterae. […] Haud secus in iis, quae ad scripturam pertinere videntur internam, contigisse arbitramur, dum ab antiquo humanum studium sive a melico Simonide sive ab alio sumpserit exordium; qui usu locorum et imaginum proportionalium chartae atque scripturae, actuque phantasiae et cogitativae locum scriptoris et calami subeuntibus, species rerum memorandarum in interno libro inscribere studuerunt."

49 Bruno, *Ars memoriae*, BOMNE, 1:222: "Qua de re qui primus apparet hanc artem transtulisse a Graecis ad Latinos, deridet Graecorum quorundam studium verborum imagines conscribere volentium atque ita eas sibi parare, ut cum opportunae fuerint, in inquirendo tempus non consumeretur. Videbat enim verborum infinitam esse multitudinem,

combinations with a finite, pre-established set of mnemonic images could be employed to memorize an infinite quantity of words, just as thousands of pages could be printed with a relatively small set of typographical characters. In this light Bruno's *ars memoriae* seems to be the fruit of the age of printing. The end of this first part of *Ars memoriae* deals with different sorts of *indumenta* or signifiers, useful for the *scriptura interna*.

The second part of *Ars memoriae* is subdivided according to the three constitutive elements of the art: *subiecta, adiecta*, and *organum*. The first two are new terms for what in the traditional art of memory were called *loci* and *imagines*. The *organum* is the instrument used by the soul to practise the art.[50] Until Bruno's time it had never been considered, and therefore it had no proper and generally accepted name.[51] This instrument, by which the soul screens the memory for specific content, is called *scrutinium* and compared to a stick used to stir a pile of acorns in search of a chestnut.[52] This attention to the instrument used by the soul during mnemonic practice links the art to the functioning of the human psyche. This psychological interest is a constant in all of Bruno's treatises on the *ars memoriae*. What is the share of reason and imagination during mnemonic practice? What is the relation between memory and the intellect? These important questions are discussed copiously and will be treated at length in my next chapter.

Only the third part of *Ars memoriae* turns to mnemonic *practice* in the strict sense of the word. Before illustrating the *function* of similitude, an excursion is necessary to expound this practice. It is presented as a means of operation – a fact which once again renders untenable a purely cognitive interpretation of Bruno's art of memory.[53] The pages that follow display the philosopher's most famous system for the memorization of words using concentric Lullian wheels. In my first chapter I mentioned Sturlese's contribution, which has

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ideoque ridiculum esse illam persequi velle." See also Bruno, *Cantus Circaeus*, BOMNE, 1:726. Cf. Pseudo-Cicero, *Rhetorica ad Herennium*, 3:23 and 3:38.

50 Bruno, *Ars memoriae*, BOMNE, 1:180: "Reliquum est ut de organo, quo in proposito utitur anima, nonnihil determinemus."

51 Bruno, *Ars memoriae*, BOMNE, 1:182: "Quod ita communi nomine insignimus, quippe cum ad nostra usque tempora eius nulla facta fuerit consideratio, proprio celebrique nomine caret."

52 Ibid., pp. 182–84: "Est ergo instrumentum istud in facultate cogitationis proportionatum baculo in nostra manu – unde nominis instituti vel melius instituendi rationem habere possis –, quo stantes iacentem acervum dimovemus, diruimus atque dispergimus, ut nobis castanea e medio gladium vel e communitate aliarum castanearum determinata prodeat."

53 Ibid., p. 216: "Age iam ad operandi formam transeamus insinuandam."

drawn attention to the practice of *memoria verborum*. Nevertheless, the merit of her interpretation does not mean that this system is *only* a way to memorize words.

Proceeding didactically, the master starts with the first praxis of three wheels, each containing 30 letters (23 Latin, 4 Greek, and 3 Hebrew) to represent syllables in Latin, Greek, or Hebrew. For Bruno, these 30 letters cover all possible pronunciations of the three languages. He does not need three entire alphabets, because A can represent α and א as well. The Latin character suffices to express the sound of the two other characters.[54] Each letter is then linked to a fragment of imagery that will occur in a mnemonic scene to visualize a given syllable. The first letter of the syllable is taken from the outermost wheel and is represented by a character from Ovid's *Metamorphoses*: Lycaon stands for A, Deucalion for B, Apollo for C, and so on. The second letter comes from the wheel in the middle and is represented by "situations" taken from the same *Metamorphoses*. "At the banquet" (*in convivium*) stands for A, "on the stones" (*in lapides*) for B, "on the Python" (*in Pythonem*) for C, and so on. Finally, the third letter from the innermost wheel is "mnemonically" translated by attributes: "chained" (*cathenatus*) A, "sashed" (*vittatus*) B, "belted" (*baltheatus*) C, and so on. This way, any composition of three elements can be visualized in a mnemonic scene. Lycaon at the banquet in chains makes AAA. "Amo", for example, is portrayed by Lycaon (A) with the head of Medusa (M) and the attribute originally assigned to Pluto (O) – which is not further specified but left to the imagination of the disciple.[55] Thus, by means of 90 image fragments, any syllable in Latin, Greek, or Hebrew can be transposed in a mnemonic scene. This first praxis is considered a kind of introduction.

Thereafter the master gradually introduces the student into the most advanced system, or second praxis, consisting of five concentric wheels, each consisting of 150 biliteral letter combinations (the 30 former characters in combination with the 5 vowels), employed to form entire words. This advanced system for *memoria verborum* follows a method similar to that of the

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54   Ibid., p. 224: "Ex iis ergo triginta tuae notitiae melius inhaerentes ad triginta elementorum expressionem faciendam eligantur, quae completum reddunt numerum eorum, quae diversis inserviunt in tribus idiomatibus pronunciationum differentiis. Neque enim necessarium est triplex instituere elementarium, cum A ipsum aequivaleat ipsi α et א, B ipsi β et ב, similiter et alia multa aliis."

55   Ibid., p. 240: "Item in secunda figura, duabus internis rotis ad vertiginem solutis et expeditis, compositum quodcumque ex tribus elementis praesentare valebis, ita ut ubi in tribus rotis fixis Lycas in convivium cathenatus presentabat tibi AAA, iam Lycas agens quod Medusa cum insigni Plutonis presentabit AMO."

first praxis and translates the biliteral combinations of the five wheels into images that will take part in a mnemonic scene. Those on the outermost wheel are represented by famous inventors (*agentes sub inventorum nomine*). The combinations on the second wheel are "mnemonically" translated by actions (*actiones*), those on the third by marks (*insignia*), those on the fourth by accompanying elements (*adstantia*), and those on the fifth by circumstances (*circumstantia*).[56] Once the student has linked the letter combinations to their corresponding image fragments and imprinted them on his or her memory, he can start turning the wheels to form words which are thus translated into a mnemonic scene. The letter combination linked to the acting inventor (of the first wheel) always represents the first syllable, his action (of the second wheel) the second, the marked object (of the third wheel) the third, and so on. The fixed structure of this mnemonic scene indicates to the student which syllable is represented by each of the image fragments of the scene. The Nolan's system is even more sophisticated than it has been presented here. He pays attention to how to insert *liquida* and how to add final letters to a syllable (as in *post* or *trans*), and he presents specific techniques to translate these insertions into fragments of images as well.

After the elaboration of this system the author praises his own invention and underlines two novelties considered impossible by the ancients. In the first praxis each letter combination is applied to only one subject: the Lullian wheels. Instead of losing oneself in memory palaces too small to contain the infinity of words, Bruno sets boundaries to the quantity of mnemonic *loci* or *subiecta* by introducing the wheels. The second novelty, in the second praxis – the "almost divine invention, begetting other inventions" – offers the possibility of ascribing each term, even in Greek and Hebrew, to this one *subiectum*. With this, Bruno claims that his invention has perfected inner writing, far more quickly and without difficulty, and it has ripened the fruit of the memory exercise.[57] Now that his *memoria verborum* has been closely examined, we can see how this mnemonic fruit may have ripened in the printing office, where

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56   Ibid., p. 254: "Conficies igitur ad similitudinem trium praedictarum rotarum quinque rotas fixas, quarum singulae centum et quinquaginta constent combinationibus elementorum duorum. Quorum exterior atque prima significet agentes sub inventorum nomine. Secunda actiones. Tertia insignia. Quarta adstantia. Quinta circumstantia."

57   Ibid., p. 342: "Duo igitur sunt quae invenimus et complevimus in hac arte, quorum utrumque antiquis omnibus visum est factu impossibile: primo ad primam praxim, ut quamlibet et qualemcumque combinationem unico tantum presentandam tribueremus subiecto. Secundo ad secundam praxim – quod pene divinum est inventum et aliarum pregnans inventionum: unum abest, ut quis ipsum noverit applicare –, ut singulari subiecto et individuo huius artis quemlibet terminum possimus commode referendum

the same "economical" rule is in force. Words are split up into their constitutive elemental characters, which are linked to image fragments to be reused in different mnemonic scenes, just as the metal characters of the press can be used to print more than one page.

Whether a patient and ingenious disciple has ever been able to master the system of the Lullian wheels, we do not know. Besides, as Torchia emphasized, the system is not faultless. Some corrections of syllables on the Lullian wheels had to be carried out by Sturlese to make the system work. It is true that the system is proudly presented by the author himself as a device for *memoria verborum*, but this does not mean that it is *only* a machine to remember words. We shall return to this matter. For now, let us question the "machine". Leaving aside the students, was the master himself capable of applying the new techniques? Two testimonies give an idea of his own abilities in mnemonics. In my previous chapter I mentioned the Bohemian aristocrat Hans von Nostitz, who attended Bruno's courses in Paris more than once in 1582. Thirty-three years later, in the introductory letter of his *Artificium Aristotelico-Lullio-Rameo* (1615), he evokes the Nolan's magnificent demonstration of the Lullian and mnemonic art. I have already underlined that Bruno successfully attracted many disciples and listeners "in private" (*privatim*). Here, however, it is worth considering that von Nostitz greatly admired "the skill and swiftness which Giordano sometimes showed when discussing copiously at once any given argument."[58] The master himself, in other words, was very impressive. Many disciples followed private lessons, but few of them were able to reach Bruno's perfection. But however spectacular his demonstrations may have been, this anecdote does not specify to what extent the master put into practice his system for *memoria verborum*.

Another testimony is found in the notes on Bruno in the diary of Guillaume Cotin, the librarian of the convent of St Victor, whom the philosopher visited regularly during his second stay in Paris. On 21 December 1585, Cotin writes: "Giordano has told me that one day he was called from Naples to Rome by Pope Pius v and Cardinal Rebiba, carried in a coach, to demonstrate his artificial memory. He recited the psalm *Fundamenta* word for word in Hebrew, and taught some of this art to the aforementioned Rebiba."[59] Apparently, the

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adiicere. Facit ergo inventio nostra ad longe citius et expeditius intimam scripturam perficiendum atque exercitii fructum maturandum."

58   See chapter 2 above, note 194.

59   Spampanato, *Documenti della vita di Giordano Bruno*, p. 43: "*21 décembre*. Jordanus m'a dit qu'il fut appellé de Naples à Rome par le pape Pius v et le cardinal Rebiba, amené en coche, pour monstrer sa Mémoire artificielle, récita en hébreu à tout endroit le psalme *Fundamenta*, et enseigna quelque peu de cest art audit Rebiba."

young friar of Naples was already making his name as a mnemonist, which is not so surprising because the *ars memoriae* was considered a specialty of the Dominican order. Besides, the choice of Psalm 87 – praising Zion as the City of God, admitting Egyptians and Babylonians into her midst – betrays the missionary spirit associated with the art that could be employed by Pius V for converting the Jewish community in Rome.[60] If Bruno was not bragging to the Parisian librarian, if he really did recite the psalm word for word in Hebrew, then the *memoria verborum* may have been useful for someone ill-acquainted with the Hebrew language, notwithstanding the probability that this *memoria verborum* lacked the refinements of his later inventions.[61]

In conclusion, the importance ascribed to his "almost divine invention" in *Ars memoriae*, the fact that numerous other systems for translating words into mnemonic images – some especially designed to memorize Hebrew triliteral roots[62] – are elaborated in his later works, and, above all, the technical refinement of these inventions, which could only be devised by someone who had actually *employed* such tricks, point to a master who practised *memoria verborum* on a certain level, and as such was the "living proof" of the art's value. After this extensive excursion, we can finally return to the central question in this section on the function of similitude during the practice of the art of memory.

3.3.2   *A More Contracted and a More General Form of the Art*

It is striking that in the practice of *memoria verborum* as outlined above, similitude disappears from the stage. Indeed, the images that represent the letters have no relation of similarity with the characters at all, as Sturlese correctly remarked.[63] For the master it is not necessary for the initials of the mnemonic persons or actions to correspond with the letters to be remembered.[64] "Regrettable for the disciple" is the least we can say. This known technique could have facilitated the mnemonic practice considerably. An Albertus known

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60   Ricci, *Giordano Bruno*, pp. 94–97.

61   De León-Jones concludes that "Bruno himself could not read Hebrew but rather relied on Latin (or Italian) translations of Jewish texts". See K.S. De León-Jones, *Giordano Bruno and the Kabbalah: Prophets, Magicians and Rabbis*, p. 14. However, the system for memorizing Hebrew roots in *Explicatio triginta sigillorum* (not considered by De León-Jones) proves Bruno had *some* notion of this language by 1583.

62   For example, in the twenty-eighth seal, "*De claustro kabbalistico et templo*" in Bruno, *Explicatio triginta sigillorum*, BOMNE, 2:80.

63   See note 15.

64   Bruno, *Ars memoriae*, BOMNE, 1:228: "In quibus non requiritur necessario primum nominis agentis vel actionis elementum idem esse cum illo cuius est expressivum: sufficit enim ambo haec determinato huic significando esse adscripta."

to the disciple might more easily evoke "A" than Lycaon. A relevant question, then, is how this device for the memorization of words can ever answer the ambitions of the first part of *De umbris idearum*, where the student was encouraged to ascend and descend the ladder of being through *similitudines*. How can the golden chain be reproduced by memorizing words by means of composed mnemonic scenes, of which each fragment translates a letter combination? Can the student acquire a *similitudo magni mundi* by these exercises? At first sight he cannot. A closer look, however, suggests the contrary.

Two remarks must be made before answering this compelling question on the internal logic of *De umbris idearum*, apparently linked to a major deficiency in the concept of similitude in the *Ars memoriae*. First of all, *Ars memoriae* is considered a more contracted sort of artificial memory than *De umbris idearum*. After the introductory dialogue of *De umbris idearum*, but before starting his thirty intentions and ideas – also linked to thirty letters and placed on two Lullian wheels – the author distinguishes two forms or ways to treat his art.

> Artem istam sub duplici forma tractamus atque via: quarum altera est altior et generalis tum ad omnes animi operationes ordinandas, tum etiam est caput multarum methodorum, quibus tamquam diversis organis artificiosa potest pertentari et inveniri memoria. Et consistit ipsa primo in triginta intentionibus umbrarum. Secundo in triginta conceptibus idearum. Tertio in pluribus complexionibus, quae fieri possunt ex intentionibus et conceptibus per industriosam adaptationem elementorum primae rotae ad elementa secundae. Altera, quae sequitur, est contractior ad certum memoriae per artificium comparandae genus.[65]

The art expounded in the second part of the book (the *Ars memoriae*) is narrower (*contractior*) and deals with a specific sort of artificial memory (*ad certum memoriae per artificium comparandae genus*). In contrast to the higher and general form (*altior et generalis*) of *De umbris idearum* for ordering all the operations of the soul, *Ars memoriae* deals "especially" with *memoria verborum*.[66] The higher form is called the "origin" (*caput*) of many methods, by which – for example, by means of different instruments – the artificial memory can be probed and discovered. It consists of thirty intentions of the shadows and

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65   BOMNE, 1:40. The importance of this passage has been stressed by Clucas, "*Simulacra et Signacula*," p. 261.

66   Only at the end of *Ars memoriae* do we find passages dealing with the other branch of the art: the memory of things, or *memoria rerum*.

thirty concepts of ideas – sixty paragraphs in which the Nolan deals with the philosophical tradition, each intention or shadow linked to one of the thirty letters and placed on two Lullian wheels. The intentions represent the share of the will directed towards the divine; the concepts, the share of the intellect illuminated by the divine, to realize the ascent of the soul. At the end of *De umbris idearum*, after the thirty intentions and concepts have been elaborated, the author writes that, in order to acquire the right disposition of the intellect, will, and memory by means of this general art, the letters of the two wheels must first be memorized with their significations, so that eventually the second can be deduced from the first.[67] The higher form combines not fragments of images to represent letters in a word, as in *Ars memoriae*, but rather philosophical theses of the Peripatetic and Platonic doctrines, leading the student to a more speculative level. Thus, the higher form of the art concerns philosophical theses – where similitude is of great importance – and contributes to *all* the operations of the soul: that is, those of the memory, the intellect, and the will. The more specific form of the art is a mnemonic application of it.

Secondly, although the mnemonic machinery set up in the *Ars memoriae* is proposed as a more contracted form of the art, it is not *merely* an invention for *memoria verborum*. It is characterized as "an invention, fertile beyond measure" (*inventio supra modum praegnans*),[68] or an "almost divine invention begetting other inventions" (*pene divinum est inventum et aliarum pregnans inventionum*). The art begets other inventions, for besides *memoria*, it serves other branches of rhetoric as well, to which the title page of *De umbris idearum* alludes, "implying an art for searching, inventing, judging, ordering and applying, explained for the purpose of internal writing and the uncommon operations of the memory".[69] Next, an even more valuable reason to call his art "rich

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67   Bruno, *De umbris idearum*, BOMNE, 1:118: "Oportebit ergo volentem per se ipsum artem generalem ad habitus intellectus, voluntatis et memoriae captare – licet eam in presentiarum ad memoriae perceptiones contrahamus –, primo callere elementarium primum cum suis significationibus, secundo secundum, tertio secundum deducere per primum. Prima duo nos prestitimus, quae optime pervia sunt versatis in Peripateticis doctrinis et Platonicis. Tertium ipsius industriae committimus. Iam applicationem et intentionis universalis contractionem ad artem memoriae aggrediamur."

68   Bruno, *Ars memoriae*, BOMNE, 1:140: "Unde nobis ita successisse presumimus, ut quidquid ab antiquioribus hac de re fuit consideratum, praeceptum et ordinatum – quatenus per eorum scripta, quae ad nostras devenere manus, extat explicatum –, non sit conveniens pars inventionis nostrae, quae est inventio supra modum praegnans, cui appropriatus est liber *Clavis magnae*."

69   Bruno, *De umbris idearum*, BOMNE, 1:2: "De umbris idearum implicantibus artem, quaerendi, inveniendi, iudicandi, ordinandi, et applicandi: ad internam scripturam, et non vulgares per memoriam operationes explicatis."

beyond measure" is its connection to nature, discussed in the first part of *Ars memoriae*, where he takes a position against Aristotle, for whom art and nature are clearly separated.[70] For Bruno, skilful (*dedalam*) nature is the source and substance of all arts.[71] These passages establish a continuity between practising the art of memory and the operation of nature in producing a flux of forms in matter, under the direction of the divine ideas, by the intermediary of the World Soul. "If things are as they appear to those who philosophize in a better way", he writes,

> art in the first place is nothing other than a faculty of nature (*naturae facultas*) born in reason with the seeds of the first principles (*seminibus primorum principiorum*), which contain a power by which they can be seduced by external objects as if by diverse temptations, illuminated by the agent intellect as if by the rays of the sun, and receive an influx of the eternal ideas as if mediated by the course of the stars, while all things are ordered in their actions by the most high and great fecundator (*optimo maximo foecundante*) to reach their proper aim, according to their capacity.[72]

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70   For Aristotle, art follows reason and tries to realize with certain instruments an image conceived in the mind of the artist. Nature, on the other hand, produces spontaneously and is not driven by an external final cause, because it already has this cause – according to the Aristotelian doctrine – in its possession. See Aristotle, *Nicomachean Ethics* (1140a), in *The Revised Oxford Translation* (1954; repr. Princeton: Princeton University Press, 1991), p. 1800: "All art is concerned with coming into being, i.e. with contriving and considering how something may come into being which is capable of either being or not being, and whose origin is in the maker and not in the thing made; for art is concerned neither with things that are, or come into being, by necessity, nor with things that do so in accordance with nature (since these have their origin in themselves)." Further translations are taken from this edition. On Bruno's concept of nature with regard to art, see A. Corsano, "Arte e natura nella speculazione del Bruno," in *Medioevo e Rinascimento. Studi in onore di Bruno Nardi* (Florence: Sansoni, 1955), pp. 117–26; Sturlese, "Arte della natura," pp. 123–41.

71   Bruno, *Ars memoriae*, BOMNE, 1:126: "Ex quibus manifestatur non temere nos dedalam naturam artium omnium fontem atque substantiam velle nuncupari."

72   Bruno, *Ars memoriae*, BOMNE, 1:126: "Quod si ita est ut melius philosophantibus apparet, id, quod primo est ars, nil aliud est dicendum quam naturae facultas connata rationi cum seminibus primorum principiorum, quibus inest potentia qua ab extrinsecus obiectis tamquam diversis illectentur illecebris, et ab agente intellectu tanquam irradiante sole illustrentur, et ab aeternis ideis quasi siderum mediante concursu influxum recipient, dum ab optimo maximo foecundante cuncta in actum atque finem proprium pro viribus consequendum ordinentur."

In other words, art is not opposed to nature, but is rather a faculty of it. Embedded in a cosmic context, art participates in divine creativity. It is born in human reason with the seeds of the first principles. According to the Platonists, these seeds are positioned in the World Soul and form matter under the influence of the divine ideas.[73] They are seduced by external matter to fertilize it and bring forth the forms, the vestiges of the divine ideas, that we see in nature. At the same time these seeds are illuminated and receive influence from above, through the intermediary of the stars. Thus, all things in acting are ordered by the most high and great fecundator. This is why Bruno calls his art "fertile beyond measure". It is made fecund by and operates with the seeds of the first principles, bringing forth all forms in nature.

One year later, in *Sigillus sigillorum*, he states more explicitly that "to obtain the absolute and perfect art, you should be coupled to the World Soul and act in connection to it." "This World Soul", specifies Bruno, "filled with rational principles, by a natural fecundity generates a world filled with similar reasons."[74] Thus, he suggests that during the practice of combining fragments of images the mnemonist brings forth new forms, just as nature does, by grace of the rational principles residing in the World Soul.[75] After these two remarks on the relation between *De umbris idearum* and *Ars memoriae*, we can return to the compelling question of the role of similitude, a central concept in the former, but apparently rather marginal in the latter.

3.3.3   *The Banner*
The *forma contractior* of the master's *memoria verborum* does not imply a degradation of the art, as we might have presumed. We may therefore doubt the decline of similitude in *Ars memoriae* as well. To be sure, there are no

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73   This already is apparent from the first chapter of Ficino's *De vita coelitus comparando*. Ficino, *Three Books on Life*, p. 242: "Accedit ad haec quod anima mundi totidem saltem rationes rerum seminales divinitus habet, quot ideae sunt in mente divina, quibus ipsa rationibus totidem fabricat species in materia." A specific study on this issue is H. Hirai, *Le concept de semence dans les théories de la matière à la Renaissance, de Marsile Ficin à Pierre Gassendi* (Turnhout: Brepols, 2005).

74   Bruno, *Sigillus sigillorum*, BOMNE, 2:258: "Ut igitur absolutam consummatamque artem adipiscare, animae mundi te copulari cumque ipsa copulatum agere oportet, quae naturali foecunditate rationibus plena mundum rationibus similibus plenum generat." How exactly the philosopher thinks this is possible will be the subject of the next chapter, on Brunian psychology.

75   Besides correspondences, Bruno also pays attention to the differences between art and nature, *Ars memoriae*, BOMNE, 1:128: "Considerato igitur qua intentione possimus expressisse, artem in quibusdam excellere naturam eandemque in aliis ab illa superari."

similarities between the initials of the inventors used on the wheels and the letters they represent. But the system is not completely devoid of similitude. One technique, called the banner or *vexillum*,[76] is employed to structure the overwhelming quantity of inventors' actions that have to be memorized on the second wheel by grouping them according to certain affinities – a structure based on *similitudo*. Under the first banner – the banner of A – we find five actions pertaining to agriculture that represent the combinations of A with the five vowels on the second wheel to become the second syllable of a word. The inventors in their turn stand for the first syllables on the exterior wheel. In *Ars memoriae* the inventors and actions listed next to each other represent the same syllables. "Rhegima" "with the chestnut bread" represents two times AA. "Osiris" "in agriculture" makes two times AE; "Ceres" "at the yoke of oxen", AI; "Triptolemus" "sowing", AO; and "Pitumnus" "manuring", AU.[77] To represent the syllables under the banner of P, religious actions are performed. "Ioannes" "baptizes" to form PA; "Emael" "uncovers the head of a man in front of the altar" to make PE; "Imus" "veils the head of a woman before the gods" to signify PI; and "Amphiaraus" "as augur" makes PO. To close the series, "Orpheus" "in orgy" stands for PU.[78] Thus, by ordering the actions of the inventors under banners, *similitudo* is reintroduced into the system.

The use of this technique is explained more extensively in the eleventh seal, "*de vexillo*", of *Explicatio triginta sigillorum*, teaching a method to help the disciple to memorize words. For translating words into a visual scene, letters are represented by persons and the initials of their names. Aristarchus stands for A, Bacchus for B, Caesar for C, and so on. As mentioned above, this correspondence between the person's initial and the letter represented was of no importance in *Ars memoriae*, nor is it the major concern in *Explicatio*. As will be seen, the *similitudo* involved here is of another order. The principle presented in this seal is easy and is based on a technique found in the *Phoenix* of Pietro of Ravenna, the book from which the young Bruno – according to his

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76   Bruno, *Ars memoriae*, BOMNE, 1:252.

77   Bruno, *Ars memoriae*, BOMNE, 1:256: "AA Rhegima in panem castanearum 1, AE Osiris in agriculturam 2, AI Ceres in iuga bovum 3, AO Triptolemus serit 4, AU Pitumnus stercorat 5." Confusion here is possible because Bruno enumerates the inventors and actions, representing the first and second syllable on two different wheels, next to only one list of syllables, probably for economical reasons. Adding the syllabic value of the inventors, too, "Rhegima in panem castanearum" would make AA AA. "Rhegima in agriculturam" leads to AA AE.

78   Bruno, *Ars memoriae*, BOMNE, 1:262: "PA Ioannes baptizat 81, PE Emael caput hominis aperit ante aras 82, PI Imus caput mulieris velat ante deos 83, PO Amphiaraus augur 84, PU Orphaeus in orgia 85."

own testimony – hunted down tricks for the art of memory.[79] In Pietro's method for *memoria verborum*, different persons were put together in a mnemonic scene to represent certain terms with the initials of their names. To remember a term with more than one A, Pietro's Aristarchus was assisted by Albertus.[80] Although Bruno was inspired by Pietro, his design is more structured and, above all, more philosophical. He builds up well-organized stocks of memory persons. As in an army, they are subdivided under banners (*vexilla*). "This is why you will not use but one Plato, Aristotle and Diogenes, nor will only one Pyrrhonist, Cynic and Epicurean be present, but many familiar, similar and proportional to them."[81] Similitude is clearly on stage again. A Caesar-like person, incarnating all the qualities of a great general, would not be considered a serious candidate for the Plato banner, just as a Bacchus-like person does not belong to the group of Aristotelians.

The disciple is forced to organize on the grounds of similarities. Thus, a very concrete mnemonic trick to remember words turns out to be an initiation into the world of *similitudines*. We can imagine that a devoted disciple of Bruno's art, meeting new people striking enough to be considered useful as mnemonic images, will assign them the appropriate banner in his memory. And this is done not so much on the grounds of the initials of their names – as for Pietro and his disciples – as on the basis of their corresponding similarities. A wise and strong Albertus can easily end up under the standard of Plato to represent P, just as a nimble, voluptuary Caesar finds his place among his Epicurean fellows to indicate E. This well-structured inner army teaches the disciple to order and gain insight into the diverse human types.

In *Theses de magia* this type of horizontal *similitudo* between two persons was called a *similitudo aequiparantiae*. So, the first way in which the mnemonic practice *functions* through similitude is to class persons under different standards on the basis of a *similitudo aequiparantiae*. But it does not end there. The amplitude of this seal becomes clear in the second part of the *Explicatio triginta sigillorum*, where each seal is unfolded and treated more extensively.

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79   Bruno, *Explicatio triginta sigillorum*, BOMNE, 2:114: "Ipsum adhuc puer ex monimentis Ravennatis expiscare potui. Hoc modica favilla fuit, quae iugi meditatione progrediens in vasti aggeris irrepsit accensionem, e cuius flammiferis ignibus plurimae hinc inde emicant favillae, quarum quae bene dispositam materiam attigerint, similia maioraque flagrantia lumina poterunt excitare." Bruno refers to Pietro da Ravenna, *Foenix*, B. de Choris, Venetiis, 1491.

80   For Pietro's system, see the comments in BOMNE, 2:385.

81   This advice is found under the eleventh seal, "*de vexillo*" (BOMNE, 2:56): "Hinc non unus tibi inserviat Plato, Aristoteles et Diogenes, neque unus adsit Pyrrhonianus, Cynicus et Epicureus, sed affines, similes proportionalesque multi."

> Ad haec si proportionaliter inspicias, non satis occultam et implici-
> tam habes inveniendi iudicandique rationem, dum non modo Baccos,
> Caesares, Dionysios in omnium hominum generibus effingas, sed in ar-
> borum omnium speciebus omnium animalium species inquiras et inve-
> nias, in omnium lapidum speciebus plantarum species, in unius speciei
> individuis omnium aliorum species individuaque similia. Innumeri enim
> diversique homines vultu, moribus et gestu innumeras et diversas anima-
> lium species referent et ad idem quasi vexillum referuntur. Hinc apertum
> est, quod omnes naturae et in natura duces in omnibus sibi definitos mi-
> lites agnoscunt, quorum alii alibi magis proprios, explicatos atque plures
> agnoscant; unde fit ut ex superabundante domini peculiares habeantur.[82]

Thus, the wide range of the seal *vexillum* is explained. It is certainly not limited
to building up a classified stock of memory-persons that can be used for *memo-
ria verborum*. The web of reality, woven with the threads of similarities, is im-
plied. "If you would look at it proportionally", writes Bruno, "you have the clear
and implicit principle for discovering and judging (*inveniendi iudicandique ra-
tionem*), when you would not only figure Bacchuses, Caesars and Dionysuses in
all types of humans, but seek and find all kinds of animals in all types of trees,
all plants in all sorts of stones, in the individuals of one species, all other spe-
cies and the similar individuals." It is not only horizontal similarities that are at
stake. Types of humans, trees, plants, animals, and stones are associated with
each other, so that everything is found in everything. Innumerable and diverse
humans, with their different faces, attitudes, and gestures, refer to innumer-
able and different kinds of animals and are collected as under one standard.

Thus, the technique of the *vexillum* introduces the omnidirectional simili-
tude, so important in *De umbris idearum*, into the practice of *memoria verbo-
rum*. "From this it is clear", continues the author, "that all leaders of nature and
in nature recognize their affiliated soldiers in everything, some of whom else-
where recognize more proper, explicit soldiers in yet greater numbers. This is
why by such abundance they are considered proper masters." The elaboration
of the *vexillum* technique emphasizes the link between his art of memory and
nature, by transposing the military terminology of this seal to nature. Thus,
a *similitudo* between the outer and inner worlds is implied as well. Is not the
psyche of the mnemonist, by classifying the natural world under standards,
focusing on the world order and contracting a *similitudo magni mundi*, as was
prescribed in *De umbris idearum*? The use of the *vexillum* technique initiates
the disciple into the language of nature. And so this is the first way in which

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82   BOMNE, 2:118.

the art functions through *similitudines*: the accumulation of an army of mnemonic persons – along with similar animals, plants, and stones – is carried out according to horizontal and vertical similitudes which are interiorized.

Before moving on to the second mnemonic function of similitude, I will indicate a parallel with one of the Nolan's magical works. For it turns out that this initiation into the language of nature, at stake in the *vexillum*, is a necessary preparation for the magician's activity of bonding – the subject of Bruno's most original treatise on magic, entitled *De vinculis in genere*. Here, magic is presented as a tool, by means of which the sage can bind the human souls of his subjects. The magician becomes a manipulator of the masses.[83] "Magical bonding" might well have been of great interest to men in power, although this treatise was never published, nor was it dedicated to a leading figure, like his writings on the *ars memoriae* were. I propose that magic and memory are complementary. But, despite numerous magical allusions in his mnemonic books, this is never made explicit by the author, both for commercial reasons and for reasons of prudence. However, that magic and memory are complementary in his mind can be seen by comparing the following introductory passage of *De vinculis in genere* with the *vexillum* seal discussed above. In his foreword he addresses himself to the reader, the manipulator *in spe*. A necessary condition for anyone who wants to bind souls is to have a certain universal principle of things (*rerum universalem rationem*):

> Eum qui vincire debet necessarium est rerum quodammodo universalem rationem habere, ut hominem – qui epilogus quidam omnium est – valeat alligare, quandoquidem – ut alibi diximus – in hac potissimum specie rerum omnium species maxime per numeros licet intueri, ut eorum alii referuntur ad pisces, alii ad aves, ad serpentes, alii ad reptilia, tum secundum genus, tum secundum eorum species. Singulis item horum accidit diversitas usus, consuetudinis, finis, inclinationis, complexionis, aetatis, atque ita ut de Protheo fingunt atque Acheloo, eandem licet subiectam materiam in varias formas atque figuras transmigrantem, ut continue ad vinciendum aliis atque aliis et nodorum utendum sit speciebus.[84]

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83   This is why Couliano once compared *De vinculis in genere* with Machiavelli's *Il Principe*. See Couliano, *Eros and Magic in the Renaissance*, p. 89. The subject matter of the two works is connected. Bruno, however, deals with psychological manipulation in general, and Machiavelli with political manipulation.

84   Bruno, *De vinculis in genere*, BOM, p. 414.

Before the magician can be capable of binding the souls of men, he has to understand the universal principle of things. He has to know how, in the effigy of mankind, the effigy of all other things can be seen. Thus, he will know which men refer to fishes, which to birds and snakes, which to reptiles, now according to genus, now according to species. He has to observe their different habits and costumes, their goals and tendencies, their temperaments and ages. Understanding this "universal principle of things", he will see how the same underlying matter transmigrates in the variety of forms and figures. This *ratio universalis* recalls the *inveniendi iudicandique ratio* encountered in the explanation of the seal *de vexillo*. Once in possession of this principle, the mnemonist and magician are both capable of seeing all species in all others. Being initiated into this variety of forms and figures is a necessary condition for the magician, as the continual bonding requires ever-changing sorts of knots. It goes without saying that the disciple in Bruno's art of memory, well instructed in the natural language of forms and figures, would be a good candidate for becoming a magical binder. As a mnemonist he is trained to collect and associate humans, animals, and plants under one banner, and thus will know what sort of *vinculum* to use for each specific case. The parallel between the eleventh seal of *Explicatio triginta sigillorum* and the introduction of *De vinculis in genere* shows the complementarity of memory and magic. We can imagine how among initiates the mnemonic practice might have culminated in magic, and how the magician is prepared by initiation in the language of natural forms through the *ars memoriae*. That the parallel between these passages which brings together the magician and the mnemonist does not depend on a hazardous interpretation results from a later passage in *De vinculis in genere* where the author explicitly refers to one of his thirty seals. The content of this passage repeats the same idea expressed in the introduction of his magical treatise.

> Civiliter ergo et secundum omnes rationes de vinculo consideranti perspicuum esse debet ut in omni materia seu materiae parte, in omni individuo seu particulari, tum omnia sublateant et subcontineantur semina, tum consequenter omnium vinculorum applicationes solerti quodam artificio compleri posse. Et docuimus in uno de triginta sigillis ut generalis ista transformatio fiat et applicatio.[85]

He who considers bonding in a social context and in all possible ways, needs to know how in every part of matter, in each individual and particular, all the seeds are hidden and contained. This means that he understands how each

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85   Bruno, *De vinculis in genere*, BOM, p. 516.

form contains all other forms so that by skilful art he can activate and realize the possible applications of all the bonds. "We have taught, in one of the thirty seals, how this general transformation and application are carried out", writes Bruno at the end of his consideration. Here, the magical practice is unambiguously linked to the mnemonics exposed in *Explicatio triginta sigillorum*. We understand that Bruno had the seal of the standard in mind, in which human expressions were associated with all animals, plants, and stones so that behind one form all others were hidden. Thus, this first function of similitude under the *vexillum* shows how magic and memory are intertwined.

3.3.4   *Laws of Psychic Association*

Another function of similitude during the mnemonic practice is considered in *Cantus Circaeus*. The way in which images refer to the contents to be memorized is often expressed as a similitude. It thus functions as a law of psychic association through which data are recalled to our memory. The name of an object can remind us of a concept similar to this name. For example, through the image of a vine (*vitis*), life (*vita*) can be memorized; through the image of a horse (*equus*), equality (*aequitas*).[86] From an accident, a substance can be reached. A white object can be used to indicate snow, dancing leads to dancer.[87] However, these psychic laws of association are not ruled by *similitudo* alone. An object, for example, can indicate a period of time associated with it (by metonymy). Flowers represent spring; the winepress, autumn.[88] In *Cantus Circaeus* and *Sigillus sigillorum* Bruno sums up thirty such ways in which images can stand for things or words (*modi imaginum ad rerum figurationem atque vocum*); in *De imaginum compositione*, he gives thirty-two.[89] These laws of association make it possible for the mnemonist to complete all the realities of the universe and to "remember everything from everything", as was claimed in *De umbris idearum*. Special attention is paid to depicting such abstract concepts as life, love, hatred, and so on. In *De imaginum compositione* one means of translating an abstract concept into images is through the nature of certain gestures.

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86   BOMNE, 1:704: "Aliquando vero simile in voce pro simili, utpote collocamus rem figurabilem, quae denominatione sua causat memoriam rei infigurabilis, cuius nomen affine est nomini illius. Sic apponimus equum ad aequitatem memorandam, vitim ad vitam."

87   BOMNE, 1:706: "Aliquando ab accidente subiectum, quemadmodum a re alba apposita nivem lucramur, a saltatione saltatorem."

88   BOMNE, 1:708: "Aliquando ex contemporaneo tempus, sicut ex floribus aprilem, ex torculari autumnum, et sic de aliis."

89   BOMNE, 1:704–714; cf. BOMNE, 2:94–96, 2:514–22.

> Ex ratione gestus, sicut amorem duabus figuris vel characteribus vel lineis se invicem complectentibus, odium ab invicem aversis, disiunctis et divulsis, quae et similia excantatores et malefici et in eodem genere medici solent observare, et non modicum ad rerum efficaciam faciunt, sicut simplicia quaedam purgativa, si sursum evulsis ramis seu frondibus capiantur, virtutem expellendi per superiora concipiunt, si vero contra, per inferiora, ut sumus experti.⁹⁰

The abstract concept of love can be depicted by two embracing figures, characters, or lines. Hatred can be represented by two separated figures, figures turning their backs on one another, or figures torn away from each other. Bruno adds that these and similar images are often employed by enchanters, evil magicians, and doctors, who use the same techniques. In an immoderate way these figures contribute to the efficacy of things, as for some purgative plants that conceive the power of vomiting through the upper parts if they are taken after their twigs and leaves are pulled off in an upper direction, but expel through the lower passages if they are torn loose in the opposite direction. In this case, Bruno himself has experienced the efficacy found in the gesture. A certain similitude links the nature of the gesture with the effect of the potion. It goes without saying that we have entered the world of natural magic. But despite its magical efficacy, this method of portraying love by means of similitude is presented as useful during the mnemonic practice.

Despite this magical allusion, Bruno at no point explicitly linked his mnemonics to magic. Caution was the rule. In the sixth chapter of this first book of *De imaginum compositione*, the author had summed up how images and signs could be distinguished. Some stand for intelligible things, others for sensible things. Some represent accidents, others substances. Some are images and signs of magnitude and power, of number, action, passion, potency, act, cognition, and so on.⁹¹ A long list is summed up without any specification or explanation, for which the author has excused himself in the preceding chapter:

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90   BOMNE, 2:514. For a parallel passage in the magical writings, see Bruno, *De magia naturali*, BOM, p. 192: "Similiter et omnes scripturae non sunt eius momenti, cuius sunt caracteres illi, qui certo ductu et figuratione res ipsas indicant, unde quaedam signa in invicem inclinata, se invicem respicientia, amplectentia, constringentia ad amorem; adverse vero declinantes, disiectae ad odium et divortium; concisae, mancae, disruptae ad perniciem; nodi ad vincula, explicati caracteres ad dissolutionem."

91   Bruno, *De imaginum compositione*, BOMNE, 2:510–12: "Imagines atque signa alia sunt sensibilium, alia intelligibilium; quaedam substantiarum, quaedam accidentium, quaedam magnitudinis, quaedam virtutis, quaedam numeri, actionis, passionis, actus, cognitionis, [...]."

> Multa sunt quae ad subsequentis differentiae elucidationem ex proxi-
> me dictis, quasi inductive concludendo et topice applicando, possemus
> adducere, nisi superciliosorum quorundam cum perniciosa ignorantia
> censuram formidaremus. Illud tamen tantummodo melioribus ingeniis
> significatum esse volumus, quod multiplex est vis in propositorum prin-
> cipiorum luce et vegeto quodam sale; [...] Sed bene intelligenti pauca.
> Reliquum est ut ad ea, quae in proposito signorum atque imaginum spe-
> cificandarum adducere necessarium est, ***, quae non ad omnes modo
> potentiae cognoscitivae operationes pertinere et non modicum emolu-
> menti adferre videbuntur, verum et ad alias quas non nominamus ope-
> rationes nihilominus, quod applicatione, intentione conceptioneque
> perfacili solertius ingenium assequetur.[92]

Bruno might have argued – concluding by induction and proceeding accord-
ing to Aristotle's *Topics* – about different kinds of images and signs, but he
does not. He fears the censure of certain supercilious people, along with their
deadly ignorance. He just wants more adept minds to understand the signifi-
cance and value of his principles. For them, a few words are enough. He will
then proceed to the proposed specifications – although these are limited to an
enumeration – about the images and signs, and his considerations will not
only pertain to all the operations of the cognitive ability and confer a great
benefit, but also to other operations that he does not even name, since a clever
mind may attain them by very easy application, intention, and conception.

Of course, the question arises as to whether these adept minds, to whom
Bruno addresses himself, are those familiar with magic. Anyhow, for them "few
words suffice": they will understand Bruno's implicit references to what cannot
be stated openly. But what is it that cannot be said? Considering the context,
he is clearly not referring to his heretical conception of the infinite universe.
Rather, what cannot be pronounced and elaborated here is the magical use
of images and signs. Bruno continues by stating that these images and signs
are not restricted to improving cognitive operations, but are useful for other
operations he prefers not to mention. From this suggestion about "other opera-
tions" and the author's silence about this distinction between different kinds
of images and signs, it seems that he had a magical use in mind which would
be clear to those acquainted with magic. My central thesis, that memory and
magic are two sides of the same coin, may be repeated once more. For the ini-
tiate, the magical suggestions in *De imaginum compositione* link the memory
images to magical operations. But on the surface the author safeguards himself

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92   BOMNE, 2:510.

against any suspicion of dabbling in magic, repeating in the third book of *De imaginum compositione* – where further particulars are considered – that "we shall consider images that are by no means magical, concerning which it is not our intention to speak here, but rather those suitable to our reasonings, those dependent on our reasonings, and also those typical images which serve as a measure."[93]

Let us recapitulate before exploring the function of similitude in magic. In search of the mnemonic function of similitude, we entered the labyrinth of *memoria verborum* laid out in the second part of *De umbris idearum*, the *Ars memoriae*. At first sight, this practice seemed not to assign any importance to *similitudo*, whereas in *De umbris idearum* the concept played the lead. To explain this discrepancy, I made two remarks. First, the art of *De umbris idearum* is called by the author a higher and more general form, while that of the *Ars memoriae* is more contracted. Secondly, the *Ars memoriae*, although it is a narrower form of the art (especially dedicated to *memoria verborum*), is not thereby devalued. It is an almost divine invention, begetting many other inventions. The flux of forms in the mnemonist's mind, like the flux of forms in nature, is generated by the seeds of the World Soul. In this way, his creativity participates in divine creativity. After these remarks we found an application of similitude to the mnemonic practice under the seal labelled *vexillum*. This technique teaches the student to recruit an "army" of persons useful for his *memoria verborum*, grouped on the ground of a horizontal *similitudo aequiparantiae*. At the same time, by classifying animals, plants, and stones together with persons under the standards, it encourages the disciple to structure his memory according to vertical (intergeneric) similitude as well. This can be seen as a concrete endeavour to interiorize a *similitudo magni mundi*.

A comparison with the introduction of the magical treatise demonstrated how mnemonics and magic are indeed complementary. The mnemonist who is initiated into the language of the natural forms is well prepared to bind the souls of men. In *Cantus Circaeus, Sigillus sigillorum*, and *De imaginum compositione*, similitude becomes indispensable for the mnemonic practice. Associative laws (often based on *similitudines*) teach the disciple to form mnemonic images for the data to be remembered. It is through these laws that the mnemonist is capable of making everything out of everything, and remembering everything out of everything – one of the ambitions expressed in *De umbris*

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93   Bruno, *De imaginum compositione*, BOMNE, 2:804: "Superest in hac tertia contemplatione magis ad particularia descendere, primum vero imagines haud quidem magicas, de quibus nullum est heic propositum, sed tum nostris rationibus adcommodatas, tum a rationibus nostris dependentes, tum etiam pro modulo typicas."

idearum. An associative law given in *De imaginum compositione* was clearly magically coloured. However, there was some ambiguity with regard to the use of signs and images. Bruno, fearing censure, did not want to focus on the distinctions that could be made between all sorts of signs and images, but stated that clever minds would understand that their use was not limited to cognitive operations. In the light of that, the distinction between the cognitive character of mnemonics and the operative nature of magic is difficult to maintain. The distinctions between magic and memory must rather be understood within a relevant logic of "commercial secrecy" and prudence. In conclusion, we can say that, by means of *similitudo*, the mnemonic art functions by studying and interiorizing natural likenesses while establishing a mnemonic army, and by an optimal use of the laws of association. In that way the practice responds to the ambitions of *De umbris idearum*.

3.3.5   *"By a certain magical power similars are attracted through similars"*
The importance of *similitudo* for magical operations was generally accepted in the Renaissance. The occult power of a magnet, for example, that could be used to draw iron from a wound, is an ever-recurrent issue in treatises on magic. It is explained by the attraction of similars to each other. In Agrippa's *De occulta philosophia* the power itself is transmitted through similitude as a contagious property, so that not only is the iron chain attracted by the magnet, but its attractive property is infused in turn into the chain.[94] The same goes for the audacity of a prostitute, which can be transmitted if someone puts on her clothes or shirt, or carries with him the mirror in which she looks at herself every day. Then this person becomes audacious, lascivious, impudent, and self-indulgent.[95] This opinion is adopted by Bruno, into whose *De magia*

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94   This theme was already present in Plato's *Ion* (533d-e), where the way in which the Muse inspires men, and then the means of these persons by which the inspiration spreads to others, is compared to the way in which the magnet imparts its power to iron rings.

95   Agrippa, *De occulta philosophia*, pp. 116–17: "Scire debes tantam esse rerum naturalium potentiam quod non modo cunctas res sibi propinquantes sua virtute afficiant, verum etiam praeter hoc infundunt ipsis consimilem potentiam, per quam hac eadem virtute ipsae etiam caetera afficiant, quemadmodum in magnete videmus: qui quidem lapis non solum annulos ferreos trahit, sed vim etiam annulis ipsis infundit qua hoc idem efficere possunt, qualem se vidisse referent Augustinus et Albertus. Hoc modo fertur quod meretrix publica, in qua est audacia et impudentia exterminate, hac ipsa proprietate cuncta sibi propinqua afficit, quae deinde reddunt eam aliis; ideo dicunt quod, si quis induat vestem vel camisiam meretricis vel secum habuerit speculum in quo ipsa se quotidie speculaverit, reddetur audax, intimidus, impudens et luxoriosus."

mathematica many of Agrippa's teachings are inserted.[96] Thus, as in the *ars memoriae*, where the similarity between humans was crucial in the practice of establishing an army of mnemonic persons, magic operates through horizontal *similitudines* as well. In this way, the audacity of a prostitute is transmitted to another through her provocative clothing.

However, in magic, vertical similitude is more important. It is one of the basic principles of Ficino's magic in his *De vita coelitus comparanda*. The magus captures heavenly powers in lower earthly materials, such as talismans, and uses them appropriately. But for this he must know the similarities of the lower materials from which the talisman is made, and of the figures engraved on it, with their superior heavenly powers. "Therefore you should not doubt, they say", writes Ficino, "that the material for making an image, if it is in other respects entirely consonant with the heavens, once it has received by art a figure similar to the heavens, both conceives in itself the celestial gift and gives it again to someone who is in the vicinity or wearing it."[97] Vertical similitude is equally evoked as the basis for magic in Bruno's *De magia mathematica*, where it is stated, following Agrippa, that "considering how the qualitative virtue descends into inferior beings, is the principle on which all magic, and even kabbalah, is based." The possibility of this attraction is guaranteed by *similitudo*.

> Considerandum est omnia sublunaria caelesti quodam modo esse supra
> Luna, et intellectuali supra mundum, ita ut omnis qualitative virtus a

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96   Bruno, *De magia mathematica*, BOM, pp. 88–90: "Considerandum est quemadmodum
       rerum virtutes investigari et experiri solent atque possunt per viam a similitudine rerum
       sumptam; et ideo – ad investigandas et inveniendas et experiendas istas – considerare de-
       bemus unumquodque naturaliter converti ad suum simile, et pro viribus ad seipsum in-
       clinare, non minus in virtute occulta quam in qualitatibus elementaribus est manifestum,
       ut patet in ferro quod magnete contigerat: magnetis attraxerat virtutem occultam, [...] ;
       hinc non solum audaces redduntur et impudentes cum publicis meretricibus conversan-
       tes, sed et qui illorum habuerint speculum et subuculam induerint; hinc tristia operantes
       per funebrem pannum et similia." In *Theses de magia*, however, the philosopher adapts
       his view, saying that the attraction is not caused by similars coming together, but by
       the principle of the repulsion of contraries. Bruno, *Theses de magia*, BOM, p. 356: "De
       attractione vero magnetis a polo variae sunt sententiae. Nos tamen, omnibus hisce prae-
       termissis, eam eius rei rationem probamus, quae non est ab attractione similis speciei
       [...] sed universam rationem ac firmam ex contrarii fuga esse asserimus et antipathiam
       quondam quam habet ad loca opposita."
97   Ficino, *Three Books on Life*, p. 332: "Ergo ne dubites, dicent, quin materia quaedam imagi-
       nis faciendae alioquin valde congrua coelo, per figuram coelo similem arte datam coeleste munus
       munus tum in se ipsa concipiat, tum reddat in proximum aliquem vel gestantem."

supernis descendat in inferna; in quo tota magia et omnis cabala ob-
servando consistit. Hinc trahitur artificiale per rationem, naturale per
artem, intellectuale per naturam, divinum per intellectuale; tum vi qua-
dam magica similia per similia trahuntur: cuius attractus possibilitas per
rerum inferiorum convenientiam cum superioribus existit.[98]

Similitudines, then, are the pores through which the virtues of the superior
being can descend through the hierarchical world to influence the lower re-
gions. Hence, for the Renaissance magus, "similitude" belongs to the scientific
field which we would call "physical causality". This causal function of simili-
tude is an important inheritance from Neoplatonism.

Criticizing the central position that Yates ascribed to Hermetism, Copenhaver
has stressed the importance of Neoplatonism as the philosophical frame for
Renaissance magic. In his view, it was not the mystically coloured and inco-
herent Hermetic treatises, but the Neoplatonic sources that provide a system-
atic philosophical substructure for magic.[99] One of these sources is Proclus's
De sacrificio, the Latin translation of which was completed by Ficino in 1489.[100]
The quotation from Proclus with which we started this chapter ("similitude
is a sufficient cause to join beings to one another") explicitly links similitude
and causality. Proclus's assertion depends on his philosophical rule that there
can be no causality without similarity between the cause and the effect.[101] A
consequence of the presence of similitude in a discourse on causation is that
the categories of signification and causation become intertwined as well. As
we have seen, in Ficino's *De vita coelitus comparanda* – for which Proclus's *De
sacrificio* was an important source – it is through similitudes that the powers
of the planets cause effects in the lower regions. Ficino's choice of words is
noteworthy, when he lists which effects the planets "signify".[102] In other words,
the planets are said to "signify" the effects caused by their influence. In turn,

98   Bruno, *De magia mathematica*, BOM, p. 96.

99   Copenhaver, "Hermes Trismegistus," pp. 79–110, p. 81.

100   Copenhaver, "Hermes Trismegistus."

101   Copenhaver, "Hermes Trismegistus," p. 86. For this philosophical rule, see the proposi-
      tions 28, 29, and 30 of Proclus's *The Elements of Theology*, ed. and trans. E.R. Dodds (1933;
      repr. Oxford: Clarendon Press, 1963), pp. XXII, 33–35, 216–19.

102   That the categories of signification and causation are intertwined in Ficino is pointed out
      in the introduction by Kaske and Clark to *Three Books on Life*, p. 49: "For him [Ficino],
      analogy can operate as a cause; a lower thing can attract a higher by being analogous
      to it, appealing to the love of like for like, [...]." See, for example, p. 250: "Saturnus non
      facile communem significat humani generis qualitatem atque sortem, sed hominem ab
      aliis segregatum, divinum aut brutum, beatum aut extrema miseria pressum."; p. 264:

images – which we intend to ascribe to the field of signification – become effective (or causal) when bearing similitudes with the celestial world, and thus *cause* certain things to happen. Ficino, for example, invokes Haly's testimony that "a figure was imprinted in frankincense from a signet of a scorpion made under these conditions from the bezoar-stone; it was given in a drink to a person whom a real scorpion had stung, and straight away he was cured."[103]

But besides the horizontal and vertical similitude, is there also a similitude between the inner world of the human psyche and the outer world of nature? In his mnemonic works Bruno called the rational world the similitude of the natural world, and by practising his art he proposed to acquire a *similitudo magni mundi*. In magic, too, there is a connection between the inner and outer worlds through similitude. *Fascinatio* is the best example of how magicians made use of the similitude of certain substances to insinuate their virtues into the heart and mind of the patient or victim.

> Observandum fascinationis artificium, quo spiritus fascinantis per fascinati oculos in cor pervenit, ingrediens dum – oculo patefacto et intento, et forti imaginatione roborato – per radios quosdam, tamquam spiritus et vaporis cuiusdam vehiculum, in aliquod fascinandum iaculatur et diversis affectibus vulnerat et inficit. Hinc Iesabel oculos suos stybio tinxisse fertur. Hinc alii aliis collyriis venereis, ut sunt sanguis passerum et columbarum; alii martialibus, ut sunt ex oculis luporum, hienae etc.; alii saturnalibus, ut sunt ex sanguine vespertilionis, cuius diversi generis dant affectus et provocant.[104]

"Praecipua vero disciplina est recte tenere quem spiritum, quam vim, quam rem potissimum hi planetae significant."

103   Ficino, *Three Books on Life*, p. 304: "Ptolemaeus ait in *Centiloquium* rerum inferiorum effigies vultibus coelestibus esse subiectas, antiquosque sapientes solitos certas tunc imagines fabricare, quando planetae similes in coelo facies quasi exemplario inferiorum ingrediebantur. Quod quidem Haly comprobat, ibi dicens *utilem* serpentis *imaginem* effici posse, quando Luna Serpentem coelestem subit aut feliciter aspicit. Similiter scorpionis *effigiem efficacem*, quando Scorpii signum Luna ingreditur ac signum hoc tenet angulum ex quattuor unum. Quod in Aegypto suis temporibus factum ait seque interfuisse, ubi ex sigillo scorpionis in lapide bezaar ita facto imprimebatur thuri figura dabaturque in potum ei quem scorpius ipse pupugerat, ac subito curabatur" (my italics). Ficino wrongly ascribes the *Commentary on Centiloquium* to the early 11th-century Haly Abenrudian (Ali ibn Ridwān). In fact, it was composed by the 10th-century Ahmad ibn Yūsuf ibn al-Dāya and translated into Latin by Hugh of Santalla (Venice, 1484).

104   Bruno, *De magia mathematica*, BOM, p. 118.

Fascination is a well-known and widespread aspect of Renaissance magic from Ficino to Agrippa, from Cardano to Della Porta and Bruno. Its basic principle was a very subtle substance, the *spiritus*, which was believed to be a kind of distillation of the purest blood. "The *spiritus* of the fascinator," writes Bruno, "enters the eyes of the fascinated one to penetrate his heart. With the eyes wide open and intent, the fascination is intensified by a strong imagination, so that through the rays, as a vehicle of the *spiritus* and vapour, the fascinator shoots his arrows into the soul of the fascinated person which is wounded and infected by different affections." It is with regard to these different affections that *similitudo* comes in. The *spiritus* is mixed with a substance, and the affections generated in the fascinated person can be influenced by this substance. "This is why Jezebel is said to have painted her eyes with antimony [2 Kings 9:30]", explains Bruno, "and others with other kinds of aphrodisiac eye-salve such as the blood of sparrows or pigeons; others with kinds of martial ointment such as from the eyes of wolves, the hyena etc.; others with kinds of saturnian unguent such as the blood of a bat, which generate and produce different kinds of affects." The blood of sparrows and pigeons possesses aphrodisiacal powers and can therefore produce feelings of desire in the fascinated person. In this case the fascination is based on the *similitudo* between the blood of the animal and the effect achieved within the human soul, a *similitudo* that in its turn is based on a vertical similitude between the animal and its governing planet. The vertical affinities between the wolf and Mars make its blood a carrier of the planet's features, and these can be introduced into the human heart – from outer to inner – where martial affects are generated.

This section proposed to enter Bruno's mnemonic and magical works to seek the function of *similitudo* during both mnemonic exercise and magical practice. I have shown that, in correspondence to the *meaning* of this concept brought to the surface in the preceding section, its function is also to provide omnidirectional access – horizontally, vertically, and between the inner and outer worlds. The mnemonic practitioner is introduced to the language of nature by associating types of humans, trees, plants, animals, and stones as it was prescribed in the seal "*de vexillo*". He thus becomes a perfect candidate for the magical practice of binding, for in *De vinculis in genere* it was necessary to understand the "universal principle of things", by which the magus recognizes "which men refer to fishes, which to birds and snakes, and which to reptiles". In the Renaissance *similitudo* was generally recognized as a basic principle for the magical practice. In accordance with the Neoplatonic doctrine it has an almost causal function, for it makes possible the effects of the higher causes in the lower regions. As a consequence, images showing similitudes with the ruling planets and constellations can become effective and cause certain things

to happen. In his mnemonic treatise *De imaginum compositione* Bruno is well aware of these possible fields, in which the image can be magically applied. However, he declines to digress on certain issues for fear of censure.

3.4   The Aim Expressed by *Similitudo*

3.4.1   *The God's-Eye View*

Now that we have a view of the meaning and function of the concept, we can proceed to the philosopher's aim as expressed through *similitudo*. As with the former sections, we first will consider the publications on memory, and then the manuscripts on magic. In the dedicatory epistle of the *De imaginum compositione* (Frankfurt, 1591) to the alchemist Johann Heinrich Hainzell, Bruno poses a riddle: Which eye sees in such a way that it also sees itself? Hainzell, a native of Augsburg, had recently acquired an estate at Elgg, near Zurich, where the Nolan stayed for several months in 1591 while working on a book on memory that would turn out to be his last published work in his lifetime. After having praised his host for his noble character and the vivid sublimity of his understanding, the aim of the book is presented as anything but common (*rem sane minime vulgarem*). The work of God, nature, and reason are put into mutual relation so that nature admirably refers to the divine action, and the operation of the human mind – as if attempting higher ground – emulates nature.[105] The richness of nature is composed of only four elements and their combinations.[106] The human mind, in its turn, first has the capacity to understand one, two, three, and four; secondly, to know that one is not two, two not three, and so on; and thirdly, that three is composed of one and two, four of one and three.[107] "Doing this is doing everything", writes Bruno, "saying this is saying everything; imagining, signifying and retaining this results in apprehending all objects, understanding all apprehensions, and memorizing all understandings."[108] The

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105   Bruno, *De imaginum compositione*, BOMNE, 2:484: "Idea, imaginatio, adsimulatio, configuratio, designatio, notatio est universum Dei, naturae et rationis opus, et penes istorum analogiam est ut divinam actionem admirabiliter natura referat, naturae subinde operationem humanum – quasi et altiora praetentans – aemuletur ingenium."

106   Ibid., p. 484: "Quis non videt quam paucis usque adeo multa natura faciat elementis?".

107   Ibid.: "At, per Deum immortalem, quid homini numeratione facilius esse potest? Primo quod sit unum, duo, tria, quatuor; secundo quod unum non sit duo, duo non sint tria, tria non sint quatuor; tertio quod unum et duo sunt tria, quod unum et tria sint quatuor."

108   Ibid., p. 486: "Hoc facere est facere omnia, hoc dicere est dicere omnia, hoc imaginari, significare et retinere, omnia facit obiecta apprehendisse, apprehensa intellexisse, intellecta meminisse."

author calls this distinctive ability the light exposed to the intellect and compares it to sensible sunlight. This intellectual light does not rise and set. With a variation on a famous Augustinian phrase, this light is no less present to us than we are to ourselves (*non minus nobis praesens est quam ipsi nobis*). It is so present to our mind that it is also the mind itself.[109] Following this analogy between two sorts of light, the physical eye is compared to the eye of the mind. The corporeal eye sees other things, not itself. But what eye sees other things in such a way that it also sees itself? The answer is given directly: "the eye which sees everything in itself and which is in itself everything."[110] Hereafter I will refer to this eye, which is able to perceive all and in the meantime to behold itself, as the god's-eye view. It returns regularly as an objective to be pursued by the philosopher. More than once he encourages his disciples, often personalities of some political power, to attain this divine view, because this insight will lead to a more judicious and operative ability too. Bruno suggests to Hainzell that, finally, for the one who understands everything (*intellegere omnia*), it would not be difficult to accomplish everything (*omnia facere*).

> Illi [i.e. oculus qui ita videt alia ut et se videat] sublimi ratione similes essemus, si nostrae speciei substantiam cernere possemus; ut noster oculus se ipsum cerneret, mens nostra se complecteretur ipsam. Tunc ut possibile esset intelligere omnia, non esset etiam difficile omnia facere. Atqui compositorum corporeorumque hoc non patitur natura: eius enim substantia in motu et quantitate versatur, etiam si per se neque mobilis neque quanta sit. Hinc quemadmodum non nosmet ipsos in profundo et individuo quodam consistentes, sed nostri quaedam externa de superficie possumus – colorem scilicet atque figuram – accidentia et oculi ipsius similitudinem in speculo videre, ita etiam neque intellectus noster se ipsum in se ipso et res ipsas omnes in se ipsis, sed in exteriore quadam specie, simulacro, imagine, figura, signo.[111]

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109   Ibid.: "Haec tota lux magis est praesens, clara et exposita nostrae intelligentiae quam externis lux solis exposita possit esse oculis: haec enim oritur et occidit, neque quoties ad eam convertimur adest; altera vero non minus nobis praesens est quam ipsi nobis: tam praesens est nostrae menti, ut et ipsa sit mens."

110   Ibid.: "Quia oculus videt alia, se non videt. At quis est ille oculus, qui ita videt alia ut et se videat? Ille qui in se videt omnia, quique est omnia idem."

111   Bruno, *De imaginum compositione*, BOMNE, 2:486. The theme of the eye seeing itself goes back to Plato's *First Alcibiades* and was taken up by Ficino in his letters (cf. BOMNE, 2:884). Next Bruno refers to the famous Aristotelian opinion that no understanding is possible without phantasms (BOMNE, 2:488): "Hoc est quod ab Aristotele relatum ab antiquis prius fuit expressum et a neotericorum paucis capitur: 'intelligere nostrum – id

Bruno thus reveals the far-reaching possibilities open to those able to equal the divine mind, which is like an eye capable of seeing itself; but the conditional mood of the first sentence reminds the reader that he is participating in the world of the shadows because of his nature as a composite body. Just as we cannot see ourselves in our deep, undivided nature, but must instead gaze at external properties, i.e. colour and shape, and the similitude of the eye in the mirror, so our intellect does not see itself in itself, or the things in themselves, but only according to a certain exterior effigy, simulacrum, image, figure, and sign. This tension between the ultimate god's-eye view and the human condition of the shadows – present from the first intention of *De umbris idearum*, where Bruno says that it is not in man's nature, by his capability, to inhabit the field of truth[112] – had been elaborated in *De gli eroici furori*.

One passage from *De gli eroici furori* is extremely interesting with regard to *similitudo*. In this philosophical dialogue on divine love – and therefore considered by Bruno as his own *Cantica canticorum*[113] – dedicated to Philip Sydney, a central role is reserved for the mythological hunter Actaeon, who saw the goddess Diana naked. For this illicit vision he was turned into a stag and eventually torn apart by his own dogs. The hunt of the young Greek was interpreted by Bruno as a metaphor for the philosophical quest for the One. Actaeon liberated himself from the fleshy prison of matter, and when he saw the goddess bathing among her nymphs, he became "tutto occhio a l'aspetto de tutto l'orizonte."[114] Still, seeing the nude goddess in this way is not the same as seizing the Monad in its essence. Diana symbolizes nature and is equally known as the goddess of the moon. The divine light of the Monad is mirrored

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est operationes nostri intellectus – aut est phantasia aut non sine phantasia'; rursum: 'non intelligimus, nisi phantasmata speculemur.'" Bruno had already expressed the same idea in his *De gli eroici furori*, BOeuC, 7:455–57: "[...]; essendo che per contemplar cose divine, bisogna aprir gli occhi per mezzo de figure, similitudini et altre raggioni che gli Peripatitici comprendono sotto il nome de fantasmi; [...], conoscendo che la divina beltà e bontà non sia quello che può cadere e cade sotto il nostro concetto: ma quello che è oltre et oltre incomprensibile; massime in questo stato detto 'speculator de fantasmi' dal filosofo, e dal teologo 'vision per similitudine speculare et enigma'; perché veggiamo non gli effetti veramente, e le vere specie de le cose, o la sustanza de le idee, ma le ombre, vestigii e simulacri de quelle, come color che son dentro l'antro et hanno da nativtà le spalli volte da l'entrata della luce, e la faccia opposta al fondo: dove non vedeno quel che è veramente, ma le ombre de ciò che fuor de l'antro sustanzialmente si trova."

112   Bruno, *De umbris idearum*, BOMNE, 1:42: "Non enim est tanta haec nostra natura ut pro sua capacitate ipsum veritatis campum incolat."

113   Bruno, *De gli eroici furori*, BOeuC, 7:13.

114   Bruno, *De gli eroici furori*, BOeuC, 7:393.

by nature, just as the sunlight is reflected by the moon. Man, sentenced to the shadows and unable to look directly into the metaphysical sun, is destined to seek the divine through nature, in which the One is reflected.

> Cossì gli cani, pensieri de cose divine, vorano questo Atteone, facendolo morto al volgo, alla moltitudine, sciolto dalli nodi de perturbati sensi, libero dal carnal carcere della materia; onde non più vegga come per forami e per fenestre la sua Diana, ma avendo gittate le muraglia a terra, è tutto occhio a l'aspetto de tutto l'orizonte. [...] Vede l'Amfitrite, il fonte de tutti numeri, de tutte specie, de tutte raggioni, che è la Monade, vera essenza de l'essere de tutti; e se non la vede in sua essenza, in absolute luce, la vede nella sua genitura che gli è simile, che è la sua imagine: perché dalla monade che è la divinitade, procede questa monade che è la natura, l'universo, il mondo; dove si contempla e specchia come il sole nella luna, mediante la quale ne illumine trovandosi egli nell'emisfero delle sustanze intelletuali.[115]

One can never quite attain a true view of oneself, as also expressed in the quote from *De imaginum compositione*. There remains a tension between man as an inhabitant of the shadowy world and his aspiration to reach the god's-eye view and become godlike. In the last stage Actaeon is transformed into a stag; the hunter becomes the prey.[116] Does this mean, translating the metaphor of the hunter, that the philosopher searching for the divine is turned into the divine? Not completely, as the hunt is never over. Between man and God there is no *similitudo aequiparantiae*, but only a *similitudo analogiae* (as Bruno asserted in his *Theses de magia*).[117] However, for a possible realization of this objective, the role of the second Monad or nature (*che gli è simile, che è la sua imagine*) is of the utmost importance. It is in nature, through certain exterior effigies and images, that the intellect can see a similitude of itself, just as an eye can see its likeness in the mirror. Attention to the external world is an unavoidable detour on the way to the top: the world is absorbed through the windows of the senses. In a second phase, our perception of nature further penetrates the human mind with its cognitive faculties. I shall return to Bruno's psychology in the next chapter, but here I shall glance ahead by examining another passage

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115   Bruno, *De gli eroici furori*, BOeuC, 7:393.

116   Also in Bruno, *De umbris idearum* (BOMNE, 1:104), the last two stages of the ascension from the shadows to the ideas, are *transformatio sui in rem* and *transformatio rei in seipsum*. On this issue, see Clucas, "*Simulacra et Signacula*," pp. 265–66.

117   See note 45.

of *De imaginum compositione* where the comparison between the external and internal eyes is worked out more precisely by the introduction of the *spiritus phantasticus*. In this fantastic spirit resides a very interior and somehow very spiritual power of the soul that seems to augment the possibilities of becoming "*tutto occhio*". This specific power must be understood as a sort of light, indivisible to such an extent that the light, the illuminated object, the sensory act, and the form are all one and the same. Contrary to the external act of seeing, which is made possible by an external light, this power is light and seeing at the same time.

> Quemadmodum pupillae centro sylvam rerum uno intuitu totam individuo concipimus, et suam cuiusque molem ex individuo specillo contrahimus atque iudicamus, non minus animae potentia illa interior et quodammodo spiritualior, quae species istas recipit et componit, in spiritu phantastico consistens, individuum quiddam esse censendo est de genere lucis, ita ut eadem sit lux, illuminatum et actus rei sensibilis et formae, differens ab externo visu, qui per alienam lucem informatur, quia simul ipsa lux est atque videns, proportionaliter atque solis lumen a lumine lunae distinguitur: haec enim tanquam ab extrinseco, ille tanquam a proprio visibilis est. Tandem differt oculi visus a visu interni spiritus, quemadmodum speculum videns a speculo non vidente, sed tantum repraesentante, speculum se ipso illuminatum et informatum, quodque simul lux est et speculum et in quo obiectum sensibile cum subiecto sensibili sunt unum. Hic est mundus quidam et sinus quodammodo inexplebilis formarum et specierum, [...]¹¹⁸

The difference between the external view and that of the internal spirit is like the difference between a mirror that can see, and one that cannot see but only represent. The mirror illuminated and informed by itself is mirror and light all together, in which the sensible object and subject are one. The metaphor of the eye seeing itself is obviously not far away. It is in this power of the soul (*animae potentia*), residing in the fantastic spirit (*in spiritu phantastico consistens*), in this seeing mirror that a world is to be found, an inexhaustible womb of forms and effigies (*mundus quidam et sinus inexplebilis formarum et specierum*).

So far, the first two passages of this section, from *De imaginum compositione* and *De gli eroici furori*, have emphasized the difficulty of becoming "*tutto occhio*" because of the shadowy human condition. This condition implies that the philosopher seeking the divine must move indirectly. Full attention must

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118   Bruno, *De imaginum compositione*, BOMNE, 2:538.

be paid to the natural world, the second Monad that functions as a mirror in which the first Monad is reflected "*come il sole nella luna*", and in which the human mind is offered a glimpse of its own essence through effigies, images, figures, and so on. The mirror of the world, in other words, is not a one-way mirror. While the metaphysical sun is reflected "downward" in the moon of nature, the human intellect knows itself and ascends through its reflection into natural forms and effigies.

With the third passage of this section, where the internal eye is compared to the external, we enter the mind of the mnemonist. In the first two passages the objective of attaining the god's-eye view (capable of seeing everything *including* itself) was overshadowed by the human condition, and so attention was directed instead to the mirror of nature; but here, by contrast, a certain power of the soul, residing in the *spiritus phantasticus*, is adduced. The external mirror of nature is now located inside the human mind. This internal seeing mirror is light and mirror at the same time, characterized as a certain world, an inexhaustible womb of forms and effigies. Is this inner mirror a way for Bruno to overcome the limits of the human mind with respect to the Monad? Is the *speculum videns* the key to an attainable form of the god's-eye view? Once again, the highest god's-eye view is inaccessible, but from the next chapter of *De imaginum compositione*, where the power of the *spiritus phantasticus* is considered, perception through the *spiritus phantasticus* seems the most obvious method. "Thus, it is apparent", writes Bruno,

> [...] that this power is the principle producing images, or the principle by which the soul produces images. In connection with this, let me make known the opinion of Synesius the Platonist, who argues in this way concerning the power of fantasy and the *spiritus phantasticus*: "while awake, man is a teacher, but while asleep God causes him to share in Himself", which opinion we adopt to affirm the dignity of the phantastic life. For if it is a blessed gift to see God through oneself, no wonder that perceiving through fantasy is a gift of the more ancient and proper inner vision. This fantasy is the sense of senses, since the *spiritus phantasticus* itself is the most general sense organ and prime body of the soul, but it remains hidden and works within us; it possesses the best part of the living being – the citadel, as it were. Nature has built the entire fabric of the head around it.[119]

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119 Bruno, *De imaginum compositione*, BOMNE, 2:540: "Ex hisce manifestum est potentiam istam imaginum esse effectricem vel qua anima imaginum est effectrix. Ad cuius re propositum Synesii Platonici sententiam in medium afferamus, qui de potestate phantasiae spiritusque phantastici ita disserit: 'In vigilia doctor est homo, somniantem vero Deus

By evoking Synesius, Bruno not only "affirms the dignity of the phantastic life", he also emphasizes the importance of "perceiving through fantasy" to approach the divine. For when man is asleep and dreaming, he becomes a participant of God.

We may now conclude that the aim of Bruno's *ars memoriae* is to reach a god's-eye view, to become like the view which sees everything and itself. Such a level of understanding would make it easy to do everything as well. But we have noticed that the path to this divine view is never-ending and full of obstacles. On this path the mirror of nature and, to an even greater extent, the inner *speculum videns*, help the philosopher to realize his goal.

3.4.2 *The Magical Writings*

In Bruno's magical works, as in his mnemonic texts, a desired ascent to the divine is expressed by the concept of *similitudo*. In *De magia mathematica* the exegesis of a scriptural verse (Gen. 5:3) is interwoven with Jewish demonology.[120] According to this tradition, Adam – before the birth of Seth – fathered the sons of his first wife, Lilith. These sons were evil beings who had the power to cause harm and injury, ready to beset humankind. But when Adam was reconciled to God, he brought forth Seth to the image and similitude of God (*ad imaginem et similitudinem Dei*). Just as the aim of the art of memory could be expressed through a similitude with the god's-eye view, one of the major goals of the magus, deification, is represented by the formula *ad similitudinem Dei*, which refers not only to man's origin, but also to his highest possible destiny. The use of the preposition "*ad*", to say that man is created *to* the image of God,

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ipse sui participem facit', quod assumimus ad vitae phantasticae asservandam dignitatem. Si enim ipsum Deum per se inspicere donum beatum est, nimirum per phantasiam percipere antiquioris propriaeque inspectionis est munus: haec enim sensus sensuum, quoniam phantasticus ipse spiritus sensorium est communissimum primumque animae corpus, et hoc quidem latet agitque intus, praecipuum animalis habet et velut arcem: circa enim universam ipsum capitis fabricam natura construxit." For the reference, see Synesius, *De somniis translatus a Marsilio Ficino*, in M. Ficino, *Opera omnia*, II, Basileae, ex officina Henricpetrina, 1576 (ripr. Anast., Turin: Bottega d'Erasmo, 1983), pp. 1968–78, 1970.

120   Bruno, *De magia mathematica*, BOM, p. 42: "Unde dicunt sapientes Hebraeorum quod Adam genuit Tochot – idest Diabolos; qui, Deo reconciliatus, genuit Seth ad imaginem et similitudinem Dei". Cf. Agrippa, *De occulta philosophia*, pp. 489–90. See also M. Maimonides, *The Guide for the Perplexed*, ed. and trans. M. Friedländer (New York: Dover, 1904) 1:7.

indicates man's divine nature.[121] As will be seen, for this ascent man is flanked by demons and a major role is played by those cast in a heroic mould.[122]

Tirinnanzi has shown that the transformation of human souls into demons often recurs in the Nolan's magical writings as a way of introducing an ethical principle into the cycle of time.[123] In the passage following the reference to Tochot and Seth in *De magia mathematica*, for example, Bruno asserts that "according to the magi Porphyry and Origen, corrupted souls are turned into demons. And it is confirmed by the statement about Judas Iscariot that 'One among you is a devil'; but others may judge how this might be".[124] Although a certain scepticism can be read in the final sentence, the role of demons, as already mentioned, remains an important issue in Bruno's ethics. In his infinite universe, spirits are believed to transmigrate to different bodies in accordance with the view of Origen and Pythagoras. This, however, does not happen

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121　In *Theses de magia*, as we have seen, the similitude between man and God is a *similitudo analogiae*. As is so often the case, the philosopher has the writings of Thomas Aquinas in mind. According to the author of the *Summa theologiae* mankind was not precisely similar to God. There was a "certain similarity" (*aliqua Dei similitudo*) that was obviously far removed from equality. For God was the example that exceeded infinitely what remained in man. "Therefore it is said that God's image is in man, not perfectly, but imperfectly. And this is the meaning of the Scripture (Gen. 1: 26) when it is said that man was made to the image of God (*hominem factum ad imaginem Dei*): the preposition *ad* points to a certain approach, which is conducive to something distant." Aquinas, *Summa Theologiae*, 1:93, 1: "Manifestum est autem, quod in homine invenitur aliqua Dei similitudo, quae deducitur a Deo, sicut ab exemplari: non tamen est similitudo secundum aequalitatem: quia in infinitum excedit exemplar hoc tale exemplatum. Et ideo in homine dicitur esse imago Dei, non tamen perfecta, sed imperfecta. Et hoc significat Scriptura (Gen. 1: 26), cum dicit, *hominem factum ad imaginem Dei*: praepositio enim *ad* accessum quemdam significat, qui competit rei distanti".

122　See also chapter 2 above, note 153.

123　N. Tirinnanzi, "Eroi e demoni," in Meroi, *La magia nell'Europa moderna*, p. 411: "Dal *De magia matematica* al *De magia naturali*, dalla *Lampas triginta statuarum* al *De minimo*, la trasformazione delle anime umane in demoni continua a imporsi all'attenzione di Bruno, che in queste tesi di ascendenza platonica ravvisa l'unica possibilità di introdurre un principio di ordine etico nel ciclo di tempo."

124　Bruno, *De magia mathematica* (BOM, p. 42): "Et existimant magi, Porphirius et Origines pravas animas in daemonas converti, quibus videtur adstipulari dictum illud de Iuda Ischariote 'Unus vestrum diabolus est'; sed hoc, quomodo sit, iudicent alii." Cf. John 6:70–71. See also Bruno, *De magia naturali* (BOM, p. 236): "Sic etiam, ut supra dictum est, alii spiritus aliis corporibus sunt inclusi, certo quodam ordine et iustitia gradus istos distribuente, et Origenes, Pythagoras et Platonici homines inter daemones annumerant, hosque non bonos, sed qui boni fieri possunt et peiores, unde ad meliorem vitam disponantur atque deteriorem."

randomly, but according to an ethical principle, so that a bad life makes man descend to the lower regions of being and a good life makes him ascend to the more noble regions. "Man", in the words of Tirinnanzi, "is properly a demon insofar as he has the capacity to become 'better' or 'worse'".[125]

The life of demons, however, is not comparable to that of men for many reasons. In *De magia naturali* man's empires belong to a temporal order, and change faster than those in the world of demons, which is ruled by larger intervals. It is also easier to unify the soul with a simple body (such as that of a demon) than with one composed of contraries, as in our case.[126] In the preceding passage, Bruno – for whom there are more species of demons or spirits than of sensible things[127] – has treated all sorts of demons, ending with aerial, terrestrial, and watery spirits. The highest, however, are the fiery spirits, which can also be called gods or heroes.[128] Thus humans with their composite bodies belong to a different species than demons, complicating any possible contact between them. Elsewhere in *De magia naturali*, the Nolan underlines that occult intelligences do not turn their ears and understanding to all languages. Words of human devising are not picked up, but rather the language of nature.[129] Human language – belonging to another temporal order – is too ephemeral, since it decays and renews itself like leaves on the trees and is therefore not adapted for the understanding of demons. I have already mentioned that,

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125   Cf. Tirinnanzi, "Eroi e demoni," p. 416.

126   Bruno, *De magia naturali* (BOM, p. 229): "In omni ordine spirituum sunt praesides et principes, pastores, duces, rectores, gradus, penes quos sapientiores et potentiores imbecillioribus et rudioribus dominantur et praecipiunt; et haec imperia non sunt aeterna, neque ita brevis consistentiae sicut humana, quandoquidem vitae illorum sunt multis rationibus vitae nostrae incomparabiles utpote facilius est animam conciliare sibi corpus simplex, quam ex contrariis compositum, quale nostrum; [...]." Cf. Tirinnanzi, "Eroi e demoni," p. 410.

127   Bruno, *De magia naturali*, BOM, p. 224: "Neque spiritibus seu daemonibus omnibus omnia aeque constant atque licent et sunt perspecta; longe enim plures species eorum esse comperimus, quam possint esse rerum sensibilium."

128   In Iamblichus, by contrast, heroes were clearly separated from demons. See chapter 2, note 136.

129   Bruno, *De magia naturali*, BOM, p. 192: "Ad haec illud quoque est observandum, quod intelligentiae occultae non ad omnia idiomata aures advertunt aut intelligentiam; voces enim, quae sunt ex institutione hominum, non ita attenduntur sicut voces naturales." In the margin of one of the manuscripts, the following words were added: "quia daemones et intelligentiae separatae non per doctrinam et disciplinam, consuetudinem et experientiam discunt, sed per innatas et natura ipsa inditas species intelligunt et apprehendunt; ideo voces quae in nova institutione consistunt et pereunt, sicut folia in arboribus decidunt et renovantur, non sunt ad propositum." See chapter 2 above, notes 155 and 156.

apart from the role of demons in an ethical context, Bruno's continual attention to the intercourse between man and demons – also present in his mnemonic works – renders untenable the characterization of his magical project as a naturalization and purification from demonic influence, at least without further specifications.

The complicated communication between species belonging to different temporal orders leads to the question of whether the language of images used during the mnemonic practice, linked to nature, is more timeless. An often-quoted passage from *De magia naturali* presents the types of signifiers to which Bruno had already ascribed a "magical" function in *Ars memoriae*, stating that by means of them one can operate above nature or even, when requested, against nature. He speaks of characters (*caracteres*) that represent the thing itself through a figuration (*figuratione*). Some signs (*signa*), inclined to each other, looking to each other, embracing and hugging each other, indicate love, just as opposed ones indicate hatred and separation.[130] There is no pre-established set of such signs. Everyone can make his own according to what he desires or detests. "And thus", writes Bruno, "he characterizes for himself each symbol according to his own impulse, and, as if a divinity were present, experiences certain powers which are not experienced in any explicit language, speech, or writing."[131]

We have already encountered these sorts of embracing figures in *De imaginum compositione*, dealing with the laws of psychological association. In *De imaginum compositione* these figures are considered useful for portraying an abstract concept, such as love, and imprinting it in our memory. In *De magia naturali*, on the other hand, they are explicitly positioned in a discussion on communicating with the divine. In the philosopher's view, the hieroglyphs or sacred characters of the Egyptians display images, taken from natural things themselves to indicate these things. On these sacred characters we read the following:

> The Egyptians used these symbols and sounds to converse with the gods (*Deorum colloquia*) to accomplish extraordinary results (*ad mirabilium*

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130   Ibid., p. 192: "Similiter et omnes scripturae non sunt eius momenti, cuius sunt caracteres illi, qui certo ductu et figuratione res ipsas indicant, unde quaedam signa in invicem inclinata, se invicem respicientia, amplectentia, constringentia ad amorem; adverse vero declinantia, disiectae ad odium et divortium; […]."

131   Ibid., p. 194: "ita utcunque rem quodam impetu nodis ipsis sibi designans et veluti praesenti numini experitur certas vires, quas nullo eloquio et elaborata oratione vel scriptura experiretur."

exequutionem). Later, when Thoth, or someone else, invented the letters of the type we use today for other purposes, this resulted in a tremendous loss, first of memory, and then of divine science and magic.

"Like those Egyptians", he continues,

> magicians today formulate images, written symbols and ceremonies, which consist of certain actions and rituals, through which they express and make known their prayers with certain signals. This is the language of the gods which, unlike all other languages which change a thousand times every day, remains always the same, just as natural species remain always the same.[132]

Thus, despite the difficulty of communication between humans and demons – due to their difference in species, living in another temporal order – the images used by the Egyptians and by the magicians today form a language that has remained the same through the ages. Some signifiers in his mnemonic art, which is profoundly linked to nature, may have been good candidates for such "images, written symbols and ceremonies".

After these remarks on the role of demons and the question on the possibly magical and communicative function of mnemonic images, we will proceed to one of the major aims of his magic: the realization of man's divine nature, the fulfilment of his creation *ad similitudinem Dei*. Deification was already a central theme in *De gli eroici furori*, where the problematic relation between the finite human state and divine infinity was described in a notably magical vocabulary.[133] The metaphysical hunger of the *furioso* is disproportionate to

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132   Ibid.: "Tales erant litterae commodius definitae apud Aegyptios, quae hieroglyphicae appellantur seu sacri caracteres, penes quos pro singulis rebus designandis certae erant imagines desumptae e rebus naturae vel earum partibus; tales scripturae et tales voces usuveniebant, quibus Deorum colloquia ad mirabilium exequutionem captabant Aegyptii; postquam per Teutum vel alium inventae sunt litterae secundum hoc genus quibus nos hodie utimur cum alio industriae genere, maxime tum memoriae, tum divinae scientiae et magiae iactura facta est. Itaque ad illorum similitudinem quibusdam hodie fabrefactis imaginibus, descriptis caracteribus et ceremoniis, qui consistunt in quodam gestu et quodam cultu, quasi per certos nutus vota sua explicant magi quae intelligantur; et illa est Deorum lingua, quae aliis omnibus et quotidie millies mutatis semper manet eadem, sicut species naturae manet eadem." Cf. *Phaedrus* 274–75. For an English translation, see Bruno, *Cause, Principle and Unity*, p. 115.

133   For an analysis of the magical terminology in this dialogue, see S. Bassi, "Dagli *De gli eroici furori* al *De magia naturali*: precorsi di lettura," in Bassi, *L'arte di Giordano Bruno*, p. 82.

the capacity of his mind. But this does not prevent his desire from binding him to truth as if he were chained by a magical bond. In the fourth dialogue of the second part of *De gli eroici furori*, a devouring bait (*esca edace*) blinds the *furioso*, binds his soul, and makes him a lover and slave.[134] The use of magical terms, such as "bait" (*esca*) and "bond" (*laccio, lego l'alma*), in an "erotic" context is not casual. Magic was already closely linked to love in *Sigillus sigillorum*, as it is in *De vinculis in genere*, where Amor is called the bond of bonds (*vinculum quippe vinculorum amor est*).

In *De vinculis in genere*, thirty articles describe the binder (*de vinciente*). Another thirty articles are dedicated to that which can be bound (*de vincibilibus*), and finally, twenty-three articles deal with Cupid's bond (*de vinculo Cupidinis*). The last article of this part is interrupted in the middle of a phrase, implying that this part was intended to number thirty articles as well. The fourth article of the second part compares everything that can be bound. "Humans are more bound than animals, and brutish and stupid humans are less suitable for heroic bonds than those who have achieved a clearer mind."[135] That humans are more subject to being bound than animals has everything to do with their reason, which is able to duplicate the bond of imagination.[136] But what does Bruno mean when he writes that those with a clearer mind are more suitable for heroic bonds? In the tenth article he divides human types which can be bound into three categories. Contemplative men are bound to the divine by seeing the sensible effigies. Voluptuous men descend to the desire of touching through sight, while ethical men are attracted by the pleasure of conversation. The first are the highest and heroic ones, the second the inferior and natural ones, and the third are in the middle, as the rational ones. The heroic ones are worthy of heaven and ascend to God. It goes without saying that the most high, heroic type, who is – following Platonic philosophy – bound to the divine through the sensible effigy, recalls the *furioso* who was bound to the truth by his love for it.

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134 Bruno, *De gli eroici furori*, BOeuC, 7:445: "esca edace, [...], /stral, fuoco e laccio di quel dio protervo,/ che puns'gli occhi, arse il cor, legò l'alma,/ e femmi a un punto cieco, amante e servo:/[...]".

135 Bruno, *De vinculis in genere*, BOM, p. 458: "Considera ut homines plus vinciantur quam bestiae, et homines bestiales atque stupidi ad heroica vincula minime sint apti, quam hi qui clariorem animam sunt adepti."

136 Bruno, *De magia naturali*, BOM, p. 280: "Vinculum phantasiae leve per se est, si vinculum cogitativae vires non conduplicet."

> Contemplativi a sensibilium specierum aspectu divinis vinciuntur, vo-
> luptuosi per visum ad tangendi concupiscentiam descendunt, ethici in
> conversandi oblectationem trahuntur. Primi heroici habentur, secundi
> naturales, tertii medii; Primi dicuntur aethere digni, secundi vita, tertii
> sensu. Primi ascendunt ad Deum, secundi haerent corporibus, tertii ab
> altero extremorum recedunt, alteri appropinquant.[137]

We learn more about the first type (the hero, worthy of heaven and ascending
to God) in the sixth article, "why one bond is not enough" (*quare uno non ex-
pleat vinculo*), of the first part of *De vinculis in genere*, where nature is supposed
to spread out various bonds of beauty, pleasure, goodness, and also those of
the effects diverse and contrary to these. Sometimes, however, it happens that
someone is bound by one object only, because of the stupidity of his senses,
blind and lazy concerning the rest, or because of the intensity of this one bond,
by which the sensibility to other bonds is slowed down or cancelled. This is
rare and happens to only a few persons. When this marvellous kind of bond
occurs, one can loosen the body to such a degree that even terrible tortures
are not felt. This is what happened to the philosopher Anaxarchus, as well as
St Andrew and St Lawrence, who let themselves be murdered in the name of
faith. "They were carried away by the hope of eternal life and by a vivid faith,
or credulousness (*quadam vivacitate fidei vel credulitate*)", writes Bruno.[138] In
opposition to these a similar concentration can be reached, not in the name
of faith, but rather with reason (*cum ratione*), as was the case with Diogenes
and Epicurus, who pursued a life similar to that of the gods in this mortal body
(*Deorum se similem vitam in hoc etiam mortali corpore consequutos*).

> Cum ratione vero in Cynico Diogene et Epicuro, quibus hac ratione –
> animo rerum contemptu et specie opinionis, secundum principia na-
> turalia et ordines devincto – sensum voluptatum et dolorum omnium
> abigebant, sicque summum huius vitae pro conditione humanae speciei

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137   Bruno, *De magia naturali*, BOM, pp. 464–66.
138   Bruno, *De magia naturali*, BOM, p. 422. According to Diogenes Laertius (*Lives*, 9.58),
      Anaxarchus endured his torture with fortitude when he was pounded to death in a
      mortar, at the command of Nicocreon, tyrant of Cyprus. Saint Andrew is said to have
      been crucified on an x-shaped cross, supposedly at his own request, as he deemed him-
      self unworthy to be crucified on the same type of cross as Jesus had been. Finally, Saint
      Lawrence was burnt or grilled to death. Tradition holds that he joked about their cooking
      him enough to eat while he was burning on the gridiron, stating "Turn me over, I am not
      done yet".

bonum se assequutos esse censebant, ubi animum, extra dolorem, timo-
rem, iram tristesque alios affectus positum, in quadam heroica voluptate
servarent, et rerum ignobilium, quae sunt in hac vita, nempe tempo-
ranearum, contemptu, Deorum se similem vitam in hoc etiam mortali
corpore consequutos testabantur. Itaque summum bonum et eximiam
virtutem tum aliis ostendisse, tum ipsos putarunt se esse consequutos.[139]

The status of hero, although very rare, might be attained. Those philosophers
who – not by a vivid faith or credulousness, but with reason – preserved their
souls in a state of heroic pleasure above sorrow, fear, anger, and other feel-
ings, thought they would attain the highest good available in this life. They
claimed that, by holding in contempt the ignoble things in this very transitory
life, they could attain a life similar to the gods even while in this mortal body.
The course of Bruno's life eventually gave him the opportunity to experience
this heroic state, which he had always described with admiration. On the day
of his execution he proclaimed that "he died willingly, as a martyr, and that
his soul would go up with the smoke to paradise" – as can be read in one of
the Inquisition documents.[140] Bruno's willingness to undergo his execution for
his philosophical ideas and his statement that his soul would go up with the
smoke to paradise, stand in perfect accord with his idea of the hero as a fiery
spirit worthy of heaven.

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139   Bruno, *De vinculis in genere*, BOM, p. 424. Cf. Bruno, *Sigillus sigillorum*, BOMNE, 2:250, and
       Bruno, *De gli eroici furori*, BOeuC, 7:251–53.

140   Firpo, *Le Procès*, p. 523: "Giovedì mattina in Campo di Fiore fu abbrugiato vivo quello scel-
       erato frate domenichino da Nola, di che si scrisse con le passate: heretico ostinatissimo,
       et havendo di suo capriccio formati diversi dogmi contro nostra fede, et in particolare
       contro la Santissima Vergine et Santi, volse ostinatamente morir in quelli lo scelerato; et
       diceva che moriva martire et volentieri, et che se ne sarebbe la sua anima ascesa con quel
       fumo in paradiso. Ma hora egli se ne avede se diceva la verità." Cf. Preface, note 1.

A Spirit-Regulating Art

> [...] quod quia Daemones ubi operantur ibi sunt, ideo quando phantasias
> & interiores potentias perturbant, tunc etiam ibi existunt. [...] Et quia
> pro tunc possunt impressiones facere in potentias interiores affixas orga-
> nis corporalibus. Ideo & per illas impressiones, sicut immutantur organa,
> ita immutantur operationes potentiarum modo quo dictum est: quod
> educere possunt species reservatas in una potentia affixa organo: sicut
> ex memoria, quae est in ultima parte capitis, educti speciem equi: loca-
> liter movendo illud phantasma usque ad mediam partem capitis, ubi est
> cellula virtutis imaginativae: & demum consequenter usque ad sensum
> communem cuius residentia est in anteriori parte capitis. Et omnia subi-
> to sic immutare & perturbare possunt, ut formae tales necessario aesti-
> mentur, ac si exteriori visui obiicerentur.
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> *Malleus Maleficarum, Lugduni, sumptibus Caudii Bourgeat*, 1669, p. 134, *impression
> anastaltique, Bruxelles, Culture et Civilisation*, 1969

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The previous chapter proposed magic and memory as being two sides of the
same coin. We have turned this coin over several times to perceive the traces
of *similitudo* on both sides. A background of similarities was the precondi-
tion for and even the key to bringing mnemonic and magical practices to a
good outcome. Our attention will now shift from the décor to the actor, from
the world of similarities to the acting soul. We touched upon the importance
of Bruno's psychology. Dealing with the *spiritus phantasticus*, a better under-
standing of the functioning of the mind and its different cognitive faculties
seemed desirable.

To this end, I shall examine two basic ingredients of Bruno's psychologi-
cal recipe: the brain ventricles, in which the cognitive faculties of the soul are
lodged, and the spirits responsible for importing sensory data into these ven-
tricles. In the first section these ingredients – both of which can, to a certain
degree, be derived from Aristotle – are presented and explained. The second
section then demonstrates how they reappear in Bruno's conception of the
mind. According to the philosopher, earlier studies of memory and psychology

fail because they are unable to demonstrate exactly how the faculties of the soul collaborate during the mnemonic process. Through a precise description of five mnemonic actions he seeks to clarify the subtlety of the collaboration between the cognitive faculties, as well as the use which his art makes of this collaboration. The third section draws out the map of the mind according to Bruno's conceptions. What is remarkable, however, is that Bruno's psychological terminology changes in accordance with the Platonic or Peripatetic sources he has in mind.[1] Because these terminological shifts might cause confusion, the third section presents a plain overview of the cognitive faculties as given in Bruno's *Summa terminorum metaphysicorum*. The fourth section then returns to my central thesis on memory and magic, developed around two concepts: belief and deceit. The Nolan's conception of the brain as a place in which "spirits" dwell becomes highly significant in the light of his description of demonic spirits. From his typology of demons in *De magia naturali*, inspired by Michael Psellus's *De daemonibus*, it becomes clear that certain types of demons are capable of intruding into our cognitive faculties. As equally appears from our quotation from the *Malleus Maleficarum*, by moving contents from one cognitive faculty to another demons were thought to be capable of corrupting the cognitive process and making humans believe they saw, heard, or even thought things which are not real. Thus, the demon *deceives* insofar as he is able to influence the *belief* of his victim. In the fifth and last section I argue that the conceptions of these "illusion-injecting demonic spirits", amply treated in Bruno's later magical writings, were already of importance to the author of the early mnemonic treatises. Their presence colours the epistemic orientation of the *ars memoriae* (emphasized by the editors of the *Opere mnemotecniche*) – teaching the student to regulate his spirit (*spiritum regulare docet*) and thus to keep his cognitive faculties free of deceptive demonic influence – in a magical way.

4.1 Spirits in the Ventricles

In the period before he came to Paris (1579–81), Bruno had been lecturing for two successive years on Aristotle's *De anima* and giving other courses on

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1   As will be seen, Bruno's treatment of the faculties is anything but consistent. Sometimes *imaginatio* and *phantasia* are clearly distinguished, sometimes not. Sometimes *cogitativa* is inserted, and a *prima memoria* is distinguished from a *secunda memoria*. In the course of this chapter, it will become evident that these variations depend on Bruno's changing sources.

philosophy in Toulouse,[2] the city where St Dominic, the founder of his for-
mer order, had started to preach at the beginning of the 13th century. Here, the
Dominicans had founded a university in 1229, and in 1231 they were empowered
by Pope Gregory IX to lead the Inquisition against the Albigenses. In Toulouse
and the surrounding countryside, Dominic and his followers acquired a repu-
tation as Inquisitors and indefatigable soldiers for the faith or, as the pun went,
God's watchdogs (*Domini canes*).[3] Bruno, after a disappointing stay in Geneva
and a one-month stopover in Lyon, where he had struggled in vain to earn a
living, decided to take his chances in the Catholic heart of southern France.[4]

Two years of teaching Aristotle's *De anima* led our philosopher to a well-
nuanced conception of the soul, which is present from his earliest mnemonic
treatises, where the Peripatetic doctrine is intertwined with Platonic thought.
But the cognitive faculties appear in Bruno's magic as well. Working on some-
one's imagination, the magician might succeed in manipulating his reason too,
as reason works with the information derived from the imagination. Thus em-
powered, the magus can make someone believe his own delusions. Once again,
the mnemonic virtuoso – experienced in modelling the imagination – seems
to be a privileged candidate to conduct these magical operations successful-
ly. But before going into this matter two basic ingredients from the history of
"brain science", both related to the Aristotelian doctrine, must be considered.

4.1.1   *Ventricles in the Brain*

Although Aristotle himself did not think of the physical brain as being di-
vided into different ventricles, his distinction between several functions of
the thought process may be seen as a decisive moment in the development
of Western "brain science". In *De anima* sense, imagination, and discursive
thinking are clearly separated. Interestingly, Aristotle himself refers to the
mnemonic practice in connection with the imagination to distinguish it from
sense and discursive thinking. Imagination is the world between the sensible

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2 Firpo, *Le Procès*, p. 49: "Et in questo mezo essendo vacato il luoco del lettor ordinario di fi-
   losofia di quella città, il quale si dà per concorso, procurai de adottorarmi, come io feci, per
   maestro delle arti; et cusí mi presentai al ditto concorso, et fui admesso et approbato; et lessi
   in quella città doppoi, doi anni continui, il testo de Artistotele *De anima* et altre lettioni de
   filosofia."

3 Ricci, *Giordano Bruno*, p. 137.

4 Firpo, *Le Procès*, p. 49: "Et andai a Lione, dove stetti un mese; et non trovando commodità
   de guadagnar tanto che mi bastasse di poter vivere et per li mei bisogni, di là andai a Tolosa,
   dove è un Studio famoso."

and the intellectual. It is not found without sensation, nor is judgement possible without it.

> That this activity [of imagining] is not the same kind of thinking as judgement is obvious. For imagining lies within our own power whenever we wish (e.g. we can call up a picture, as in the practice of mnemonics by the use of mental images), but in forming opinions we are not free: we cannot escape the alternative of falsehood or truth.[5]

Imagination is freer and does not have to answer the demands of truth to the same degree as judgement. Thereafter Aristotle distinguishes imagination from sense too, for "sense is either a faculty or an activity (e.g. sight or seeing)" and "imagination takes place in the absence of both, as e.g. in dreams" (428a 5–7). Thus, in this passage, which the mnemonist Bruno might have dealt with at great length during his Toulousian lessons, Aristotle explicitly links mnemonics to imagination.[6]

It is worth noting that the Greek philosopher makes careful distinctions between cognitive activities. Although these distinctions lay its foundation, the doctrine of the faculties of the soul, located in ventricles in the human brain, each responsible for specific activities of the cognitive process, does not come from Aristotle himself. And even though, not long after Aristotle, the brain was meticulously studied in Alexandria, where vivisection was practised and Herophilus (330–250 BC) distinguished several ventricles in the brain,[7] a well-elaborated ventricular conception of the brain remained an isolated opinion among pagan authorities for several centuries. As Walter Pagel argues, it was much later, when Nemesius (born 340 AD), bishop of Emesa, was particularly concerned with the non-corporeality of the soul, that he worked out the doctrine of the ventricles in his *De natura hominis*.[8] Pagel compares Nemesius to

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5   Aristotle, *De anima*, 427b, in *Complete Works*.

6   The association of memory with imagination returns in Aristotle, *De memoria et reminiscentia* 450a, where he asks of which part of the soul memory is a function, and replies: "Manifestly of that part to which imagination also appertains; and all objects of which there is imagination are in themselves objects of memory, while those which do not exist without imagination are objects of memory incidentally."

7   Systematic vivisection for scientific purposes would not occur again until the Third Reich. See C.G. Gross, "Aristotle on the Brain," *The Neuroscientist* 1/4 (1995), 245–50, p. 250. The concept of "ventricles" is still used today in neuroscience to indicate certain regions on the map of the human brain.

8   W. Pagel, "Medieval and Renaissance Contributions to Knowledge of the Brain and its Functions," in *The History and Philosophy of Knowledge of the Brain and its Functions:*

his pagan contemporary Macrobius, for whom the soul – although divine – "dwells in the brain substance, for this resembles the circle, the perfect and therefore divine symbol, uppermost in the body and like the soul itself devoid of sensation."[9] For Nemesius, on the contrary, the soul does not dwell *in* the brain substance, but is wholly separate from the body. By indicating what *can* be localized in the brain, he seeks to demonstrate what *cannot* be found in the brain, i.e. the soul itself.

Proof of an exact localization of brain ventricles then appears when a loss of isolated functions is noticed after the injury of certain parts of the brain.[10] Nemesius explicitly refers to Galen's observation of a frenetic case (insanity caused by fever). The rational part – thought of as the warmest part of the brain – is damaged by the fever, while other parts, such as sensation, remain intact.[11] Others have a disrupted imagination, convinced that they see things that are not there, while their reason is intact.[12] For Nemesius these examples demonstrate that local damage to the brain impairs one specific function, while other functions remain intact, and thus that there must be several ventricles responsible for their own specific functions.

After Nemesius, this ventricular theory enjoyed a long life in the history of Western thought. Many medical and cognitive treatises of the Middle Ages contain images in which the brain ventricles are represented. This idea of the human mind was still current in the Renaissance. Even Vesalius's objections could not wipe out these representations from treatises on the human psyche; in Pagel's words, ventricular theory

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      An Anglo-American Symposium, London, July 15th–17th, 1957 (Oxford: Blackwell Scientific Publications, 1958), pp. 95–114.

9   Pagel, "Medieval and Renaissance Contributions," p. 100. Cf. Macrobius, *Saturnalia*, 7.9.

10   See chapter 12, "De memorativo", in Némésius D'Émèse, *De natura hominis, édition critique avec une introduction sur l'anthropologie de Némésius*, par G. Verbeke et J.R. Moncho (Leiden: Brill, 1975), p. 88: "Nam anterioribus quidem solum ventriculis secundum aliquem unquam modum laesis, sensus quidem impediuntur, discretivum vero adhuc manet servatum; cum autem medium ventriculum solum patitur, discretio quidem fallitur, sensuum vero membra manent custodientia secundum naturam sensuum; si autem anteriores et medius ventriculus patiantur, discretio simul cum sensibus absciditur."

11   Némésius D'Émèse, *De natura hominis*, pp. 88–89: "Fit autem hoc manifestum et per alias quidem passiones et multa symptomata, maxime autem ex phrenesi. Eorum enim qui hanc patiuntur, hi quidem sensus servant, mente et discretione sola laesa." Cf. Galen, *De locis affectis*, trans. R.E. Siegel (Basel: S. Karger, 1976), 4.2.

12   Némésius D'Émèse, *De natura hominis*, p. 89: "Alii vero inanem habent imaginationem, videre existimantes quae non videntur, in aliis vero sapientes sunt secundum rationem."

tenaciously kept its place up to Vesalius who demolished it – pointing to the presence of all the four ventricles in so many stupid animals (notably the ass) so that there is no room for the higher human faculties in them. Yet even after Vesalius it formed the germ of the many attempts at brain localisation in the seventeenth century and after.[13]

It is therefore not surprising that one of the most famous and detailed representations of the ventricular theory is given by the 17th-century Platonic philosopher Robert Fludd, many years after Vesalius's anatomical discoveries.

The ventricular view of the brain is the first necessary element in Bruno's concept of the human psyche. It provides a material frame, a corporeal machinery in which cognitive processes occur. Within this frame, cognition is generally seen as a linear movement of abstraction, starting from sensory perception and running backwards through the different ventricles of the brain. The information of the five senses is collected in the first ventricle of *sensus communis*, found in the front of the brain. This information coming from the senses can be cut and pasted into the *imaginatio* or *phantasia*.[14] Here, centaurs are fabricated and the Minotaur is born by combining images derived from sense perception. These processes are the first to take place and are therefore located in the anterior part of the brain. Thus, the *sensus communis* and imagination are associated and located in the same frontal ventricle.[15] Deeper in the brain, these images are digested in the middle ventricle of *ratio*, or reason. This is the more abstract area of truth and falsehood – just as in Aristotle's *De anima*, these two concepts concerned reason and not imagination (*supra*) – where the information coming from the senses and imagination is inserted into discursive knowledge and judged. Finally, the ventricle of *memoria*, in the back of the brain, preserves all information. Thus, the brain functions in three successive phases: first, the sensual information is brought in and masticated

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13   Pagel, "Medieval and Renaissance Contributions," p. 100.

14   The exact senses of the terms *phantasia* and *imaginatio*, sometimes used as synonyms, vary considerably. Cf. *Phantasia-imaginatio. Atti del colloquio internazionale del Lessico intellettuale europeo, Roma 9–11 gennaio 1986*, eds. M. Fattori and M. Bianchi (Rome: Atteneo, 1988). In his contribution to this volume, "*Phantasia* e *imaginatio* fra Ficino e Pomponazzi," pp. 3–20, E. Garin writes that "a proposito della *imaginatio*, inquietante non è solo la variazione di senso da una lingua all'altra (φαντασία/*imaginatio*), ma la molteplicità di valori di un termine nella medesima lingua. Più preoccupante ancora l'oscillazione e l'ambiguità su cui medici, filosofi e teologi sembrano giocare di continuo" (ibid., p. 5).

15   This association is reflected in Bruno's *Ars memoriae* (BOMNE, 1:192), where *phantasia generaliter dicta* is called that "quae includit etiam in sua significatione sensum communem communiter appellatum."

by the imagination so that new images are formed (ingestion in the anterior part). Next, this information is judged by reason (digestion in the middle part). Finally, it is stored in the memory (retention in the back).

This view of the brain is reinforced by anatomical considerations, consonant with Plato's metaphor of knowledge as food for the soul.[16] The anterior ventricle, being soft and moist, facilitates the association of sensory perception and imagination. In the middle of the brain the pure is separated from the impure, the true from the false. Rational thinking is conceived as the digestion of sensory impressions. Heat is considered a necessary factor for digestion. Therefore, this central place in the brain is believed to be the warmest. The posterior ventricle, where memory is located, is cool and dry, and as such is an ideal storage place.

With regard to the cognitive faculties located in ventricles, Bruno especially refers to the Arabic commentators on Aristotle. In his mnemonic works Bruno often evokes Avicenna's commentary on *De anima* and Averroes's commentary on *De memoria et reminiscentia* when he discusses the cognitive faculties.[17] These commentaries make clear distinctions between several ventricles and their functions. However, the Nolan is not satisfied with their insights. Discussing different psychological actions that occur during the mnemonic practice in *Ars memoriae*, he writes that

> […] it is sufficiently known that [these actions] are produced by the reasoning soul in a general and rather confused way; but it is not known well by means of which potencies, faculties and organs closely related to these actions; nor has anyone appeared before us, to our regret, who has investigated these matters more profoundly than some of the Arabs, versed in the Peripatetic discipline, by whom some of these subjects have been touched upon.[18]

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16   Plato, *Protagoras* 313c.

17   For the presence of these Arabic sources, see BOMNE, 1:184 ss. and p. 664 ss. However, book 8 of Ficino's *Theologia Platonica* and his comments on Plotinus also contain ample discussions of the cognitive faculties which, as will become apparent, were used by Bruno. On the Arab commentators of Aristotle's psychology, see C. Di Martino, *Ratio Particularis. La doctrine des sens internes d'Avicenne à Thomas d'Aquin. Contribution à l'étude de la tradition arabo-latine de la psychologie d'Aristote* (Paris: Vrin, 2008).

18   Bruno, *Ars memoriae*, BOMNE, 1:194: "Notum satis est in universalitate et confusione quadam haec a ratiocinante anima produci, sed non admodum quibus proxime potentiis, facultatibusve et organis; nec, ut desideramus, ante nos apparuit qui haec fuerit rimatus intimius quam quidam ex Arabibus, qui versati sunt circa Peripateticam disciplinam, a quibus nonnulla praetacta sunt."

In the following pages of *Ars memoriae* Bruno meticulously determines to which faculties these actions are linked and how they collaborate. By this means he wants to clarify certain issues left in the dark by the Arabs, and show how his art of memory effects an optimal, uncorrupted cognitive process throughout its different stages – from perception to rational judgement.

Now, if the cognitive process takes its starting point from sense perception, how is sense data adduced in the first place, and what is it exactly that can be found in these ventricles? This question brings us to the second ingredient needed to understand Bruno's psychology: a trafficking of spirits responsible for the ingestion of sensible information into the ventricles.

4.1.2   *Personal and Universal Spirit*

Thus, we have come to our second point: the *spiritus* or *pneuma*, which is sometimes considered to be the subtler part of the blood, sometimes a sidereal substance – an ambiguous but important matter to which we will soon return. This *spiritus* can also be traced back to Aristotle, although he was not the first to discuss it. In fact, the concept of *pneuma* originated in the school of Sicilian medicine, with Empedocles as a leading figure, and probably reached Aristotle through the figure of Diocles of Carystus.[19]

Although his master Plato does not use the *pneuma* explicitly to explain sight (*Timaeus* 45b-d), his conceptions are very similar and, as suggested by Couliano, he may have been influenced by the Sicilian physicians as well. Plato's mechanism of sight – closely related to the aforementioned practice of fascination – functions by means of an internal fire, a kind that does not burn, akin to daylight. It is from the mutual combination of the inner and outer fires that sight is explained.

> So whenever the stream of vision is surrounded by mid-day light, it flows out like unto like, and coalescing therewith it forms one kindred substance along the path of the eyes' vision, wheresoever the fire which streams from within collides with an obstructing object without. And

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19   See the chapter "History of Phantasy" by Couliano, *Eros and Magic in the Renaissance*, pp. 3–27. On the history of *pneuma* or *spiritus*, see also D. Giovanozzi, *Spiritus mundus quidam. Il concetto di spirito nell'opera di Giordano Bruno* (Rome: Edizioni di Storia e Letteratura, 2006), pp. 81–136. On the history of the concept of *pneuma*, G. Verbeke, *L'Evolution de la doctrine du pneuma du stoicisme à S. Augustin: Etude philosophique* (Paris: D. De Brouwer, Editions Inst. Sup., 1945). On Aristotle's concept of *pneuma*, see G. Freudenthal, *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul* (Oxford: Clarendon Press, 1999).

this substance, having all become similar in its properties because of its similar nature, distributes the motions of every object it touches, or whereby it is touched, throughout all the body even unto the Soul, and brings about that sensation which we now term "seeing".[20]

Couliano compares this mechanism to the principle of radar: "the eyes, depositories of an internal fire, project an igneous ray through the pupils, a ray that meets the 'external fire' projected by sensory bodies outside themselves."[21] The contact between the internal and external fires is captured by the centre of sensation and the cognitive process, which Plato – following the Hippocratic tradition – positions in the brain.[22]

In opposition to Plato, Aristotle explicitly uses the term *pneuma* in the context of sense perception, and he positions the heart, not the brain, as the ultimate centre of life and sensation. The heart produces the vital heat on which the functions of the soul and the cognitive soul capacities (except for the human intellect) depend.[23] Sensation and motions are also directed from the heart. It is precisely by means of the *pneuma* that the vital heat of the heart is dispersed through the whole body, just as it is thanks to the *pneuma* that information coming from the senses is able to reach this control room. In brief, the *pneuma* works in two directions, towards and away from the heart.[24]

But how, then, is information brought in through the senses? For smelling and hearing Aristotle refers to "passages (*poroi*) connecting with the external air and full themselves of innate breath (*pneuma*); these passages end at the small blood vessels about the brain which run thither from the heart" (*De generatione animalium* 744a). In connection with sight he mentions that "there are channels (*poroi*) which lead from the eyes to the blood vessels that surround the brain" (*De partibus animalium* 656b). Although Aristotle does not refer explicitly to *pneuma* here, Freudenthal argues that "Aristotle held the

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20   Plato, *Timaeus*, 45c-d.

21   Couliano, *Eros and Magic in the Renaissance*, p. 8.

22   Plato, *Timaeus*, 69e–73a.

23   Cf. Freudenthal, *Aristotle's Theory*, p. 120.

24   However, it would be wrong to say that the brain is of no importance to Aristotle. In his view, the brain is moist and cold and its function is to cool the heat of the heart. "The brain, then, tempers the heat and seething of the heart" (*De partibus animalium* 652b). Gross, "Aristotle on the Brain," pp. 247–48: "Galen and many subsequent historians of medicine are somewhat unfair in claiming that Aristotle simply dismissed the brain as cold and wet. Rather, for Aristotle, the brain was only second to the heart in importance and was essential to the functioning of the heart. The heart together with the brain formed a unit that controlled the body."

sensory effect to be transmitted to the centre by the connate *pneuma*" (i.e. the innate breath), simply because the blood itself, although it is necessary for the conditions of sensation, is not itself endowed with sensation (*De partibus animalium* 656b). This connate *pneuma* must be understood as "naturally and constantly produced through the action of vital heat on the blood."[25] As such, it is a kind of vapour derived from the blood which reaches into the external world through specific *poroi*. An effect of the *pneuma* on the external world, for example, is seen

> […] in the case of very bright mirrors, when women during their menstrual periods look into the mirror, the surface of the mirror becomes a sort of bloodshot cloud; and if the mirror is new, it is not easy to wipe off such a stain, while if it is old it is easier. The cause is, as we said, that the eye is not only affected by the air but also has an effect upon it and moves it. (*De somniis* 459b)

For our purposes, the intermediary position of the *pneuma* between the corporeal and the incorporeal is interesting because it is shared by the imagination. In the inner world of our imagination corporeal features, such as colour and size, seem to persist without matter. In our imagination we can fall from an iron spiral staircase without breaking our legs, or lean against a newly painted wall without ruining our clothes. In Aristotle's words, "images are like sensuous contents except in that they contain no matter" (*De anima* 432a). As such, just like the *pneuma*, the image stands somewhere in between, as an incorporeal projection of corporeal realities. For Aristotle, just as the soul cannot receive information from the senses without the intermediary instrument of *pneuma*, it also cannot understand without images. "To the thinking soul images serve as if they were contents of perception […]. That is why the soul never thinks without an image" (*De anima* 431a). This being so, both the *pneuma* and the imagination belong to the same intermediary world, and will be connected to each other to such an extent as to be united in one concept: the "fantastic *pneuma*" or "*spiritus phantasticus*".[26]

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25   Freudenthal, *Aristotle's Theory*, p. 120.

26   Hereafter I will speak of *pneuma* and *spiritus* in accordance with the language of the author in question. I remark that the connate *pneuma* and the fantastic *pneuma* cannot be identified simply: not every connate *pneuma* is seen as fantastic (it being responsible for the transportation of information from other senses as well), but imagination is believed to be *pneumatic*.

Aristotle's conception of *pneuma* was picked up and further elaborated by later philosophical currents, such as Stoicism, Neoplatonism, and Hermetism. Within these conceptual developments of the *pneuma*, extremely relevant for Bruno is the connection between the individual and cosmic *pneuma*, a predominantly Stoic inheritance.[27] However, Aristotle himself had given occasion for this connection in a passage of *De generatione animalium* (736b) in which he referred to the sidereal substance while speaking about the connate *pneuma*.

> Now it is true that the faculty of all kinds of soul seems to have a connexion with a matter different from and more divine than the so-called elements; [...] All have in their semen that which causes it to be productive; I mean what is called vital heat. This is not fire or any such force, but it is the breath (*pneuma*) included in the semen and the foam-like, and the natural principle in the breath, being analogous to the element of the stars.[28]

This passage has troubled scholars for many years, for it introduces the divine quintessence – the element of the stars – into the lower regions of the Aristotelian cosmos, strictly divided into the sublunary and celestial regions. Freudenthal emphasizes the analogical character of Aristotle's statement to diminish the problematic status of this passage.[29] But this analysis is recent,

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27   Verbeke, *L'Evolution*, p. 512: "Cléanthe a été le premier à se servir de ce terme dans la signification indiquée: le pneuma est un souffle igné, qui pénètre le cosmos tout entier pour en assurer la cohésion et la vie. L'âme humaine elle-même est une parcelle de ce feu créateur; et ainsi les diverses réalités cosmiques, tout en possédant leur individualité distincte du milieu environnant, ne constituent qu'un seul être, qu'on pourrait appeler le grand vivant, animé par le pneuma cosmique."

28   Aristotle, *De generatione animalium*, in *The Complete Works*, 1:1143.

29   The reference to the sidereal substance appears as "mysterious" – in Martha Nussbaum's words – in the rest of Aristotle's elemental biological system (Aristotle, *De motu animalium*, ed. M.C. Nussbaum (Princeton: Princeton University Press, 1978), p. 143). A discussion of the problem is given in the third chapter of Freudenthal, *Aristotle's Theory*. Instead of focusing on the compatibility between the celestial element and the whole of Aristotle's biological thought, Freudenthal shifts the core of the problem by examining the philosopher's research programme and giving an analysis of the concept of "vital heat". He concludes that Aristotle in fact states "that by virtue of the identity of their capacities to inform matter and specifically to give rise to souls, the celestial element and the vital heat are analogous" (p. 117).

and philosophers as early as the Stoics identified the connate *pneuma* with the sidereal spirit.

While Bruno referred his idea of ventricles to the Arabic commentators on Aristotle, his conception of the *spiritus* shows Platonic characteristics instead. For Renaissance Platonists, occupied with man's divinity, Aristotle's analogy between the connate *pneuma* and the quintessence (and its reception by later philosophical currents) offered a possibility for introducing the divine into the lower terrestrial regions. Giovanni Pico, for example, states in his *Disputationes adversus astrologiam divinatricem* that

> [...] the middle between what seems the fleshy house and the soul – source of life – which we call *spiritus* – a very thin and invisible body – is most connate with the sidereal light and heat. In this *spiritus* life is mainly present, and through this *spiritus* life unfolds and diffuses its powers in this visible body and vice versa.[30]

But more influential for Bruno was Ficino, who works out in detail how the individual and the cosmic *spiritus* are interrelated. Interesting differences come to the surface if we compare how both authors see the connection between these spirits.

Already in his commentary on Plato's *Symposium* (composed in Latin in 1468–69) Ficino alludes to the personal *spiritus*.

> Tria profecto in nobis esse videntur, anima, spiritus atque corpus. Anima et corpus natura longe inter se diversa spiritu medio copulantur, qui vapor quidam est tenuissimus et perlucidus per cordis calorem ex subtilissima parte sanguinis genitus. Inde per omnia membra diffusus anime vires accipit, et transfundit in corpus.[31]

Here, Ficino does not mention any analogy between the personal *spiritus* and the element of the stars. A similar reference to the *spiritus*, as a very pure

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30   Pico della Mirandola, *Disputationes adversus astrologiam divinatricem*, in *Opera omnia*, 1:460: "In omnibus etiam viventibus, inter hoc quod videtur crassius habitaculum et animam, vitae fontem, medius est quem spiritum appellamus, tenuissimum corpus et invisibile, luci calorique illi sidereo maxime cognatum, cui vita praecipue adest perque eum suas in hoc visibile atque retrorsum vires explicat atque diffundit."

31   M. Ficino, *Commentaire sur le* Banquet *de Platon, De l'amour* (Paris: Les Belles Lettres, 2002), p. 141. An overview of Ficino's passages on the spirit as the subtle part of the blood, and on the *spiritus univeralis*, is given by Giovanozzi, *Spiritus mundus quidam*, pp. 87–91.

distillation of the finest blood, generated by the heat of the heart, can be found in *Theologia Platonica*.[32] It is in *De vita coelitus comparanda* that the doctrine of a mediating spirit between body and soul is transposed from the individual to the cosmic level. The material body of the world and the immaterial World Soul are so distant from each other that the soul cannot transmit its life force to the world if it is not mediated by a substance bearing features of both the material and immaterial realities. This *spiritus* is called a very tenuous body, "as if now it were soul and not body, and now body and not soul" (*quasi non corpus, et quasi iam anima. Item quasi non anima et quasi iam corpus*).[33] The universal *spiritus* is said to mediate between the material world and the World Soul in a manner analogous to the way in which the individual *spiritus* mediates between the human body and soul.

> Igitur inter mundi corpus tractabile et ex parte caducum, atque ipsam eius animam, cuius natura nimium ab eiusmodi corpore distat, inest ubique spiritus, sicut inter animam et corpus in nobis, si modo ubique vita est communicata semper ab anima corpori crassiori. Talis namque spiritus necessario requiritur tanquam medium, quo anima divina et adsit corpori crassiori et vitam eidem penitus largiatur.[34]

Thus, everything lives by grace of the spirit, which communicates life from the soul to the body, and this procedure is valid on the individual as well as the cosmic level. But the Florentine's analogy does not imply any identification of the two spirits. Ficino's opinion seems very close to Freudenthal's solution of the anomaly in Aristotle's world view: the spirits are analogous but not identical. The individual spirit is the result of a continuous distillation of the finest blood, brought about by the heat of the heart, whereas the World Soul "procreates this spirit in the first instance as if pregnant by her own generative power" (*hunc proxime ex virtute sua procreat genitali, quasi tumens*).[35] In brief, although their origin is not the same, they share a common function which leads to correspondences between the individual and the cosmic level.

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32   Ficino, *Platonic Theology*, 2:234 (book 7, chapter 6): "Anima ipsa [...] cum sit purissima, crasso huic et terreno corpori ab ea longe distanti non aliter quam per tenuissimum quoddam lucidissimumque corpusculum copulatur, quem spiritum appellamus, a cordis calore genitum ex parte sanguinis tenuissima, diffusum inde per universum corpus."

33   See Ficino, *Three Books on Life*, p. 256.

34   Ficino, *Three Books on Life*, pp. 254–56.

35   Ficino, *Three Books on Life*, p. 256.

But this does not mean that the two mediums cannot be linked, and this very possibility forms the basis of Ficino's spiritual magic. Heavenly virtues are torn down from the World Soul to influence the individual soul and the human body by "a certain application of the individual spirit to the universal spirit" (*applicatio quaedam spiritus nostri ad spiritum mundi*).[36] Thus, in Ficino the levels are well distinguished. Virtues from the *anima mundi* pass through the *spiritus universalis* and reach the *spiritus individualis* to be absorbed by the *anima individualis* and the human body.

The fourth chapter of *De vita coelitus comparanda* discusses how the individual spirit must be made solar and Jovial to facilitate this absorption. Four steps are indicated by Ficino to obtain this objective. First, the obfuscating vapours are separated from the spirit by purgative medicines. Secondly, the spirit is made luminous by luminous things. Thirdly, it is so cared for that it may be at once rarefied and strengthened. And finally, it will be made celestial to the highest degree if the rays and influence of the sun, when dominant among the celestial bodies, are applied to it. "And so", concludes Ficino, "from this spirit, acting as a mediator in us, the celestial goods located principally within it will overflow not only into our body but also into our mind – I say all the celestial goods, because they are all contained in the Sun."[37]

In Bruno's infinite universe, however, the cosmic levels which had been well distinguished by Ficino are compressed and tend to converge. Although the *spiritus universi* is still an important basis for magic (especially for *actio in distans*),[38] its function is no longer to mediate between the World Soul and the

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36   Ficino, *Three Books on Life*, p. 254: "Quem [sc. mundum] sicut et quodvis animal multoque efficacius animatum esse, non solum Platonicae rationes, sed etiam astrologorum Arabum testimonia comprobant. Ubi etiam probant ex applicatione quadam spiritus nostri ad spiritum mundi per artem physicam affectumque facta, traiici ad animam corpusque nostrum bona coelestia. Hinc quidem per spiritum nostrum in nobis medium et tunc a mundi spiritu roboratum, inde vero per radios stellarum feliciter agentes in spiritum nostrum, et radiis natura similem, et tunc seipsum coelestibus coaptantem."

37   Ficino, *Three Books on Life*, p. 258: "Atque ita ex hoc spiritu tanquam in nobis medio coelestia bona imprimis insita sibi in nostrum tum corpus, tum animum exundabunt – bona, inquam, coelestia cuncta, in Sole enim omnia continentur."

38   Bruno, *De magia naturali*, BOM, p. 196: "Inde credere et considerare licet causam, qua non solum actio est ad propinqua, sed etiam ad remota secundum sensum; secundum rem enim, ut supra dictum est, per communionem spiritus unius seu animi, qui est totus in toto et qualibet mundi parte." Thanks to the universal spirit, it is not contrary to reason that a physician can cure at a distance, as we read in *Theses de magia*, BOM, pp. 346–48: "Hinc non est inopinabile contra rationem, sed valde rei naturae consonum, quod medicus vulnera longius absentis possit curare, non solum certis adhibitis partibus, quae

body of the world, because it is identified with the World Soul. In many plac-
es Bruno speaks of *spiritus universalis seu anima mundi*.[39] On the level of the
human soul, on the other hand, the distinction between *anima* and *spiritus* is
maintained.[40] Yet this does not prevent the continuity between them, nor does
it prevent the connection of the individual *spiritus* and soul with the universal
spiritus and World Soul; as we read in *Theses de magia*, "it is manifest from
experience that every soul and spirit has a continuity with the spirit and soul
of the universe."[41] This continuity raises the question of how we must under-
stand this continuity between both *spiritus*. It is noteworthy not only that the
World Soul and universal spirit are identified by Bruno, but also that the fron-
tier between the universal spirit and the fantastic spirit seems to fade away.
While Ficino taught that there were four steps for absorbing the universal spir-
it by making the personal spirit more solar, Bruno's description of the internal
power residing in the *spiritus phantasticus* shows striking resemblances with
his vision of the universal spirit, and thus with the World Soul. Let us consider
a crucial passage on the fantastic spirit from *De imaginum compositione*, al-
ready discussed from another perspective in our previous chapter, from which
the correspondences with the *spiritus mundi* become apparent.

> [...] animae potentia illa interior et quodammodo spiritualior, quae spe-
> cies istas recipit et componit, in spiritu phantastico consistens, *indivi-
> duum quiddam* esse censendo est, [...] Hic est mundus quidam et sinus

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cum illius corporis materia communionem aliquam adeptae sunt, et instrumentis: verum
etiam, si profundioris erit virtutis et efficaciae, immediate per spiritum universi omnia
poterit perficere."

39   See, for example, Bruno, *De magia naturali*, BOM, pp. 168–70, p. 184: "Hoc est principium
praecipuum et radix omnium principiorum, ad reddendam causam omnium mirabilium
quae sunt in natura, nempe quod ex parte principii activi, et *spiritus seu animae univer-
salis*, nihil est tam inchoatum, mancum et inperfectum, tandemque ad oculos opinionis
neglectissimum, quod non possit esse principium magnarum operationum." Giovanozzi
dedicates a whole section to '*Anima mundi sue spiritus universalis*', *Spiritus mundus qui-
dam*, pp. 70–80, p. 92.

40   Bruno, *Theses de magia*, BOM, p. 342: "Anima per se et immediate non est obligata corpori,
sed mediante spiritu, hoc est subtilissima quadam substantia corporea, quae quodam-
modo media inter substantiam animalem est et elementarum; ratio vero istius nexus est,
quia ipsa non est omnino substantia immaterialis."

41   Bruno, *Theses de magia*, BOM, p. 340: "Ex rerum experientia manifestum est omnem
animam et spiritum habere continuitatem cum spiritu universi et anima, [...]." As men-
tioned, according to Bruno the art of memory in its perfect form had to be practised in
connection with the World Soul.

quodammodo inexplebilis formarum et specierum, [...] Rursumque sicut ex paucis elementis natura innumerabiles species componuntur et coalescent, ita et opera istius *intrinseci efficientis* non solum specierum naturalium formae in isto amplissimo sinu reservantur, verum quoque *ad innumerabilium imaginum multiplicationem* improportionabiliter *concipiendarum* multiplicari poterunt, sicut ubi ex homine et cervo, homine et equo et ave, centauros alatos, alata animalia rationalia confingimus, [...] Ex hisce manifestum est potentiam istam imaginum esse effectricem vel qua anima imaginum est effectrix. Ad cuius rei propositum Synesii Platonici sententiam in medium afferamus, qui de potestate phantasiae spiritusque phantastici ita disserit: "In vigilia doctor est homo, somniantem vero Deus ipse sui participem facit", quod assumimus ad vitae phantasticae asservandam dignitatem. [...] phantasticus ipse spiritus sensorium est communissimum primumque animae corpus, et hoc quidem latet *agitque intus*, [...] Intimus interea sensus *in cunctis suis partibus est integer*; [...].⁴² (my italics)

This ample description of the power residing in the *spiritus phantasticus*, in which the opinion of Synesius is evoked, answers the principal features that return in Bruno's conception of the *spiritus universalis*. First of all, the fantastic spirit, which is complete in all its parts (*integer in cunctis suis partibus*), is said to contain a power (*potentia*) that is indivisible (*individuum quiddam*). In the Nolan's writings there are many references to the universal spirit stressing this peculiar feature of being complete in all its parts (*totus in toto et qualibet mundi parte*).⁴³ The second feature which the fantastic spirit has in common with the universal spirit is closely related to the first. It is said to be an inexhaustible womb of forms and species (*sinus inexplebilis formarum et specierum*). Just as nature composes all the species with a few elements, so too does the fantastic spirit combine forms with an infinite variation, to create, for example, a winged centaur. In other words, the *spiritus phantasticus* contains all things

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42   Bruno, *De imaginum compositione*, BOMNE, 2:538–42.

43   Bruno, *De magia naturali*, BOM, p. 196. See also, for example, *Lampas triginta statuarum*, BOM, pp. 1052–54, where it is emphasized that the World Soul's omnipresence in its totality does not imply that it is unfolded to the same degree everywhere. "Sicut etiam in corpore humano – licet tota anima sit in toto, et in qualibet corporis parte – non tamen ubique totam se explicat [...] ita et anima mundi et spiritus universi – dum eodem pacto eadem virtute et *essentiae integritate sit in omnibus et ubique* – pro ordine tamen universi, [...], alibi vero sensum et vegetationem tantum, alibi compositionem tantum, alibi imperfectam mixtionem, alibi simplicius mixtionem explicat" (my italics).

in all (*omnia in omnibus*).[44] This second feature can also be ascribed to the universal spirit, as we can read in *De magia naturali*, where the *anima mundi seu spiritus universi* is said to couple and unite all with all (*qui omnia copulat unitque omnibus*) and to offer access from all to all (*unde ab omnibus datur aditus ad omnia*).[45] A third correspondence is that, just like the universal spirit, the fantastic spirit is called an "intrinsic worker" (*intrinsecus efficiens*, *agit intus*). Likewise, in *Lampas triginta statuarum*, the universal spirit is said to "operate in all things from the inside".[46]

These correspondences between the universal and fantastic *spiritus* are striking and demonstrate an important difference from Bruno's Platonic precursor. Ficino's astrological magic tries to absorb the higher virtues by adapting the personal spirit to the universal spirit. Bruno's ample description of the *spiritus phantasticus*, on the other hand, almost fits the universal spirit. It is complete in all its parts, can make all out of all, and works from within. It is remarkable that, whereas the physician Ficino is concerned about the *material conformity* of both spirits, the mnemonist Bruno focuses especially on the *functional conformity*.[47] Bruno does not adapt his spirit to the universal one by purifying medicines, or by making his spirit more luminous and rarefied.[48] On the contrary, as an intrinsic worker creating all out of all, Bruno's personal

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44   This aim, to make all out of all, was discussed in the previous chapter, where I indicated similitude as being a necessary condition to realize this objective. The mechanism of universal association by which all is created out of all is based precisely on *similitudo*.

45   Bruno, *De magia naturali*, BOM, p. 244: "IV. Vinculum est anima mundi seu spiritus universi, qui omnia copulat unitque omnibus; unde ab omnibus datur aditus ad omnia, sicut dictum est in superioribus."

46   Bruno, *Lampas triginta statuarum*, BOM, p. 1058: "Intelligendus est universalis spiritus, qui – sicut intellectus ab intimis omnibus intelligit – ita ab intimis omnibus ipse operatur, […]."

47   Ficino's concern is due to the fact that the universal spirit or quintessence is present, for him, in the sublunary sphere in a mixed form. Ficino, *Three Books on Life*, p. 246: "Semper vero memento sicut animae nostrae virtus per spiritum adhibetur membris, sic virtutem animae mundi per quintam essentiam, quae ubique viget tanquam spiritus intra corpus mundanum, sub anima mundi dilatari per omnia, maxime vero illis virtutem hanc infundi, quae eiusmodi spiritus plurimum haeserunt. Potest autem quinta haec essentia nobis intus magis magisque assumi, si quis sciverit eam aliis elementis immixtam plurimum segregare, […]."

48   This does not mean that Bruno rejects Ficino's opinion about the disadvantage of a troubled spirit. See, for example, Bruno, *Ars memoriae*, BOMNE, 1:196: "Anima clarior, divinis ideis magis exposita, intentius obiectorum formas suscipit, quemadmodum qui acutioris visus est, facilius aptiusque discernit." But there is a clear shift from Ficino's focus on the material constitution of the spirit to Bruno's focus on its activity.

spiritus participates in the activity of the universal *spiritus*. I think this is a crucial difference between Ficino and Bruno, showing that the latter not only identifies the *spiritus universalis* with the *anima mundi*, but also seeks to approach the *spiritus universalis* by participating in its activity "from within". Thus, for Bruno, it is manifest from experience that there is continuity between the individual and the universal spirit; their shared features seem to point to the fantastic spirit as an area of intensified connection.

4.2   An Internal Art and Its Inner Tool

4.2.1   *"An art of this kind inhabits the essence itself of the whole soul"*

Now that we have identified these two ingredients, let us follow the spirits on their way through the ventricles to see how Bruno thought of the human psyche. Bruno's treatises on the art of memory are always accompanied by psychological considerations. After a close look at a passage from *Ars memoriae*, it becomes clear how the art relates to both ingredients.

> Est quidem huiuscemodi ars rerum prosequendarum in genere discursiva architectura et habitus quidam ratiocinantis animae, ab eo quod est mundi vitae principio ad omnium atque singulorum se exporrigens vitae principium. Nulli de potentiis ipsius tanquam ramo innixus, neque de peculiari quadam emergens facultate, sed ipsum totius stipitem utpote ipsam animae totius incolens essentiam.[49]

These two sentences go straight to the heart of Bruno's mnemonic project: the art is not restricted to only one of the cognitive faculties, but is rooted in the essence of the soul and operates in connection to the universal spirit. Unfortunately, this is once again written down in the enigmatic, albeit mannered, style which is so typical of Bruno, and by means of which he intended to keep his doctrine safe from unworthy minds. Let us therefore proceed step by step to show the reader how I derived this conclusion from the quotation above.

The first phrase comprehends three important statements by which Bruno characterizes his art. First, an "art of this kind" is said to be a sort of "discursive architecture" of the kind that seeks what has to be found (*huiuscemodi ars rerum prosequendarum in genere discursiva architectura*). By now we know that this art is a complicated device, by which one can translate data to be

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49   Bruno, *Ars memoriae*, BOMNE, 1:122–24.

remembered into images, order them as a harmonious whole, and later recover them. But what exactly is meant by this first characterization as "discursive architecture"? On the one hand, "discursivity" indicates that the art embraces, apart from memory and imagination, the level of discourse. But it may also refer to the activity of "running through" the memory in search of specific content. On the other hand, *architectura* is significant if we compare it to a passage from *De la causa, principio et uno*, where

> […] that intellect which possesses the faculty of producing all species, and of sending them forth *with such fine architecture* from the potency of matter to act, must contain them all in advance, after the manner of forms, without which the agent could not proceed to manufacture, just as the sculptor cannot execute different statues without having a preconception of their different forms.[50]

In this Italian dialogue, an analogy is drawn between the skilful divine intellect and the sculptor, both of whom possess in advance the forms they will bring forth – evoking the Architect in Plato's *Timaeus* (28c). In *Ars memoriae*, presenting an art that teaches one to sculpt mnemonic images, the term *architectura* suggests an equal skilfulness on behalf of the mnemonist. Secondly, the art is said to be "a certain habit of the rational soul" (*habitus quidam ratiocinantis animae*), indicating that his *ars memoriae* is not restricted to the hours in which it is practised. Rather, it becomes a "habit" of the soul (in terms of Aristotelian ethics),[51] an acquired disposition, available at any moment. As such, the skilful creativity aimed at by Bruno's art should become a spontaneous attitude of the mind of the mnemonist. Thirdly, this "habit of the rational soul" stretches from the "principle of the life of the world" to "the principle of the life of everything and all individuals" (*ab eo quod est mundi vitae principio*

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50   Bruno, *Cause, Principle and Unity*, pp. 39–40; See *Causa*, BOeuC, 3:119–21: "questo intelletto che ha facultà di produre tutte le specie, e cacciarle con sì bella architettura dalla potenza della materia a l'atto, bisogna che le preabbia tutte, secondo certa raggion formale, senza la quale l'agente non potrebe procedere alla sua manufattura; come al statuario non è possible d'exequir diverse statue, senza aver precogitate diverse forme prima." See also Bruno, *Lo Spaccio*, pp. 21–23: "Sa che la sustanza spirituale, […] è una cosa, un principio efficiente et informative da dentro […] che da entro fabrica, contempra e conserva l'edificio […] ordisce la tela, intesse le fila […] infibra le carni, stende le cartelagini, salda l'ossa, ramifica gli nervi […]. Così necessitato dal principio della dissoluzione, abandonando la sua architettura caggiona la ruina de l'edificio dissolvendo li cotrarii elementi." Both parallel passages are indicated in the comments of BOMNE, 1:449–50.

51   Aristotle, *Ethica Nicomachea*, 1103 a-b.

ad omnium atque singulorum se exporrigens vitae principium), wording repeated almost verbatim at his trial to describe the life-giving universal spirit.[52] This first phrase, then, affirms that the art of mnemonic "sculpting" is rooted in the universal spirit. However, should we not expect the mnemonist to create his forms out of the fantastic spirit – possessing all forms at any time – rather than out of the universal spirit? In my opinion, this ambiguity points to the way in which both spirits are closely linked for Bruno, as I have pointed out before.

The second phrase of this passage states that the art "is not founded on only one of the powers of the soul as if on one branch, nor does it emerge from one peculiar faculty, but inhabits the very trunk of the whole as if it resided in the very essence of the whole soul." What is it, then, that precedes the cognitive faculty branches as a "trunk of the whole"? Might it be the spirit, whether universal or fantastic, as they seem to be intertwined?

This assumption is affirmed by the crucial passage of *De imaginum compositione* where the fantastic spirit is called the inner sense "around which nature built the entire construction of the head." Thus, Bruno suggests that the head with its different ventricles has been constructed around this inner spirit, which he compares to the citadel.[53] We conclude that the "trunk of the whole" (*totius stipitem*) from *Ars memoriae*, preceding the cognitive faculties, is the fantastic spirit, about which *De imaginum compositione* asserts that it "as it were, casts out innumerable lines from one centre to the fullness of its circumference, as if going out from one common root (*ex commune radice*) and being brought back into this root (*in quod tanquam radicem reducuntur*)."[54] The trunk metaphor (*stipes*) of *Ars memoriae*, preceding the cognitive faculties, indicates precisely that which is expressed by the root metaphor (*radix*) of *De imaginum compositione*.

If the two phrases of this charged passage of *Ars memoriae* are joined, we may conclude that Bruno's *ars memoriae* is not limited to only one of the cognitive faculties. On the contrary, it is rooted in the fantastic spirit, where, "as

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52　See, for example, Firpo, *Le Procès*, p. 265: "Da questo spirito poi, ch'è detto vita dell'universo, intendo ne la mia filosofia provenire la vita e l'anima a ciascuna cosa che ha anima e vita."

53　Bruno, *De imaginum compositione*, BOMNE, 2:540: "Haec enim sensus est sensuum, quoniam phantasticus ipse spiritus sensorium est communissimum primumque animae corpus, et hoc quidem latet agitque intus, praecipuum animalis habet et velut arcem: circa enim universam ipsum capitis fabricam natura construxit." I have already commented upon this passage in my chapter on *similitudo*.

54　Bruno, *De imaginum compositione*, BOMNE, 2:540–42: "quasi a centro ad amplitudinem circumferentiae innumeras uno eiaculans lineas, inde tanquam ex communi radice exeuntes et in quod tanquam radicem reducuntur."

if it inhabited the essence itself of the whole soul", it is linked to the universal spirit or the "principle of the life of the world and of the life of all and each".

As we have seen, Aristotle in *De anima* links the art of memory to the activity of the imagination. For Bruno the operative field of the art seems much wider than imagination and memory. After this difficult passage in *Ars memoriae*, he continues:

> Therefore, the following seems not irrelevant: if the art were located in the power of memory, how could it pour out from the intellect (*effunderet ab intellectu*)? If it were located in the intellective power, how could it be transmitted (*transmitteret*) from memory, sense and appetite? For it is the art that regulates and directs us to understanding, discoursing, memorizing, fantasizing, desiring and sometimes to feeling the way we want.[55]

Bruno's emphasis on regulating the faculties betrays his vision of the fragility of the cognitive process, subject to many corrupting influences. Therefore, just as the spirits pass from one part of the brain to the other, the art is not restricted to only one region, the cold and dry storage room in the back of the brain. It follows the spirit rather than the faculties so that from the essence of the soul, it regulates the cognitive activities, such as memory, understanding, and fantasizing.

4.2.2   *The Inner Tool, or* Scrutinium, *and Its Five Actions*

An internal art, forming matter from within, needs an internal instrument. In the second part of *Ars memoriae* the elements necessary for the art are expounded. After his passages on *subiecta* and *adiecta* (the traditional *loci* and *imagines*), he proceeds with the *organum*, or the instrument used by the soul to practise his art.[56] This tool, by which the *cogitatio* inquires and discerns, is called the *scrutinium* and, according to the philosopher, had never been

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55   Bruno, *Ars memoriae*, BOMNE, 1:124: "Quod non ab re dictum existimarim: si quippe in memorativa potentia consisteret, quomodo effunderet ab intellectu? Si in intellectiva, quomodo e memoria, sensu et appetitu transmitteret? Porro per ipsam regulamur et dirigimur ad intelligendum, discurrendum, memorandum, phantasiandum, appetendum et quandoque ut volumus sentiendum." It is worth noting that Bruno's terminology of cognitive processes – with verbs such as *effundere* and *transmittere* – fits with the conception of cognition as a flux of spirits through different ventricles.

56   Ibid., p. 180: "Reliquum est ut de organo, quo in proposito utitur anima, nonnihil determinemus."

considered before his time.[57] When situated in the *cogitatio*, the *scrutinium* is compared to the stick one can use to stir a pile of acorns in search of a chestnut.[58] However, its operations are clearly not restricted to cogitation, but cross the borders of each of the traditional faculties.

Further on in *Ars memoriae* we read that the action of the *scrutinium* cannot be restricted to memory, the function of which is to receive and retain (*cuius est recipere et retinere*), nor can it be restricted to what is generally called *phantasia* – including the *sensus communis*. *Phantasia* only concerns those realities which manifest themselves wholly or partially to the external and particular senses.[59] This connection to the senses does not count for the *scrutinium*, which is characterized by more rational properties as well. The interior images of *phantasia* are still deprived of a determinate conceptualization, while the visual translation (by the *scrutinium*) of the matter to be remembered demands a deliberate link between the content and its translation. Next, the activity of the instrument cannot be limited to the cogitative faculty, since this pertains to apprehensions and cognitions.[60] In some cases a search of our memory is realized without judgement on its contents, for example when we remember meaningless words or the musicality of a nonsense verse (as in *Est percor partes agrios labefacta ruinam*).[61] The attempt of the *scrutinium* to remember this verse does not fit into the operations of the *cogitatio*. Therefore, the question is raised: "Which interior faculty is it that introduces into the memory the voices heard by the ear and transmitted to the *sensus communis* as mere sounds?"[62] He answers:

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57   Ibid., p. 182: "Inter haec omnia quod scrutinium appellamus sive discerniculum – utpote quo cogitatio inquirit atque discernit – instrumenti rationem sortiri facile constat. Quod ita communi nomine insignimus, quippe cum ad nostra usque tempora eius nulla facta fuerit consideratio, proprio celebrique nomine caret."

58   Ibid.: "Est ergo instrumentum istud in facultate cogitationis proportionatum baculo in nostra manu [...], quo stantes iacentem acervum dimovemus, diruimus atque dispergimus, ut nobis castanea e medio glaudium vel e communitate aliarum castanearum determinata prodeat."

59   Ibid., p. 192: "Cum igitur haec applicatio non referatur ad memoriam, cuius est recipere et retinere, [...], nec phantasiae generaliter dictae – utpote quae includit etiam in sua significatione sensum communem communiter appellatum: ipsa enim non est nisi eorum quae vel secundum integrum vel secundum partes in sensibus particularibus et externis praeextitere modo suo, [...]".

60   Ibid.: "nec certe cogitativae, cum ipsa sit de apprehensivis cognitivisque facultatibus."

61   Ibid., p. 190.

62   Ibid.: "quae nam igitur est illa potentia interior, quae ab aure perceptas illas voces ad sensum commune delatas ut voces tantum nudas potuit intrudere memoriam?"

If it were *cogitatio* – as we may not presume another internal faculty with the same function as *cogitatio* to justify the introduction into memory of such information – it would certainly not be the pure cogitative faculty, but the cogitative faculty armed with the *scrutinium*. By means of the *scrutinium* the *cogitatio* can send into the storage room of memory not only the information which it can, so to speak, touch with its hand, but also that to which it cannot stretch its hand.[63]

Thus, the instrument of Bruno's art of memory, or *scrutinium*, operates within the faculties of memory, *phantasia* and *cogitatio*. Its territory comprehends at least these three faculties and mediates between them. It transforms into images the data to be remembered (something of which memory itself is not capable), provides significations to the contents of *phantasia* (incapable of conserving significations), and succeeds in sending information into memory and recovering information, and as such transcends the capacities of *cogitatio*.[64] In brief, just like the spirits that pass from one part of the brain to another, the operational field of the inner tool or *scrutinium* is not limited by ventricular boundaries.

Specifying its activity, then, five sorts of action are ascribed to the *scrutinium: applicatio, formatio, immutatio, adunatio*, and *ordinatio*. According to the philosopher, just as many people who see and hear do not know how they see and hear, and by which organ they see and hear, not all who apply, form, vary, associate, and order are aware of how they perform these actions and by which powers, faculties, or organs.[65] Bruno admits that some of these matters have already been touched upon by the Arabs, but it is still not clear on which powers, faculties, and organs each of these actions depends.[66] Therefore, a more profound study is required.

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63   Ibid., p. 192: "Certe si est cogitativa – cum non libeat aliam internam fingere potentiam ex aequo cum cogitativa memoriae proximam pro intrudendis his –, haud est nuda cogitativa, sed scrutinio armata, quo non solum quae quasi manu tangere potest, sed et ea, ad quae quasi manum extendere non valet, immittit in memoriae promptuarium."

64   For the explanation of this passage, I owe much to the comments in BOMNE, 1:510.

65   BOMNE, 1:192–94: "Genus actuum scrutinio prosequutorum in quinque distribuitur species: applicationem, formationem, immutationem, adunationem et ordinationem, quae sane perpaucis notae sunt. Sicut enim non omnes qui vident et audiunt, quomodo vident et quid est quo vident et quid est quo audient, bene norunt, ita et non omnes, qui applicant, formant, immutant, adunant et ordinant, sciunt quomodo haec praestent et quid sit quo praestent."

66   See note 18.

Before discussing the action of *applicatio*, Bruno states that the order of the cognitive faculties has to be kept in mind. Therefore, rather than immediately going into this action, he digresses on the faculties in a critique of Ficino's epistemology, which is relevant in a magical context as well.

First of all, he recalls the order of the faculties and reproduces almost verbatim a famous passage by the Florentine in which the activities of the faculties are described.[67] This silent presence of Ficino in Bruno's *oeuvre* is the rule, not the exception. It indicates not only the intellectual framework of his reasoning, but, in Bruno's subtle variations from his source, also his precise position on certain topics. Here he deals with the cognitive process as expounded in the eighth book of *Theologia Platonica*. In this book Ficino argued for the immortality of the soul by asserting that the soul is "undivided form, everywhere complete and in no way taking its origin from matter". For Ficino "this is demonstrated by the power of understanding". In the first chapter of this book it is described how the rational soul ascends to the spirit through four degrees.[68] This process implies, successively, the *sensus communis, imaginatio*, and *phantasia*. The *intellectus* finally grasps the universal concepts from the preconceptual determinations (*intentiones*) delivered by *phantasia*, and next passes to ever more general concepts.

Yet a strange dissonance is present in Ficino's cognitive theory. Although the cognitive process consists of several successive degrees, starting from the *sensus communis*, the intellect is nonetheless completely independent from matter – a condition of its immortality – as was announced in the title of this

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67   Bruno, *Ars memoriae*, BOMNE, 1:194: "Pro applicatione notandum quod dicitur, facultates istas analogiam et ordinem inter se retinere, ut sensus exterior sit circa corpora, phantasia circa corporum simulachra, imaginatio circa singulas simulachrorum intentiones, intellectus vero circa singularum intentionum naturas communes et rationes poenitus incorporeas." Cf. Ficino, *Platonic Theology*, 2:270: "Quapropter sensus circa corpora versatur, imaginatio circa simulacra corporum, phantasia circa singulas simulacrorum intentiones, intellectus circa singularum intentionum naturas communes ac rationes penitus incorporeas." Thus, Bruno – following Avicenna (cf. BOMNE, 1:512) – substitutes *phantasia* for *imaginatio* in his Platonic source. In Bruno's view the external sense concerns bodies, while representations of these bodies are found in *phantasia* (*imaginatio* for Ficino). For Bruno, then, *imaginatio* deals with individual intentions (a kind of preconceptual determination) of these representations (ascribed by Ficino to *phantasia*). Finally, the intellect concerns the common natures and deeper incorporeal causes of these intentions.

68   The title of this first chapter reads as follows: "Anima est forma individualis ubique tota et nullam trahit originem a materiale, ideoque immortalis est, ut ostenditur per intelligendi virtutem. Animus per quattuor gradus ascendit ad spiritum." Ficino, *Platonic Theology*, 2:262.

first chapter, and as is concluded at the end.[69] It is the *formulae innatae* which decide true knowledge and make it possible for man to reach the ideas and the absolute One, a possibility nipped in the bud in Bruno's *De umbris idearum*, where it is stated rather that "the nature of mankind is not such, that it can inhabit the field of truth".[70] For Ficino, intellectual knowledge is guaranteed from above and made immune to influence from below.[71] As a consequence, however deceptive and fallacious sensible knowledge and imagination may be, the intellect and its inborn formulae remain out of reach. This is a crucial issue on which Bruno and Ficino do not agree. Whereas for the latter the soul receives "from above" and gives "downwards", for Bruno sensible knowledge is derived from the perception of external objects and does not exclusively rely upon the soul. For him, the cognitive process is not a one-way street.[72] Therefore, it is of the utmost importance to master *phantasia* and *cogitatio* by means of a regulatory art: the *ars memoriae*. For these cognitive faculties, just like the senses, risk being deceived and bound. This binding of the senses, *phantasia* and *cogitatio*, later considered by Bruno in the final pages of *De magia naturali*, is evoked in the subsequent passage of *Ars memoriae*.[73]

Bruno next continues his reasoning by stating that, just as there is an art that can seduce, attract, and bind the external senses, so too is there one that can tempt and bind fast the inner senses as well.[74] In which case, the philosopher's

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69   Ficino, *Platonic Theology*, 2:272. Ficino concludes his first chapter as follows: "Atque illud insuper: animam scilicet neque ducere originem a materia neque esse mortalem, siquidem ipsa per se intelligendi opus exsequitur, in quo materiam relinquit omnino atque ad incorporales ascendit et perpetuas rationes."

70   BOMNE, 1:42: "Non enim est tanta haec nostra natura ut pro sua capacitate ipsum veritatis campum incolat." That intellectual knowledge is founded on innate formulae is argued in the early chapters (2, 3, and 5) of book 11 of Ficino's *Platonic Theology*. This dissonance, due to an uneasy combination of Thomistic abstraction and Platonic innatism, is noticed by P.O. Kristeller, *Il pensiero filosofico di Marsilio Ficino* (Florence: Sansoni, 1953), pp. 249–54; and Spruit, *Il problema della conoscenza*, p. 72.

71   Spruit, *Il problema della conoscenza*, pp. 72–73: "Il modo specifico in cui Ficino costruisce la gerarchia universale rende impossibile che un grado inferiore influisca su un grado superiore. La conoscenza sensibile, quindi, non può determinare la conoscenza intellettuale."

72   Spruit, *Il problema della conoscenza*, p. 77.

73   BOM, pp. 262–84. Unlike the senses, *phantasia* and *cogitatio*, the higher cognitive faculties can be bound only by what is good and true. See, for example, Bruno, *Theses de magia*, BOM, p. 396: "Vincula non attingunt rationem, intellectum et mentem, nisi quae iocunda sunt, bona et vera, nempe perfectiva."

74   Bruno, *Ars memoriae*, BOMNE, 1:194–96: "sicut extat ars quae sensum externum allicit, trahit atque ligat, ita est quae <sensum internum> allectat atque tenacissime vincit." I approve of Sturlese's insertion, *sensum internum*.

terminology of magical binding is surely applicable to both the outer and inner senses. The examples that follow, used by Ficino to discuss the relation between art and nature, are taken by Bruno to illustrate what he would later call "binding by sight".

> Cur ad uvas per Zeusim depictas accursabant volucres? Cur Venus a Praxitele sculpta vix ab amatoribus pudica servabatur? Quia artificum forma quaedam ita suum subiectum rebus applicabat, ut eas intensius exquisitiusque discerneret, nec non sedes, unde praecipue et – ut ita dicam – capitaliter species irrepunt in sensus, inveniret.[75]

"Why did birds fall upon the grapes depicted by Zeuxis? And why was the Venus sculpted by Praxiteles just barely preserved inviolate by its admirers?" These questions are proposed to his reader and answered by the author in the following way: "Because a particular form created by these artists applied its own subject to things in such a way that it articulated them more intensely and perfectly, and thus found the exact place from where principally and – so to speak – mainly the species penetrate the senses (*irrepunt in sensus*)." And thus, we might add, they "can bind more efficaciously", which appears from the birds and lovers bound to these works of art.

It may help to know what exactly Bruno means by "form" and "its own subject" in the passage above. He subsequently explains the latter, stating that "the forms in the bodies are considered nothing other than the images of the divine ideas".[76] Thus, the "form" indicates the incarnated image of the divine idea, which he elsewhere calls the "vestige". In accordance with the reasoning above it would be plausible, then, that by "its own subject" he means the divine idea, so that "the more a work of art approaches the divine idea, the more binding power resides in its form".

An analogous passage is found in the twelfth article of the first part of *De vinculis in genere* – on the binder – where Bruno writes that what is absolutely beautiful, good, and great absolutely binds the affect, the intellect, and everything. But no particular being is absolutely beautiful and good. Beauty and goodness differ from one species to another.[77] Therefore, the "whole beauty and goodness of one species, has to be sought in the totality of the species,

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75   BOMNE, 1:196. These examples are derived from book 13.3 of Ficino, *Platonic Theology*, 4:170.

76   BOMNE, 1:196: "Formae enim in corporibus nil aliud quam divinarum idearum imagines esse censentur."

77   BOM, pp. 428–30.

through the ages, by investigating all the individuals one by one. With respect to human beauty, Zeuxis, who painted Helen from several Crotonian virgins as models, gives evidence."[78] The story comes from Pliny's *Naturalis historia*, where it is related that, for his painting of Helen, Zeuxis assembled a group of the most beautiful virgins of Croton.[79] By combining the best features of each of these beauties he approached the most perfect state of beauty, resulting in his image of Helen.

This passage of *De vinculis in genere* equally evokes Zeuxis' marvellous skill at painting. And it appears that the artist's form is derived from his observation of the beauty of various Crotonian virgins. Here, then, Bruno emphasizes the importance of perception. Only after meticulous observation will a good artist be able to apply a form which has binding power.

By this digression on the *applicatio* Bruno distances himself from Ficino. First, the artist's quest for the divine idea is realized by turning to the external world, just as Zeuxis painted his Helen after having observed the Crotonian girls. This prescription is valid also for the mnemonist or internal sculptor, who must seek the divine idea in the external world. For Ficino, on the other hand, although sense perception might stimulate the cognitive process, directing oneself to the external world is not necessary.[80]

In the following passage Bruno continues his discussion of the role and importance of sense data for the cognitive process. Unlike Ficino, he does not think that "the divine ideas print absolute and distinct images of themselves on us, as in mirrors, but certain vague shadows on corporeal nature".[81] Rather, in Bruno's view the external forms in nature are the images of the ideas, closer to the ideas than the shadows of the ideas in the human mind (which are, so

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78   BOM, p. 430: "Totam quoque pulchritudinem et bonitatem speciei unius, non nisi in tota specie, et per totam aeternitatem, per omnia individua atque sigillatim est petendum. Hoc testatus est Zeuxes in pulchritudine humana, qui Helenam de pluribus Crotoniatis virginibus depinxit."

79   Pliny, *Naturalis historia*, book 35, chapter 36. Cf. Cicero, *De inventione*, 2, 1, 1.

80   Ficino's opinion that sense perception can stimulate the mind to be elevated to divine ideas is expounded, for example, in book 12.2 of his *Platonic Theology*.

81   Ficino, *Platonic Theology*, 3:296 (11.5): "Itaque divinae ideae absolutas atque distinctas ipsarum imagines nobis tamquam speculis impressere, naturae autem corporali umbras quasdam confusiores, [...] Quod autem non umbrae idearum, sed imagines perspicuae nobis insint, ex eo patet potissimum, quod umbras illarum ab imaginibus earundem recta ratione distinguimus, quodve formulae illarum nobis insitae ipsas nobis perspicue repraesentant nosque ad eas convertunt, et umbrae idearum in corporibus haud prius eas nobis referunt, quam per nostrae mentis formulas purgentur atque reformentur."

to speak, images of images).[82] In other words, the images and the shadows change position with respect to Ficino. Therefore, attention to the external world and mnemonic practice with the inner shadows of the ideas form unavoidable stages in the never-ending quest for knowledge. "Never-ending" because the absolute One is unattainable. Mankind is destined for the shadows, as was clear from the first intention of *De umbris idearum*. Thus, from the very beginning of *De umbris idearum*, just as throughout this passage on the *applicatio* in *Ars memoriae*, Bruno rejects Ficino's statements that "man's mind is turned towards God without an intermediary", and that "the soul reflects on God without an intermediary when it sees God, not in any creature or in any image of the sense or phantasy, but above all created things as absolute and unadorned".[83] For Bruno, "seeing God" is problematic and certainly cannot be realized without an intermediary because of the disproportion between the infinity of God and the human cognitive faculties. This is why in *De gli eroici furori* man must turn himself instead towards the second Monad or nature, which is God's image (*che gli è simile, che è la sua imagine*).[84]

We might describe Bruno as a Platonist in love with – but also sentenced to – matter.[85] In *De umbris idearum* he argues against Plato, who did not ascribe ideas to accidents, and proposes that there are ideas of everything, because we ascend to the ideas from all that is conceivable.[86] Accidents and the uniqueness of each detail therefore have their proper value. The epistemological status of the senses and the imagination is restored within a Platonic view. "Without the application of the rays (*emissio per applicationem*) coming out of the eyes", writes Bruno to conclude his discussion, "how could there ever be immersion of spirits of things through this same eye in the other internal

82   BOMNE, 1:196: "Formae enim in corporibus nil aliud quam divinarum idearum imagines esse censentur; quae eaedem in sensibus hominum internis quo melius nomine intitulari possunt quam divinarum idearum umbrae, cum ita a realitate distent naturalium, sicut naturales a veritate distant methaphisicalium?".

83   Ficino, *Platonic Theology*, 3:182–84 (10.8): "Cuius rei signum est quod hominis mens in deum convertitur sine medio. [...] Anima sine medio in Deum reflectitur, quando deum neque in aliqua creatura, neque imagine sensus et phantasiae, sed super omnia creata absolutum nudumque suspicit."

84   See chapter 3 above, note 115.

85   In other words, as belonging to the strand of Platonism following *Timaeus*. See A.O. Lovejoy, *The Great Chain of Being: A Study of the History of an Idea* (1936; repr. New York: Harper Torchbook, 1960), pp. 45–55.

86   Bruno, *De umbris idearum*, BOMNE, 1:112: "Accidentium ideas non posuit Plato, [...] Et nos in proposito ideo omnium volumus esse ideas, quia ab omni conceptabili ad easdem conscendimus."

faculties? For what else can this [not turning to the outside world] be called other than having closed eyes?"[87] In this way Bruno tacitly reproaches Ficino for closing his eyes by turning away from the outside world.

The second action of the *scrutinium* is the *formatio*, which follows the *applicatio* and the power of which depends on the manner and kind of application.[88] When the *scrutinium* applies to, or fixes its rays on, an item in the memory, this item will be brought to the surface in a certain form during the formation. Bruno does not think of the formation as an activity exclusively reserved for *phantasia*, as we might suppose. The intellect has its formation too, in correspondence to the Aristotelian statement that "the soul never thinks without an image" (*De anima* 431a).[89] The formation of both the intellect and the memory are said to "follow the application – and the better the foregoing application, the better the formation. This efficacy consists for the most part in the guidance of the *scrutinium*."[90] In other words, the better the artist has observed (or applied his eyes to the object) – as in the case of Zeuxis – the better the formation can be realized.

The formation gives Bruno the opportunity to argue against Averroes and his followers, who stated that the corporeality of a form gives it a greater acting power on memory. By their reasoning, corporeal forms remain more easily than spiritual forms, an opinion Bruno does not share.[91] Nor does the amount

87   Bruno, *Ars memoriae*, BOMNE, 1:198: "Huiusce sane oculi nisi in te vigeat emissio per applicationem, qui fieri potest ut per ipsum in caeteras interiores animae potentias scibilium speres consequi immissiones? Quid enim aliud est non appellere quam clausos habere oculos?".

88   Bruno, *Ars memoriae*, BOMNE, 1:198: "Pro formatione vero, quae sequitur applicationem, illud primo animadvertendum, eius totam vim in modo et specie applicationis esse sitam."

89   A statement dear to Bruno, and one that recurs throughout his works; see, for example, Bruno, *De imaginum compositione*, BOMNE, 2:486–88: "Hoc est quod ab Aristotele relatum ab antiquis prius fuit expressum et a neotericorum paucis capitur: 'intelligere nostrum – id est operationes nostri intellectus – aut est phantasia aut non sine phantasia'; rursum: 'non intelligimus, nisi phantasmata speculemur'."

90   Bruno, *Ars memoriae*, BOMNE, 1:198–200: "Iam habes per similitudinem formationem tum intellectus tum memoriae consequi applicationem tanto meliorem, quanto et antecedens melior extitit applicatio; et huius efficacia maxima ex parte in scrutinii manuductione consistit."

91   Bruno, *Ars memoriae*, BOMNE, 1:200–02: "Quidquid enim sentient, nunquam corporalitas qua corporalitas, seu proprius dicas corpus qua corpus est, quippiam agere intelligi debet; imo universaliter asserendum a corporalitate non esse actionem, a maiori minus esse, a maxima minime, quia corpus quatenus corpus non agit: omnis enim actio est a qualitate et ab eo, quod spiritualius est ipsa qualitate, magis, et ab incorporeo maxime."

of time we focus on a certain form decide how well we remember it. "We have experienced rather frequently", writes Bruno, "that things heard, seen or considered without delay are remembered forever, while other things seen and considered for a long time and with a lot of attention are not retained at all".[92] It is not the span of time that fixes a form in memory, but the activity of the form (*non est mora quae facit fixionem, sed formae activitas*). And, against the aforementioned opinion of Averroes, the more spiritual the form, the more active it is as well (*ubi vero forma est spiritualior, est et activior*).[93] To recall the cases of Praxiteles and Zeuxis, the more the form approaches the divine idea, the more spiritual and active it is, and thus the better it can bind.

The association (*adunatio*) and variation (*immutatio*) – by *immutatio* Bruno understands the action that preserves the particularity of all and each in *phantasia* – occur together, although they are two different actions. There is a strong symbiosis between these actions of the *scrutinium*: "By variation the association happens, and by association the variation."[94] Association would not be possible if all forms were identical. It is necessary for them to keep their proper characteristics (for which the variation is responsible), so that one form can be associated with another by *cogitatio*. In turn, the association highlights the proper characteristics by linking them to other characteristics so that these particularities are preserved by the variation. To illustrate his view, the author proposes an extreme version of Heraclitus' claim as presented in Aristotle's *De sensu et sensibili* (443a): "if everything turned to smoke, our noses would discern everything."

See Averroes, *Compendium Libri Aristotelis De memoria et reminiscentia*, eds. A. Ledyard Shields and H. Blumbert (Cambridge, Mass.: The Mediaeval Academy of America, 1949), in *Corpus commentariorum Averrois in Aristotelem. Versionum Latinarum*, 8:69: "Forme autem facilis reductionis sunt ille que sunt apud virtutem ymaginativam et sensum communem multe corporalitatis et pauce spiritualitatis; et forma difficilis reductionis est multe spiritualitatis et pauce corporalitatis: forme enim multe corporeitatis morantur, dum sensus communis distinguit spiritualitatem earum a corporalitate" (quoted in the notes of BOMNE, 1:200).

92   Bruno, *Ars memoriae*, BOMNE, 1:202: "experimur enim etiam atque non minus, nos quaedam sine mora audita atque visa vel etiam considerata in sempiternum recordari, alia vero diutius attentiusque visa et considerata minime retinere."

93   Bruno, *Ars memoriae*, BOMNE, vol. 1. For the identification between spirit, act, and form, see also Bruno, *De la causa, principio et uno*, BOeuC, 3:137: "Se dumque il spirito, la anima, la vita si ritrova in tutte le cose, e secondo certi gradi empie tutta la materia, viene certamente ad essere il vero atto, e la vera forma de tutte le cose."

94   Bruno, *Ars memoriae*, BOMNE, 1:206: "Immutando enim fit adunatio, adunando fit immutatio."

> Dixit Heraclitus: "si omnia entia fumus fierent, nares omnia discerne-
> rent". Dicamus crassius: si omnia praeter vulpem in gallinaceos converte-
> rentur, frustra non esuriret vulpes, omnia per vulpem essent vorabilia. De
> potentibus omnia suo modo convertere unum est phantasia; de potenti-
> bus omnia suo modo vorare et degustare unum est hominis cogitativa.
> Tale conversionis genus poterit attingere – non sine cogitationis actu –
> phantasia, ut omnia memorabilia potenter reddat – non absque phanta-
> siae actu – cogitativa.[95]

Above all, this comparison to the fox and chickens explains how the *scrutini-
um* mediates between *phantasia* and *cogitatio* to make contents memorable.
The Platonic metaphor of the soul feeding itself with truth is also implied.[96]
"If everything except the fox were converted into chickens, the fox would not
be hungry in vain, as everything would be edible for him." The fox in Bruno's
example, for whom everything is converted into chickens, finds himself in
a privileged situation that is also proper to the faculty of fantasy, capable of
converting all sensory information into one fantastic substance, with which
the cogitation can start its association. But just as when different items (veg-
etables, potatoes, fish) are eaten and become one substance in the stomach,
the nutritive value of each of these items does not change; the reduction of the
sensory information to one fantastic substance does not imply that they lose
their individual characteristics (thanks to the action of variation). Without a
certain preservation of their particularities, *cogitatio* could never assign differ-
ent meanings to the images that are projected on the fantastic screen. Thus,
both actions of the *scrutinium* describe the collaboration between *phantasia*
and *cogitatio*, the former responsible for *immutatio*, the latter for the *adunatio*.

The fifth and last action of the *scrutinium* is the *ordinatio*. From the mem-
ory of snow we come to the memory of winter, from here to the memory of
coldness, and so on. It is emphasized that order is natural. Order is called the
"proper nature of sensible things" (*propria natura sensibilium*). Or order is also
said to be the "progress of a thing along its natural way" (*progressus rei secun-
dum viam naturae*). And if something lacks order, it "leaves the way of nature."[97]

We conclude this section by noting that these five actions of the *scrutinium*
demonstrate the Nolan's familiarity with the Peripatetic commentators and his
need for a deeper analysis of the psychological processes involved in the art

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95   BOMNE, 1:206.

96   See Ficino, *Platonic Theology*, 2:272–82 (8.2 "*anima alitur veritate*"); Bruno, *De gli eroici
        furori*, BOeuC, 7:383–87.

97   BOMNE, 1:214: "Quid est 'ordinis carentia'? 'Exitus', inquiet, 'a via naturae'."

of memory. Practising the art cannot be reduced to the faculties of memory and imagination. The territory of the *scrutinium* is not restricted to one or two ventricles. It rather follows the spirits on their way through the ventricles. The first action of the *scrutinium*, the *applicatio*, gave the philosopher occasion to digress on the cognitive faculties and distance himself from Ficino, for whom turning towards the external world is not necessary. Whereas in Ficino intellectual knowledge is guaranteed from above because the images of the divine ideas are imprinted directly into the soul, from the beginning of *De umbris idearum* this direct connection with the divine is problematic. In opposition to Ficino, for Bruno the images of the divine ideas are situated in nature and the shadows in the human mind, which must turn itself towards nature, the image of God. But in turning to nature, Bruno is clearly concerned with perception, *phantasia*, and *cogitatio*, for these necessary stages of the cognitive process run the risk of being deceived and bound. A major role is reserved for the art of memory because it teaches us a way to bring the cognitive faculties to a prosperous and truthful collaboration. The complexity of this collaboration is revealed by the analysis of the five actions of the *scrutinium*. Cognition implies an *art* in the true sense of the word. The mnemonic practitioner, operating from within, sculpts his mnemonic images, associates them with each other or with certain objects, orders them, and recalls them to the surface, always aware of which specific cognitive faculty is responsible for each task. In this way he maintains an active overview of a complex psychic process which risks deception while it remains passive.

4.3   The Map of the Mind

In a passage of *Cantus Circaeus* dedicated to "the acquisition of the art for mastering *phantasia* and *cogitativa*, which are the gates to memory" (*de modo inquirendae artis in gubernanda phantasia et cogitativa, quae sunt portae memoriae*), the order of the faculties is discussed again.

> It is sufficiently known and accepted that there are four chambers corresponding to the four internal senses: of which the first is called *sensus communis*, situated in the first part of the brain; the second, towards the middle of the brain, is defined as the house of *phantasia*; the third, touching the second, the seat of *cogitativa*; and the fourth of memory.[98]

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98   Bruno, *Cantus Circaeus*, BOMNE, 1:664: "Satis famosum est atque concessum, quatuor esse cellulas pro quatuor sensibus internis: quarum prima sensus communis appellatur,

Here, then, are the faculties and their locations set out for us. The attentive reader will notice that the four cognitive faculties listed here (*sensus communis, phantasia, cogitativa, memoria*) are called internal senses and are not the same as those indicated in *Ars memoriae* (*sensus, phantasia, imaginatio, intellectus*). There, the source was Ficino's *Theologia Platonica*; here, by contrast, Bruno probably had in mind Avicenna's commentary on *De anima*.[99] The reader may here recall my earlier warning about Bruno's inconsistent psychological terminology, which varies in accordance with the sources with which he is working.

It goes without saying that these source-dependent shifts might cause confusion. What, then, are the cognitive faculties? Are there more than four faculties, and if so, which are they? For the sake of clarity, here I propose to expound a plain and complete view – albeit in a summarized form – of the cognitive faculties, as is given by Bruno himself in certain later works, such as *Lampas triginta statuarum* and *Summa terminorum metaphysicorum*.

In *Summa terminorum metaphysicorum* the external senses, internal senses, and higher cognitive faculties are clearly distinguished. The internal senses, each in its own way, are occupied with information derived from the external senses. *Sensus communis* receives, unites, and compares one external sense with another. *Phantasia* divides and puts together this information, creating centaurs or sirens. *Cogitativa* apprehends something insensible from the sensible, for example when a man apprehends hostility and the fear of death by seeing a snake. Animals also possess this power – one might think of a sheep fearing death upon the sight of a wolf – although in them it is called

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situata in anteriori parte cerebri; secunda, usque ad cerebri medietatem, phantasiae domicilium nuncupatur; tertia, illam contingens, cogitativae domus dicitur; quarta vero memorativae."

99   Avicenna, *Liber de anima seu Sextus De Naturalibus*, ed. S. van Riet (Louvain: Peeters Publishers, 1968–72), vol. 1, pp. 87–89: "Virium autem apprehendentium occultarum vitalium primum est fantasia quae est sensus communis; quae est vis ordinata in prima concavitate cerebri […] Post hanc est imaginatio vel formans, quae est etiam vis ordinata in extremo anterioris concavitatis cerebri […] Post hanc est vis quae vocatur imaginativa comparatione animae vitalis, et cogitans comparatione animae humanae, quae est vis ordinata in media concavitate cerebri […] Deinde est vis aestimationis; quae est vis ordinata in summo mediae concavitatis cerebri, apprehendens intentiones non sensatas quae sunt in singulis sensibilibus, sicut vis quae est in ove diiudicans quod ab hoc lupo est fugiendum, et quod huius agni est miserendum; videtur etiam haec vis operari in imaginatis compositionem et divisionem. Deinde est vis memorialis et reminiscibilis; quae est vis ordinata in posteriori concavitate cerebri, retinens quod apprehendit vis aestimationis de intentionibus non sensatis singulorum sensibilium". This reference is indicated in the notes of BOMNE, 1:664.

aestimativa. Finally, *memoria* preserves the species apprehended by both the inner and outer senses.

The "higher" cognitive faculties, then, following the internal senses, are *ratio*, *intellectus*, and *mens*. *Ratio* is proper to mankind. It is the power by which man comes to conclusions that go beyond the senses – although they do start with sensory information – by means of argumentation and discourse. While reason argues and discourses, intellect understands in one intuitive glance. Bruno etymologically explains *intellectus* as an internal reading (*interna lectio*), as if it were some kind of living mirror, seeing and possessing the visible things in itself that are reflected in it. It is the end of the reasoning process, just as possession is the end of the process of searching and finding.[100]

Thereafter comes *mens*. *Mens* understands everything in one simple glance, without any preceding or accompanying discourse. It is compared to a mirror, full and alive. It is light, mirror, and all the figures which it sees without distinction, without temporal succession, as if a head were one great eye, seeing on all sides in one motion what is above, below, in front, and behind, within and without, as one whole. Likewise, concludes Bruno, the activity of *mens divina* contemplates in one simple act the past, present, and future at the same time.[101]

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100 G. Bruno, *Summa terminorum metaphysicorum*, ristampa anastatica dell'edizione Marburg 1609 (Rome: Edizioni dell'Ateneo, 1989), pp. 21–22: "Est enim cognitio sensitiva, et haec duplex: exterior illa quintuplex et interior et haec est quadruplex juxta quatuor species, quae sunt sensus communis, cuius est recipere et unire et comparare sensum unum externum cum altero; phantasia cuius est componere et dividere species sensibiles, ut facere centaurum, chimaeram, sirenem et montem aureum et his similia. Tertia cogitativa quae de specie sensibili apprehendit aliquid insensibile, ut viso serpente homo apprehendit inimicitiam, formidinem mortis; et ovis viso lupo formidinem mortis et inimicitiam apprehendit naturaliter. Quae potentia in brutis dicitur aestimativa. Sequitur memoria quae est potentia retentiva seu conservativa earum specierum, quas sensus interiores vel exteriores apprehenderunt. Sequitur ratio quae propria est homini, nempe potentia quae ex his quae sensu sunt apprehensa et retenta, aliquid ulterius insensibile seu supra sensus infertur et concluditur, [...] Subinde sequitur intellectus, qui ea quae ratio discurrendo et argumentando et ut proprie dicam ratiocinando et decurrendo concipit, ipse simplici quodam intuitu recipit et habet, [...] et dicitur intellectio quasi interna lectio, atque si speculum vivum quoddam sit, tum videns, tum in seipso habens visibilia, quibus obiicitur vel quae illi obiciuntur, et his est finis ratiocinii, sicut possessio est finis inquisitionis et inventionis."

101 Bruno, *Summa terminorum metaphysicorum*: "Sequitur mens superior intellectu et omni cognitione, quae simplici intuitu absque ullo discursu praecedente vel concomitante, vel numero vel distractione omnia comprehendit, et proportionatur speculo tum vivo tum pleno, quod idem est lux, speculum et omnes figurae, quas sine distractione videat, et sine temporali seu vicissitudinali successione, sicut si caput totus esset oculus et undique

First of all, the metaphor of the mirror, which is "light, mirror and all the figures which it sees without distinction," recalls my crucial passage on the power residing in the *spiritus phantasticus* (compared to a seeing mirror, light, and illuminated object at the same time) and our discussion of the god's eye-view.[102] The metaphorical description of the mind here equally recalls Actaeon, who became *tutto occhio a l'aspetto de tutto l'orizonte*, for the mind is compared to a head conceived as one great eye, seeing on all sides. These analogous descriptions of the power residing in the fantastic spirit (which, as we have seen, also shows a striking resemblance to Bruno's conception of the universal spirit) and the mind once again underline the importance of *phantasia* in his doctrine of cognition. Secondly, a clear distinction is made between the five external senses, the four internal senses (sometimes also referred to as *facultates* or *potentiae*), and the higher cognitive faculties, which function by discourse, argumentation, conception, or simple intuition. Remarkably, there is a sort of "first judgement" on the lower level of *cogitativa* (sometimes also referred to as *cogitatio*), where conclusions are drawn from sensory information. This "first judgement" is not the result of a reasoning process but occurs spontaneously, such as when a man sees a snake and considers it to be dangerous. It is found in animals as well, where it is called *aestimativa*. Also noteworthy is that memory appears to be one of the "lower" cognitive faculties. Given this position, one might be surprised by the importance the philosopher ascribes to the art of memory. However, as we have already emphasized, Bruno's art is not restricted to memory and imagination.

With regard to this last observation, there is one more thing to be specified. Although memory is the last of the internal senses, there is also a second memory, which in *Lampas triginta statuarum* is identified with the highest cognitive faculty (*mens*). This distinction into first and second memories is derived from Ficino's commentary on Plotinus, who conceives of imagination and memory as twofold.[103]

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visus uno actu videret superiora, inferiora, anteriora et posteriora, et cum sit individuum interiora et exteriora. Sicut et mens divina uno actu simplicissimo in se contemplatur omnia simul sine successione, id est, absque differentia praeteriti, praesentis et futuri."

102   See chapter 3, section 4.1.

103   This influence of Plotinian psychology was noticed by Catana, *The Concept of Contraction*, pp. 73–77. For twofold memory and imagination, see Plotinus, *The Enneads*, trans. S. MacKenna (1917–30; repr. Oxford: Oxford University Press, 1969), vol. 4, 3, 27–32 (pp. 283–87). Cf. Plotinus, *De rebus Philosophicis Libri LIIII in Enneades sex distributi,* [...]*, Marsilio Ficino Florentino e Graeca lingua in Latinam versi*, Basileae, Petrum Pernam, 1559, f. 203 ss.

Hence, to complete my presentation of Bruno's psychology, I must briefly explain Plotinus' doctrine of the twofold soul (rational and irrational), or at least Ficino's reception of it. First of all, in his translation Ficino adds that Plotinus' division of the soul is "like a poetic opinion" (*opinio quasi poetica*),[104] because eventually for Plotinus the soul is one. Plotinus asks, to which soul does memory belong: to the rational or the irrational soul? He answers that "memory must be admitted in both of these, personal memories and shared memories; and when the two souls are together, the memories also are as one; when they stand apart, assuming that both exist and endure, each soon forgets the other's affairs, retaining for a longer time its own."[105] After this statement, he continues to ask in which faculty memory must be located. Plotinus concludes that

> [...] where there is to be memory of a sense-perception, this perception becomes a mere presentment, and to this image-grasping power, a distinct thing, belongs the memory, the retention of the object: for in this imaging faculty the perception culminates; the impression passes away but the vision remains present to the imagination.

"Remembrance, thus," concludes Plotinus, "is vested in the imaging faculty; and memory deals with images."[106] Thus, like Aristotle, Plotinus links memory to the imaging faculty. Yet, as I will show, Plotinus' approach is more qualified. Whereas Aristotle's statement that "the soul never thinks without an image" remained somewhat vague, Plotinus makes a clear distinction between a lower and a higher imagination (and memory), of which the contents exteriorize mental conceptions.

"But what of the memory of mental acts", posits Plotinus, "do these also fall under the imaging faculty?"[107] It might be that the discursive sequel to an act of intuitive thought is received into the imagination. For

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104   Plotinus, *De rebus Philosophicis*, f. 203 D.

105   Plotinus, *The Enneads*, pp. 283–84; Cf. Plotinus, *De rebus Philosophicis*, f. 203 E: "Caeterum quaerendum est, utrius animae conditio sit memoria. Altera siquidem anima divinior appellatur, secundum quam nos sumus: altera vero ab universo dependet. Forsan dicendum est utrique memoriam convenire, sed alteram quidem memoriam esse propriam, alteram vero communem. Et quando coniuncta sunt utraque, simul omnes esse memorias: sin autem separentur, si modo utraque sint & maneant, alteram animam sua quidem diutius conservare: quae vero ad nostram pertinent, brevius."

106   Plotinus, *The Enneads*, pp. 285–86. Cf. Plotinus, *De rebus Philosophicis*, f. 204 C: "Imaginalis ergo virtutis memoria est, taliumque est meminisse."

107   Plotinus, *The Enneads*.

> [...] the mental conception – an indivisible thing that never rises to the
> exterior of the consciousness – lies unknown below; the verbal formu-
> la – the revealer, the bridge between the concept and the image-taking
> faculty – exhibits the concept as in a mirror; the apprehension by the
> image-taking faculty would thus constitute the enduring presence of the
> concept, would be our memory of it.[108]

Here, the object of the higher memory is not an image in the strict "visual"
sense, but the apprehension of a verbal explication reflecting the mental con-
ception. Apart from the twofold memory, we must also suppose a twofold
imagination.[109] One imagination is connected with the sensitive soul, another
with the intellectual soul. Likewise, the inferior memory is bound to the senses
and located in the faculty of imagination. The superior memory, on the other
hand, is located in the higher imagination, where it apprehends the verbal
exhibition of mental conceptions. The objects of the higher imagination and
memory are translated by Ficino as *notiones intelligentiae*.

Despite the twofold nature of memory and imagination, towards the end of
his discussion Plotinus refers to the possible unity of the soul.

> When the two souls chime each with each, the imaging faculties no lon-
> ger stand apart; the union is dominated by the imaging faculty of the
> higher soul, and thus the image perceived is as one, the less powerful is
> like a shadow attending upon the dominant, like a minor light merging
> into a greater.[110]

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108 Plotinus, *The Enneads*, p. 286; *De rebus Philosophicis*, f. 204 D-E: "Forsan vero ratione
     ipsam intelligentiam comitante traductio & susceptio quaedam in imaginationem me-
     moria erit. Ipsa enim intelligentiae notio, sive (ut ita dixerim) intelligimen impartibile
     est, ac nondum quasi processit foras, sed permanens intus latet. Ratio vero explicans &
     educens ex ipsa intelligentiae notione in imaginandi virtutem, ipsum quod dicitur intelli-
     gimen, velut in speculo demonstravit, eiusque animadversio ita fit & permanentia atque
     memoria."

109 This explains why Ficino, just before the passage cited, had added a comment that "in us
     there are two imaginations, one in the irrational life, one in the rational soul." See *De rebus
     Philosophicis*, f. 204 D: "Sunt in nobis imaginationes geminae, una in vita irrationali, altera
     in anima rationali."

110 Plotinus, *The Enneads*, p. 287; Plotinus, *De rebus Philosophicis*, f. 204 F: "Forsan quando
     altera consentit, sive consonat alteri: quippe quum imaginationes non sint seorsum, si-
     quidem tunc animae potioris expressio superat, unum provenit phantasma, idest visum:
     quippe quum velut umbra tunc alterum comitetur, minusque lumen maiori cedat."

In accordance with Plotinus' doctrine, Bruno's *Sigillus sigillorum* mentions a twofold imagination.[111] Likewise, a distinction is made between the first and the second memory. After *cogitativa* there is the first memory, which is followed by reasoning and intellect, out of which the second memory comes into being. This second memory is usually called "acquired intellect and disposition" (*intellectus adeptus et in habitu*).[112] The fact that the second memory is called "acquired intellect" seems to answer Plotinus' explanation of the object of higher memory as the apprehension of a mental conception exteriorized through language. Later, in *Lampas triginta statuarum*, the doctrine of the twofold memory reappears. Here, the first memory is identified with what the Peripatetic doctrine calls *phantasia* (analogous to Plotinus ascribing the lower memory to the faculty of imagination). The second memory, which retains the species perceived by reason and intellect, is said to be, in a certain way, the mind itself.[113] The fact that Bruno explicitly links the second memory to the mind, as Catana argues, points to his acquaintance with 'Plotinus' idea that through the memory of the intellectual soul, the human soul is transformed into the intelligible world, that is, the Mind."[114] In which case, Plotinus' doctrine of the higher memory through which the ascent of the soul is realized probably lay at the basis of the deification aimed at by Bruno's art, as expounded in *De umbris idearum*.[115]

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111   BOMNE, 2:214: "Duplicem subinde in nobis esse imaginationem considerato: primam quidem in anima ratiocinantem experimur, discursis iudiciique compotem rationique quodammodo similem; secundam vero in anima seu vita, in nobis ratione carentem, ab hac impressam."

112   Bruno, *Sigillus sigillorum*, BOMNE, 2:190: "Quibus [signs, images, …] mediantibus natura ornat sensum, concupiscentiam, intellectum et voluntatem, unde prodit videre, tangere in genere, imaginari, cogitare, primum memorari, ratiocinari et intelligere, unde nascitur secundum memoratum, quod intellectus adeptus et in habitu consuevit appellari."

113   Bruno, *Lampas triginta statuarum*, BOM, p. 1230: "Est memoria, utpote potentia retentiva specierum receptarum et digestarum; et haec est duplex: sensitiva specierum sensibilium, quam Peripathetici etiam phantasiam appellant, et intellectiva, quae retinet species ratione et intellectu perceptas, et quodammodo est ipsa mens."

114   Catana, *The Concept of Contraction*, p. 79. See Plotinus (4.6), cit., p. 340: "Poised midway [between the sensible and intelligible worlds], it [the soul] is aware of both spheres. Of the intellectual it is said to have intuition by memory upon approach, for it knows them by a certain natural identity with them; its knowledge is not attained by besetting them, so to speak, but by in a definite degree possessing them; they are its natural vision; they are itself in a more radiant mode, and it rises from its duller pitch to that greater brilliance in a sort of awakening, a progress from its latency to its Act."

115   For the importance of Plotinus in *De umbris idearum*, see also Clucas, "*Simulacra et Signacula*," pp. 260–69.

Hence, it is worth adding that this doctrine of the twofold memory in *De umbris idearum* is reflected in the two types of shadows: *umbra physica* and *umbra idealis*.[116] "You will not sleep", writes Bruno, "if you are moved from the physical shadows to a proportional consideration of the shadows of the ideas."[117] Keeping Plotinus' psychology in mind, we realize that the physical shadows correspond to the lower imagination and memory, whereas the shadows of the ideas refer to the higher imagination and memory. This is affirmed by the fact that Bruno defines the shadows of the ideas as *notiones* (i.e. the term used by Ficino to translate Plotinus' objects of higher imagination and memory).[118]

By now I hope the reader has a clear view of the map of the mind according to Bruno. This knowledge is necessary to overcome the shifts in Bruno's terminology in diverse passages throughout his works. This map will be essential to understanding certain issues in Bruno's magical works as well.

4.4   Belief and Deceit

As we have seen, Bruno pays close attention to the cognitive faculties in his mnemonic works. The same is true of his writings on magic, because these faculties are decisive for the practice of binding as well. One can bind a soul through the ear by incantations, and through the eye by certain images, but also through *phantasia* and *cogitativa*.[119] In *De magia naturali* and *Theses de magia*, belief (*fides*) is inserted into the scheme of the cognitive faculties as the most necessary thing for the magical activity. The importance ascribed to *fides* – defined in *Lampas triginta statuarum* as a *propensio ad assentiendum*[120] – is emphasized in *Theses de magia*, where it is called "a great bond, even the bond of bonds".[121] Belief is considered the indispensable ingredient for a successful binding: "No operator, whether he be magus, physician or prophet, can obtain an effect without a certain previous belief, and his operations succeed

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116   On these types of shadows, see Spruit, *Il problema della conoscenza*, pp. 63–64.

117   Bruno, *De umbris idearum*, BOMNE, 1:68: "Non dormies si ab umbris physicis inspectis ad proportionalem umbrarum idealium considerationem promoveris."

118   Bruno, *De umbris idearum*, BOMNE, 1:72: "Porro quid dicimus de idealibus umbris? Ipsas nec substantias esse intelligas nec accidentia, sed quasdam substantiarum et accidentium notiones."

119   For an analysis of the faculties in a magical context, see N. Tirinnanzi, "*Ars* e *Phantasia* in Giordano Bruno," *Esercizi Filosofici* 1 (1992), 109–31.

120   Bruno, *Lampas triginta statuarum*, BOM, p. 1232.

121   Bruno, *Theses de magia*, BOM, p. 396: "Ideo fides vinculum magnum et vinculum vinculorum, […]."

in proportion to this previous belief."[122] Belief must be present in both parties: the magical operator as well as the patient. Otherwise, the magic will be fruitless. The more intense the belief, the more effective its results. This explains why "no one is accepted as prophet in his homeland."[123] People saw how the "prophet" grew up. Their familiarity with him hinders their belief in this person as an extraordinary messenger of God.

This necessary element of belief receives a specific position within Bruno's psychology. In accordance with the twofold soul, belief is also twofold. The lower faculties have their belief, which is condensed in the *cogitativa*, just as reason and the higher faculties have theirs.

> Duplex est fides, sicut duplex est cognitio et affectus, sensitiva videlicet et rationalis: prima est fundata in praeviis facultatibus ante cogitativam, et quiescit in illa; secunda in subsequentibus potentiis et virtutibus, et exordium sumit ab ipsa, et istae duae fides mutuo regulantur et regulant.[124]

Thus, *fides sensitiva* concerns the lower faculties and finds stability in *cogitativa*. This first belief is crucial for the higher faculties (reason and intellect) as well, because the higher *fides* – taking its leave from *cogitativa* – remains in contact with the lower. Both forms of belief mutually interact with and regulate each other.

Here, *cogitativa*, where the first belief finds stability, is a crucial intermediary lock for the cognitive process. It is the first level where one can speak of true and false. "Neither the external senses, nor the internal *sensus communis*, nor *phantasia* are deceived or deceive," writes Bruno in *Theses de magia*. "But being deceived or deceiving happens because of their perturbation; by itself *cogitativa* is deceived directly and in itself, and in relation to it an opinion can be called true or false."[125] In other words, only from the *cogitativa* onwards does speaking of false and true become relevant. Of course, the *cogitativa*, as one of the four internal senses, depends on other lower faculties, such as the *sensus*

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122   Bruno, *De magia naturali*, BOM, p. 280: "Unde omnes operatores sive magi sive medici sive prophetae sine fide praevia nihil efficient, et iuxta fidei praeviae numeros operantur." For translations of the magical works in this section, I rely on Bruno, *Cause, Principle and Unity* (which contains a translation of *De magia naturali* and *De vinculis in genere*).

123   Bruno, *De magia naturali*, p. 282: "Nemo propheta acceptus in patria". Cf. Luke 4:24.

124   Bruno, *Theses de magia*, BOM, p. 390.

125   Bruno, *Theses de magia*, BOM, p. 380: "Neque sensus externus, neque sensus communis internus, neque phantasia fallitur aut fallit. Sed ex horum perturbatione falli sequitur et fallere; per se enim immediate et proprie cogitativa fallitur, et secundum ipsam opinio vera dicitur et falsa."

communis and *phantasia*. This is exactly why Bruno stresses in *De magia naturali* that "the physician or magus should thoroughly pursue the work of *phantasia*. It is the gate and principal entrance to actions, passions and universal affections, which are present in animated beings. From this type of binding follows the binding of a more profound power, which is *cogitativa*."[126] Capable of binding someone's *phantasia*, the magus might bind the more profound *cogitativa* too, and thus influence the *fides sensitiva* of his victim or patient, which regulates the *fides rationalis* as well.

Hence, it is important that *phantasia* be mastered in a good way. This way, the first belief in *cogitativa* will be true. After having dealt with the magical bonds arising from sounds and songs (*ex voce et cantu*), and those from vision (*ex visu*), the bond *ex phantasia* is described in the following way:

> Cuius quidem munus est recipere species a sensibus delatas et continere, et componere eas et dividere, quod quidem accidit dupliciter: uno pacto ex arbitrio vel electione imaginantis, quale est poetarum et pictorum munus, et eorum qui apologos component, et universaliter omnis cum ratione species componentis; alio pacto extra arbitrium et electionem. Et ita dupliciter: vel per causam etiam eligentem et voluntariam, vel ab extrinsecus moventem. Et hac duplici: vel mediata, ut homine qui per voces vel per spectra, per visum vel per auditum perturbationes inducit; vel immediata, ut spirituali, rationali, seu daemone qui agit in phantasiam per somnia vel etiam per vigilias, ita internas species commovens, ut aliquid sensus externi apprehendi videatur.[127]

"It is the role of the [*phantasia*] to receive images derived from the senses and to preserve, combine and divide them." Thus, Bruno characterizes the exact function of *phantasia*, similar to his description in *Summa terminorum metaphysicorum*. But this function is fulfilled in two ways: "first, it occurs by the free creative choice of the person who imagines, for example, poets, painters, story writers and all who combine images in some organised way. Second, it happens without such deliberate choice." Poets, painters, and storytellers consciously combine images during their artistic creation. But the process is not always deliberate: sometimes *phantasia* operates beyond our choice.

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126   Bruno, *De magia naturali*, BOM, p. 280: "medico seu mago maxime insistendum est circa opus phantasiae; hoc enim est porta et praecipuus aditus ad actiones et passiones affectusque universos, qui sunt in animali; ex hac etiam alligatione sequitur alligatio profundioris potentiae, quae est cogitativa."

127   Bruno, *De magia naturali*, BOM, pp. 272–74.

Thus, a clear division separates an active creativity that masters images – and here Bruno is thinking of the activity of the *scrutinium* – from a passivity that is mastered by images. Those who combine "without deliberate choice" can be further subdivided. It sometimes happens "through some other cause which chooses and selects, or through an external agent." Bruno's vague reference to "some other cause" must indicate an internal cause, for it is opposed to an external agent. Such internal causes might be, for example, the emotions that control *phantasia*, such as with a husband whose jealousy provokes him to invent a thousand possible stories in which he is duped, or a miser whose avarice imagines a conspiracy to steal his money. In these cases, their *phantasia* is played with. When an external agent is involved, this agent can be

> [...] mediated, as when a man uses sounds or appearances to bring about stimulations through the eyes or ears. And sometimes the agent is unmediated, as when a spirit, rational soul or demon acts on the imagination of someone, asleep or awake, to produce internal images in such a way that something seems to have been apprehended by the external senses (*ita internas species commovens, ut aliquid sensus externi apprehendi*).

Among the first group we may count illusionists who, using certain instruments – such as mirrors or a *camera obscura* – perturb the perception of their public.[128] The second group is deceived by spirits, rational souls, or demons that manipulate the internal senses by presenting certain images to them as if they sprang from the external senses.

Those who are possessed "strongly and persistently assert that what they have seen and heard is true, when in fact it is their reason which is deceived, and not their senses (*non sensus eorum decipitur, sed ratio*), for they do hear what they hear, and they do see what they see."[129] Thus, there is a kind of disconnection between *phantasia* and the senses of which the possessed are unaware. Reason *believes* that the contents from *phantasia* truly derive from the

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128 See S. Dupré, "Optical Games, Magic and Imagination," in *Spirits Unseen: The Representation of Subtle Bodies in Early Modern European Culture*, eds. C. Göttler and W. Neuber, Intersections 9 (Leiden: Brill, 2008), pp. 71–90.

129 Bruno, *De magia naturali*, BOM, p. 274: "Ubi energumeni quidam videre sibi videntur quaedam spectacula et audire quasdam voces et sententias, quas putant vere ab externis subiectis insinuari, unde importunissime et constantissime asseverant se vera vidisse et vera audisse, ubi nimirum non sensus eorum decipitur, sed ratio; quae enim audiunt, audiunt, quae vident, vident."

senses, while in reality these contents have been infused.[130] We may wonder about *cogitativa*, which is not mentioned in this passage. We must suppose that, in the case of demonic deception, the belief on the level of *cogitativa* (*fides sensitiva*) is not false per se. For if a man is convinced that he sees a snake which is not actually there, but instead is inserted into his internal senses by a deceiving demon, his judgement that this snake may be life-threatening is not wrong in itself. In this case, as has been said, what is false is the belief (in his *ratio*) that the snake is really present.

Bruno continues to discuss this kind of possession, entering into the contemporary debate among physicians, who referred to these cases as mania and melancholy, and called these states "the dreams of those who are awake".[131] He distinguishes two parties: the physicians, who declare that a purely material principle is responsible for this psychological state, an opinion of the most rude and oppressive obstinacy; and the theologians, who reduce it to a cause which is purely demonic or diabolic, as was the case, for example, in *Malleus Maleficarum* (quoted at the beginning of this chapter). According to Bruno, both causes operate together.

> The material factor is a melancholic humour, which we call the kitchen or bath of the saturnalian demons. But the efficient cause and moving spirit is a demon who does not have a completely immaterial substance, because these demons seem to be endowed with many animal affections and have definite properties of density. Although they are spiritual substances, nature has given them a body which is very thin and is not endowed with senses. They belong to that genus of animal which, as was said, has more species than living, composite and sensory animals.[132]

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130 Bruno, *De magia naturali*, BOM, p. 274: "quod interno sensu per speciem phantasiabilem illis obiicitur, idem per sonum externum, per aures et formam externam per visum ingestam se videre arbitrantur, et intentiones sensuum internorum res ipsas esse autumant."

131 Bruno, *De magia naturali*, BOM, p. 276: "[...] et medici haec ipsa referunt ad maniam et melancholiam, quae ab iisdem somnia vigilantum appellantur."

132 Bruno, *De magia naturali*, BOM, p. 276: "Porro in hoc vinculo neque purum est materiale illud principium, quod crassissima et importunissima pertinacia quorundam vulgarium medicorum opinatur, neque purum illud efficiens daemoniaci seu diabolici generis, quod pro sua parte tuentur quidam theologi; sed utrunque concurrit, materialiter quidem humor melancholicus, quem saturnalium daemoniorum popinam seu balneum appellamus, sed etiam pro causa movente et efficiente spiritus ipse daemoniacus, qui cum non sit omnino substantia incorporea, quandoquidem multis affectibus animalibus iisque gravissimis praediti videntur daemones, quamvis substantia spiritualis, cui subtilius et minus sensibus pervium corpus est a natura tributum, in quo genere animalium dictum

This statement repeats an opinion with which Bruno had begun his exposition in *De magia naturali* on different types of demons under the title "*de vinculis spirituum*": "we have seen that there are far more species of demons than there can be species of sensible things".[133]

In a moment we shall return to a list of species of demons given by Bruno, to study in detail which demons are especially dangerous for *phantasia*. For now, let us continue with Bruno's reasoning on possession, which for the physicians is caused by a material principle, and for the theologians by a demonic one. The presence of the melancholic humour – the material principle – is a condition for the possession. This humour is an ideal residence for the demons and is therefore called their kitchen or bath. This makes it possible to end the possession by removing the material principle. The reasoning is simple: a filthy kitchen attracts rats, but the animals disappear when the kitchen is cleaned up. But the fact that the possession can be healed by taking away the material principle does not mean the role of demons should be denied. Bruno explicitly censures Levinus Lemnius, who concluded in *De miraculis occultis naturae* that if the problem is solved by taking away the humour, then it was nothing other than the humour.[134] This reasoning is ridiculed by the philosopher. "If he himself were to decide to abandon his house and country because a shortage of food and water made him ignorant of medicine and of the obvious colours and sounds of nature, we should conclude that he belongs to the same species as the things which expelled him."[135] Bruno's rejection of the opinion of this

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est non pauciores reperiri species, quam sint viventium, compositorum et sensibilium." On melancholy as *balneum diaboli*, see N.L. Brann, *The Debate over the Origin of Genius during the Italian Renaissance* (Leiden: Brill, 2001), p. 6.

133 Bruno, *De magia naturali*, BOM, p. 224: "longe enim plures species eorum esse comperimus, quam possint esse rerum sensibilium."

134 Levinus Lemnius, *De miraculis occultis naturae*, Antwerpiae, apud Guilielmum Simonem, 1559.

135 Bruno, *De magia naturali*, BOM, pp. 278–80: "Interim satis rationabile est, ut ad curationem perturbatae phantasiae et ad solutionem interni sensus hoc pacto devincti simplex humorum purgatio simplexque victus ratio sufficiat; non propterea tamen concluditur, ut concludit quidam pinguissimae Minervae medicus, qui sub titulo *De occultis naturae miraculis* plures protulit ineptias quam potuit litteras et sillabas exarare, qui ex eo quod per successum et humorum vacuationem tales spiritus cum eiusmodi miris intentionibus liberis et ordinatis expelluntur, concludit eos nihil aliud esse quam humores; unde aeque possemus dicere suam excellentiam, quae plurium animas per secessum abire coegerit, ut et animam ipsam etiam humorum seu excrementum existimet, aut si penuria cibi atque potus cogatur ipse suam domum et patriam deserere propter medicinae ignorantiam et apertorum naturae colorum atque vocum, existimemus eum nihil aliud esse quam de genere eorum quae illum expellunt."

"most stupid physician" (*pinguissimae Minervae medicus*), who brings forth
"more nonsense than the letters and syllables he could have produced", char-
acterizes well his magical project.

I consider this passage extremely relevant, especially for Bruno studies
today, because it belies the current attempt to define Bruno's magical project
as a "naturalisation of magic", rid of demons.[136] In other words, Bruno's magic
is sometimes portrayed as being similar to Lemnius's reasoning, which is pre-
cisely what Bruno fiercely refutes. But rather than naturalizing magic, Bruno
tries to adapt it to his conception of the infinite universe, a universe in which
demons – of which there are more species than of sensible things – flourish.

Bruno's infinite universe is animated. Living matter is imbued with spirit.
From his first cosmological dialogue he raises the question of the relation-
ship between corporeal and spiritual matter. Although in *Cena* it remains
unanswered,[137] *De la causa* digresses on this issue.[138] But let us here consider
De magia naturali, where the same reasonings appear in a magical context.
Both types of matter are amply described. First, Bruno writes that "it must be
consciously accepted and firmly asserted that all things are full of spirits, souls,
divine power, and God or divinity, and that the whole of intelligence and the
whole soul is everywhere, although they do not do everything everywhere."
Then, Vergil is said to have suggested this idea by the formula *spiritus intus alit*
in the famous verses of *Aeneid* (6.724–29), leaning on Pythagorean doctrine.
Psalms and Wisdom also contain the idea when they say: "The spirit of God has
filled the whole earth and everything which it contains" and "I fill the heavens
and the earth".[139]

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136   See chapter 2 above, note 152.

137   Bruno, *Cena*, BOeuC, 2:257–58: "E non è cosa della quale noi siamo, che talvolta non
       debba esser nostra, come non è cosa la quale è nostra, della quale non doviamo talvolta
       essere: se una è la materia delle cose, in un geno; se due sono le materie, in dui geni: per
       che ancora non determino se la sustanza e materia che chiamamo spirituale, si cangia in
       quella che diciamo corporale, e per il contrario; o veramente non."

138   See, for example, Bruno, *De la causa, principio et uno*, BOeuC, 3:241–43.

139   Bruno, *De magia naturali*, BOM, p. 240: "In fine illud firmiter est asserendum et mente
       tenendum, quod spiritu, anima, numine, Deo seu Divinitate omnia sunt plena, et intel-
       lectus et anima, ubique totus et tota est, sed non ubique facit omnia. Hoc insinuavit poeta
       ex dogmate Pythagorico: 'Principio caelum et terras camposque liquentes/lucentemque
       globum m Lunae pythania astra;/ spiritus intus alit, totamque infusa per artus,/mens
       agitat molem, et totus se corpora miscet./Hinc hominum pecudumque genus vitaeque
       volantum/et quae marmoreo fert monstra sub aequore pontus./' Idem dicit sensus sa-
       crorum arcanorum ab omni vulgo receptus, et in Psalmo et in libro Sapientiae 'spiritus

After this enumeration of authoritative sources affirming that all things are full of spirits, the difference between the material and the spiritual substance is explained. The universal body is contained as a whole in the whole universe, while the spiritual substance is contained as a whole in every part (*tota in qualibet parte*). This conception of the spiritual substance is illustrated by the metaphor of a great mirror broken into a thousand little pieces, each of which reflects the totality of the original image.

> Differt autem corporea substantia ab huiusmodi substantia mentis, animae atque sublimis spiritus, quod universum corpus est totum in toto et universe, ipsa vero est tota in qualibet parte, ubique videlicet totum quoddam constituens et totius imaginem referens, ubi clarius, ubi obscurius, ubi singularius, ubi multipliciter, ut eiusdem ideae species atque lucis ab omnibus materiae particulis tota refertur, sicut etiam tota a tota materia, quod sane in magno speculo licet contemplari, quod unam unius rei refert imaginem, idemque rursum in mille frusta contritum ex omnibus partibus integram nihilominus refert imaginem.[140]

While each part of spiritual matter contains the totality, these pieces are not identical. Some reflect more clearly, some more obscurely. Sometimes the reflection happens in one way, sometimes in many ways. Another metaphor is used to specify this feature of the spiritual world:

> When different parts or bodies of water are separated from the whole Amphitrite or universal ocean, they have different names and properties; when they later flow together into one ocean, they have the same name and properties. Likewise, if all the spirits and parts of air were to flow into one ocean, they would produce one soul, which elsewhere is innumerably multiplied.[141]

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domini replevit orbem terrarium et hoc quod continet omnia', et alibi 'caelum et terram ego impleo'". Cf. Ws. 1:7; Jer. 23:24 and Ps. 23:1.

140   Bruno, *De magia naturali*, BOM, p. 242.

141   Bruno, *De magia naturali*, BOM, p. 242: "Sic etiam diversae aquae partes et hypostases, avulsae a toto Amphitrite seu universali Oceano, diversa recipiunt nomina et proprietates, quae omnes, in unum subinde fluentes Oceanum, unum habent nomen et proprietatem; ita si omnes spiritus et aeris partes in unum Oceanum confluerent, unam animam efficerent, quae alioqui multae sunt et innumerae."

Thus, while each part of spiritual matter contains the totality, there is great diversity in the parts. Just as rivers have their own names and watersheds, spirits have names and dwell in certain domains. But despite these differences, as Bruno writes in *Theses de magia*,

> [...] from experience it is shown that each soul and spirit has a continuity with the universal spirit and soul, and they are not comprehended by a body, rather the body is comprehended by the soul, as universally it is not matter that embraces the form, but the form that embraces matter.[142]

It goes without saying that such a spiritualized infinite universe offers an ideal habitat for demonic spirits.

Let us look now at Bruno's description of different sorts of demons in the passage "*de vinculis spirituum*", based on Michael Psellus's *De daemonibus*.[143]

> Some spirits reside in more subtle matter, others in more dense matter; some reside in composite bodies, others in simpler bodies; some in observable bodies, others in unobservable bodies. As a result, the operations of the soul are sometimes easier, sometimes more difficult, sometimes weaker, sometimes well adapted, sometimes impossible. Some spirits operate within one genus, others act more efficaciously in another genus. Thus, humans possess certain operations and actions and desires not found in demons and vice versa.[144]

The comparison between humans and demons returns several times and is most valid – as already suggested in the preceding chapter – in a moral context. One fundamental difference is that demons penetrate bodies more easily (*promptior penetratio*) than humans, and thus are capable of initiating thoughts in us (*immissio cogitationum*).

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142   Bruno, *Theses de magia*, BOM, p. 340: "Ex rerum experientia manifestum est omnem animam et spiritum habere continuitatem cum spiritu universi et anima, et non comprehendi a corpora, sed potius ab ipsa corpus comprehendi, sicut universaliter non materia formam, sed forma materiam complectitur."

143   See Psellus, *De Daemonibus*, p. 340 ss.

144   Bruno, *De magia naturali*, BOM, p. 222: "Supra dictum est spiritus alios crassiorem, alios subtiliorem incolere materiam, alios in compositis, alios in simplicioribus corporibus consistere, alios sensibilia, alios insensibilia; unde operationes animae aliis sunt promptiores, aliis hebetatae, aliis difficiliores, aliis aptatae, aliis ablatae. Alii item secundum genus unum, alii secundum aliud genus potentius operantur; unde hominibus datae sunt quaedam operationes et actus et voluptates quibus privantur daemones, et econtra."

> Illis autem promptior est penetratio circa corpora et immissio cogitatio-
> num, quandoquidem usque adeo sensibus internis impressiones quas-
> dam obtrudunt, ut ea quae ipsi suggerunt, per nosmetipsos excogitare
> videamur interdum. Proportionaliter enim videtur se habere eorum in-
> formatio, atque analogia quaedam est, ad hoc quod quispiam velit sen-
> sum aliquem exuscitare et loco distantiore, opus est clamore, ut per
> auditum ad sensum internum conceptiones alicuius perducantur, pro-
> pinquo ergo clamore non est opus, sed submissiore voce, proximo suffi-
> cit auribus insusurrare, daemoni vero ne auribus ipsis quidem opus est,
> neque voce, neque susurru, sed sensum ipsum internum ita penetrat, ut
> dictum est. Sic immittunt somnia non solum et faciunt voces exaudiri
> et quaecunque videri, sed etiam vigilantibus certas cogitationes, quas ab
> alio vix esse cognoscantur, interdum per aenigmata, interdum expres-
> sioribus sensibus veritatem inculcantes, interdum fortasse decipientes;
> atqui non omnibus omnia licent, quandoquidem certa serie atque ordine
> peraguntur universa.[145]

This long quotation, which echoes a passage of Psellus, comprehends all the
previous suggestions about demons being capable of penetrating the internal
senses, not only generating dreams in people who are asleep, but even causing
thoughts in those who are awake. "They convey certain impressions into our
internal senses in such a way that we ourselves seem to have originated their
suggestions in our thought." An analogy may help to explain the way in which
these demonic injections occur.

> If one wishes to generate a thought in someone standing at a distance,
> one must shout so that the thought is produced in their internal sense
> through their hearing it. But if a person is closer a shout is not needed,
> only a quieter voice. And if the person is immediately nearby a whisper
> in the ear suffices. But demons have no need of ears or voices or whispers
> because they penetrate into the internal sense directly, as was said.

An advantage of their nature as spirits is clearly their capacity to penetrate
and thus influence the human psyche, not only when the consciousness loses
control while dreaming at night, but even in the daytime, when demons can
make people believe that they have arrived at certain thoughts, when in fact

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145 Bruno, *De magia naturali*, BOM, pp. 222–24.

these thoughts were suggested by these demons.[146] Thus, they can "communicate truths sometimes through enigmas, and sometimes through sense impressions; they may even deceive."

After this general remark, Bruno works out a more specific description of six different categories of demons. The distinction between the first two categories concerns their intellectual capacities. The four subsequent categories depend on the elements to which the demons are bound. This is not entirely in correspondence with Psellus's treatise, where the categories of demons depend on the regions of the universe they inhabit.[147] Of the first type Bruno writes that "some of them are brute animals and cause injury without reason." And although they are "far inferior to humans in knowledge, they still can do as much harm as dangerous animals or poisons." This type does not recognize threats or prayers, as it is without reason.[148]

Another type of demon is

> [...] fearful, suspicious and credulous. They hear and understand voices but do not distinguish the possible from the impossible, or the appropriate from the inappropriate. They are like humans who are dreaming and disturbed by fantasies. This type of demon is usually expelled by threats of death, prison, fire and other such things.[149]

The subsequent categories, then, are linked to the elements. The third type is characterized as being more airy (*magis aerea*) than the preceding types, so that its spiritual functions are more developed. This is why these spirits are more prudent (*prudentiores*).

> They are affected by no cult, no religious practice and no prayers. Rather, they freely distort all these things and play with humans by counterfeiting fear, anger, religion and the like. They understand languages and the

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146   The impact of these deceiving demons on the history of epistemology – even relevant for Descartes's *malin génie* – has not been fully acknowledged. Clark, *Thinking with Demons*, pp. 251–80, however, discusses demonology in relation to epistemology.

147   For a comparison between Psellus and Bruno, see Giovanozzi, *Spiritus mundus quidam*, pp. 139–51.

148   Bruno, *De magia naturali*, BOM, p. 224: "Unde et ex ipsis bruta quaedam sunt animalia et sine ratione nocentia, ut multum degant infra humanam sapientiam, hominibus tamen nocere possunt aeque atque perniciosa animalia atque venena."

149   Ibid., p. 226: "Est aliud genus timidum, suspiciosum, credulum, quod voces exaudit et intelligit, inter possibile vero et impossibile, conveniens et inconveniens non distinguit, more hominum somniantium et eorum quorum perturbata est phantasia; et hoc genus minis ipsis mortis, carceris, ignis et similium solet a corporibus fugari."

sciences but never make any firm assertions. And so these hateful demons introduce confusion and doubt into the human mind and senses.[150]

The fourth type of the "ethereal spirits" (*aethereum genus*) is completely good and friendly to virtuous men and hostile to no one, while the airy ones (of the third category) are hostile to some and friendly to others.[151]

The fifth type comprehends both the "aqueous and terrestrial spirits, who are hostile, or at least not friendly, since they are less rational and more fearful. For this reason, they deliberately cause harm, following the saying: 'They hate what they fear.'"[152]

The last type counts the "spirits of fire, which are more properly called heroes and gods and are said to be the ministers of God". These are the ones the cabalists call "Fissim, Seraphim and Cherubim, and of which the prophet of the Psalms said: 'He made the winds to be His angels, and the flames of fire His ministers'."[153]

After having described these six categories the Nolan adds a general feature of the demonic world, which it has in common with the world of humans: some rule, others are ruled. "In every group of spirits there are sovereigns and rulers, ministers, leaders, governors and ranks, by which the wiser and more powerful dominate and direct the more ignorant and more uncultured."[154] It is not surprising, then, that for working on lower demons, higher dominating

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150   Ibid., p. 226: "Sunt et alii prudentiores, quorum magis est aërea substantia illa simplex, qui nullo cultu, nulla religione, nullis orationibus moventur, sed haec omnia pro arbitrio fingunt, et hominibus illudentes timorem, iram, religionem et similia stimulant, callent linguas et scientias, sed nihil constanter asseverant, utpote genus invidiosum, quod confusionem et dubia mentibus et sensibus hominum immittant."

151   Ibid., p. 228: "Aethereum vero, purum lucidumque genus, omnes convenient in eo quod sit omnino bonum et hominibus probis amicum, nullis vero inimicum, sicut ex aeries alii aliis sunt amici, aliis vero inimici et infensi."

152   Ibid., p. 228: "Aquei vero et terrestres aut inimici sunt aut non amici, utpote minus rationales et propterea timidiores, et iuxta illud "quem metuunt, oderunt" et libenter laedunt." The saying derives from Cicero, *De officiis* (Cambridge, Mass.: Harvard University Press, 1942), 2:7, 2:23.

153   Ibid., p. 228: "Ignei vero, qui proprius dii appellantur et heroes, dicuntur hi dei ministri, quos Cabalistae appellant Fissim, Seraphim, Cherubim, de quibus dixit Psaltes propheta 'qui facit angelos eius spiritus, et ministros eius flammam ignis'". The passage is evoked in Bruno, *De monade*, BOL, vol. 1, part 2, p. 408, and in Bruno, *De magia mathematica*, BOM, p. 86. The quotation is found in Ps. 103:4 "qui facis angelos tuos spiritus ministros tuos ignem urentem."

154   Bruno, *De magia naturali*, BOM, p. 228: "In omni ordine spirituum sunt praesides et principes, pastores, duces, rectores, gradus, penes quos sapientiores et potentiores imbecillioribus et rudioribus dominantur et praecipiunt."

demons are invoked to manipulate them, as Bruno writes in his description of one of the bonds between spirits.

> Strong invocations and supplications to make the power of the superior overcome that of the inferior, for example, to banish evil demons using good ones, and to banish lower evil demons through higher ones. These demons are enticed by sacrifices and burnt offerings; they are frightened by threats, and they are summoned by the powers of rays and influxes.[155]

Considering these six types of demons, the third type especially is said to mislead human beings and to introduce confusion and doubt into the human mind and senses. Besides, these demons "understand languages and the sciences". For this reason we could suspect this type to be implicated in the *ars notoria* (which was, we recall, a magical practice aimed at obtaining higher knowledge by the mediation of spirits). These demons are also said to not be affected by worship or prayers, despite feigning that they are. Following the rules indicated in *De magia naturali*, an effective way to dominate these demons, then, would be to invoke superior demons. This is exactly what is done in *Cantus Circaeus*, as we shall see in the next section. Bruno's description of demons and his emphasis on their way of misleading by confusing the inner faculties, alongside the importance ascribed to *phantasia* in his magical practice, makes his art of memory more than relevant for his magic. Indeed – as has been suggested by the scholars who published his mnemonic works – his art of memory is more epistemically orientated than his magical manuscripts with their operative character. But this section has shown that for Bruno all knowledge implies insecure "magical" stages. Behind every corner demons may hide, demons that are even capable of injecting into us thoughts that we believe to be our own. Here Bruno's *ars memoriae* becomes "magically relevant". The practitioner seeks to weaken and undo these fallacious influences by controlling his *phantasia* so that he can rely on the belief which is present in his *cogitativa*.

And so we have returned to where we began: the importance of belief within the cognitive process taking place by means of a collaboration between the faculties in which the spirits flow. "This belief", writes Bruno in *De magia naturali*, "is originated in some by the foregoing faculties which are well disposed and

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155   Bruno, *De magia naturali*, BOM, p. 246: "Obtestationes, coniurationes, quae fiunt virtute superiorum in inferiora, ut qui per bonos daemones malos eiiciunt, alii per superiores malos inferiores. Item alliciuntur per sacrificia, holocausta, terrentur per minas, provocantur per virtutes radiorum et influxuum."

ordered, in others by perturbed faculties."[156] Well-disposed and well-ordered lower faculties, one of the aims of his *ars memoriae*, result in reliable belief. In *Theses de magia* those who understand the relations between *phantasia* and *cogitativa* "can act more upon the fantastic species than they are acted upon by the fantastic species" (*plus agunt in species phantasiabiles, quam a speciebus phantasiabilibus patiantur*).[157] Here, the division between actively mastering the *phantasia* and passively being mastered by it reappears. The mnemonist who actively sculpts and orders his *phantasia* runs a lesser risk of being manipulated by, among other things, demons.

At the end of his mnemonic treatise *Sigillus sigillorum* we see the same dichotomy between active and passive. The author affirms that his book contains "that which serves to control understanding, judgement and affection" (*quae ad intelligentiam, iudicium et affectum regulandum conferat*). But a final warning is not out of place.

> Be very careful that you are not concerned with the fantastic images to such an extent that, while you think you master them, in fact you are mastered by them – something which is said to have happened to Antipheron – so that you put yourself among those who are acted upon rather than those who act.[158]

Thus, Bruno warns the practitioners of his art against exactly the danger it seeks to overcome: being mastered by fantastic images.

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156   Bruno, *De magia naturali*, BOM, p. 282: "Haec [fides] in quibusdam commovetur tanquam praeviis potentiis bene dispositis et ordinatis, a quibusdam vero tanquam perturbatis." On this double disposition (ordered or disturbed) of the *potentia assentiendi* or belief, see also Bruno, *Lampas triginta statuarum*, BOM, p. 1234: "Duplex autem haec potentia assentiendi: aliquando est regulata et tunc retinet nomen fidei simpliciter, interdum est perversa – utpote cum ex una parte a falsis prophetis et apostolis humana et diabolica pro divinis obtruduntur, ex alia parte vel a falsa imaginatione vel a sensus perturbatione circumvenimur, aut ubi, cum sensus est anceps, ad unam partem definitur – et tunc non est fides, sed credulitas et imaginatio."

157   Bruno, *Theses de magia*, BOM, p. 386.

158   Bruno, *Sigillus sigillorum*, BOMNE, 2:252: "Illud tamen importunius spectandum, ut maxime caveas, ne in phantasmata nimium incurrens nec velut ea comprehendens, sed potius tamquam ab iisdem comprehensus – quemadmodum in Antipheronte factum ferunt –, in eorum numero qui aguntur potius quam agant te constituas." The reference to Antipheron of Oreus, who suffered from mental derangement, speaking of his own phatasms as facts of his past experience, comes from Aristotle, *De memoria et reminiscentia* 451 a.

It goes without saying that it is not only those in search of knowledge who may be deceived by demons on their way to the truth. Those who audaciously dabble in demonic magic run even a greater risk. According to Bruno, this is exactly what happened to Cecco d'Ascoli, the medieval commentator of Sacrobosco's *Sphere*. In Toulouse, the Nolan lectured for about six months on the *Sphere*.[159] Preparing his lectures, Bruno would certainly have consulted Cecco's *Commentary*, which is filled with allusions to demons, spirits, and magic. In the final pages he even populates the entire sky with demons.[160] At a certain point, Cecco discusses the power of demons in relation to the place they occupy in the heavens. He inserts an interesting passage on the demon Floron, explaining a quote from Solomon's *De umbris idearum*.[161] According to Cecco, Floron used to belong to the order of the Cherubim, and therefore he is a spirit of a "most noble nature". He can "be bound in a metal mirror by a powerful incantation" and "truly knows many secrets of nature". Cecco sums up several examples of deceit by this cunning demon, who often speaks in misleading riddles.

> It was he who deceived King Manfred, saying, "You will win, you will not die". And he deceived that Ferrarese, saying in response, "Your head will be raised above all." And he deceived that one from Provence, who sought a response to his question as to whether there was a treasure in a certain

159   Firpo, *Le Procès*, p. 49: "Et andai a Lione, dove stetti un mese; et non trovando commodità de guadagnar tanto che mi bastasse di poter vivere e per li mei bisogni; di là andai a Tolosa dove è un Studio famoso; et havendo fatto prattica de persone intelligente, fui invitato a legger a diversi scholari la *Sfera*, la qual lessi con altre lettioni de filosofia forse sei mesi."

160   Sacrobosco's *Sphere* was the most used textbook in astronomy and cosmography from the 13th to the 17th centuries, and Cecco's *Commentary* was included in the early printed collections of it. See L. Thorndike, *The* Sphere *of Sacrobosco and Its Commentators* (Chicago: University of Chicago Press, 1949), p. 53.

161   L. Thorndike, *The* Sphere, p. 398: "Iuxta quod debetis intelligere quod Salomon in libro De umbris idearum concludit istam distantiam scilicet tropici Cancri et circuli arctici esse duplam ad maximam solis declinationem, ubi ad litteram sic dicit: Sicut distantia tropici stelle lune et poli artici ad maximam declinationem vite celi dicitur esse dupla, sic Floron ad Asmitus est distantia in virtute. Iuxta quod debetis intelligere quod inter istas intelligentias est dare ordinem nature quamvis non gratie. Ordo quidem nature est quo dignior est superior inferiori. Unde Floron fuit de hierarchia Cherubin et est spiritus nobilissime nature qui constringitur in speculo calibis maiori invocatione. Hic vero novit multa secreta nature." According to Thorndike this *De umbris idearum* might be identifiable with the *Idea Salomonis et entocta*, cited and heavily condemned for its detestable invocations and images by William of Auvergne a century before. See L. Thorndike, *A History of Magic and Experimental Science* (New York: Macmillan, 1923), 2:279–80.

place, saying, "Go on, go on, you will find a treasure that will never leave you in your life." He [the man from Provence] said this to his friends and left. When he came across a cave in the mountain, he found four ounces of gold. While holding it in his hand a cave-in occurred and covered him wholly, and so he died. His friends went there and, uncovering him, they found him dead but with gold in his hand. They said, "Truly Floron spoke the truth, because you have gold that never left you in your life." So be aware for them because their final intention is to deceive Christians as an offense to our Lord Jesus Christ.[162]

From this passage we can only identify King Manfred (from Sicily), whose army was defeated at the battle of Benevento in 1266. The king himself, refusing to flee, rushed into the midst of his enemies and was killed. The Ferrarese, on the other hand, might well have been an ambitious general who eventually was decapitated – the fact that Cecco does not specify who he is talking about seems to imply that his audience knew to whom he was heading. The man from Provence, in turn, is probably derived from a folktale-like story. In any case, all three of them consulted the demon Floron. This means that they engaged in necromancy, a dangerous enterprise that cost them their lives. Longing for more power, fame, or wealth, Floron plays along with their vanity, and even more so with their *credulity*, something that would not have escaped the mnemonist Bruno.

In *De monade* Bruno holds Cecco in esteem and introduces him as a man "born in an age of light". Nevertheless, he relates how this "miserable magician", who had mentioned Floron several times in his *Commentary*, in the end was dreadfully ruined and deceived by this demon himself.

But he was not deceived because, in the shadow rising from a metal mirror, Floron had predicted that his head had to be elevated above the

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162 Thorndike, *The* Sphere, pp. 398–99: "Hic vere fuit ille qui decepit regem Manfredum dicens, Vinces, non morieris, et illum Ferrariensem respondens ei, Caput tuum elevabitur super omnes, et illum de Provincia querens responsum utrum thesaurus esset in loco, qui respondens dicens, Vade, vade, invenies thesaurum quod non deficiet in vita tua. Iste dixit sociis et abiit, et cum effoderet in caverna montis reperiit quatuor uncias aurui. Tenens in manu advenit ruina et coopervit eum et sic mortuus fuit. Socii iverunt excoperiendo invenerunt istum mortuum cum auro in manu et dixerunt, Recte dixit Floron quod habebis aurum quod non deficiet in vita tua. Unde caveatis ab eis quia ultima intentio ipsorum est in opprobrium domini nostri Iesu Christi decipere christianos."

Roman people, but because of all things he did not fear at all being deceived. And so he was crucified in Rome, on the Campo dei Fiori.[163]

Thus, Bruno ironically alludes to Floron's words to the ambitious Ferrarese, "your head will be raised above all". For this turned out to be the fate of Cecco, the man who noted the episode, when his head was raised above the Roman people while he was – at least in Bruno's mind – crucified on the Campo dei Fiori.[164] Yet Bruno specifies that the true reason for Cecco's ruin and deception was that, of all things, he did not fear this (*minime omnium id formidaret*), that is, being deceived.[165] Bruno's *De monade* echoes the other examples of demonic deceit given by Cecco. Next to a man from Marseille (who is not in Cecco's *Commentary*), Floron's deception of King Manfred and the treasure hunter is brought up.[166] But then Bruno goes on with a conversation between Floron and Cecco himself, who consulted the demon on the astronomical question about the shadow of the moon. "Interrogated by Asculanus on the shadow of the moon, Floron responded: 'The earth is like the earth, it is an earth of humidity: if you will have gained the complete shadow, he will not deceive you like the shadow.'"[167] Analogous with Floron's victims mentioned

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163   Bruno, *De monade*, BOL, vol. 1, part 2, p. 467: "Hinc Ciccus Asculanus (tempus lucis nactus) Principem Spirituum, qui Floron dicitur, et duplici virtute distat ab Asmito, a quo tandem male magus ille miser perditus fuit et deceptus: sed non deceptus, quia illius caput deberi elevari super populum Romanum praedixerat in umbra ex speculo chalybeo, sed cum minime omnium id formidaret, fuit in patibulum sublatus Romae, in campo Florae." Cecco is also mentioned in Bruno's *De immenso*, BOL vol. 1, part 1, p. 185.

164   Cecco was actually burnt at the stake in Florence in 1327 together with his *Commentary* (Thorndike, *The* Sphere, p. 55). Bruno's mistake, however, is understandable, as *in campo Florentiae* (on a square in Florence) is very much alike *in Campo Florae* (on the Campo dei Fiori).

165   As usual, Bruno's words are puzzling, and therefore it is hard to say what he exactly refers to with "id" in *minime omnium id formidaret*. Grammatically it might refer to his own execution as well (*caput deberi elevari*), but it makes more sense that for it to refer to the fact of being deceived. Moreover, "deceptus" is emphasized by a repetition.

166   Bruno, *De monade*, BOL, vol. 1, part 2, p. 467: "[…] Invocatione rite facta, decepit/etiam Massiliensem, sed non decepit thesauri inquisitorem cui /dixerat: Vade vade, invenies Thesaurum quod tibi per totam vitam/ sufficiet: sed cum ille, effossa montis caverna, invenisset quatuor/ auri uncias, ruina obrutus interiit, et cadaver inventum est habens/ aurum in manu. Regi Manphredo irrisit dicens: irruite in campum/ hunc et inclinabuntur vobis inimici vestri, quem caeso exercitu/ conquestum iussit respicere hostes, qui iacentia cadavera spoliantes/ inclinabantur."

167   Bruno, *De monade*, BOL, vol. 1, part 2, p. 467: "Interrogatus ab Asculano de umbra Lunae respon-/dit: Ut terra terra est, humiditatum est terra: si totam umbram/ habueris, te non decipiet sicut umbra." Cf. Thorndike, *The* Sphere, pp. 407–08.

by Cecco, the demon now speaks in the same enigmatic way to Cecco, and promises him that he will not be deceived like the shadow's other victims, once he has gained the whole shadow. How exactly must we interpret this riddling answer of Floron? Unfortunately I do not have a priest trained in unravelling words of the Pythia available at my desk. What is striking, however, is that the cunning demon promises Cecco he will not be deceived if he follows his advice. Cecco did not have a trained interpreter of the Pythia by his side either, but he certainly had more experience than I do in deciphering the enigmatic words of higher spirits. Hence, in his *Commentary* he explains the words of the demon in the following way: "To understand these words, you have to know that when the moon is full, this whole shadow appears in the full moon, and the spirits give answers from nature and do not deceive [...]".[168] This is where Bruno must have thought Cecco fell into the trap. Although Cecco had written about Floron's sly nature and must have been aware of the possible danger, he now took the words of the demon at face value. In brief, he was too credulous, because "of all things he did not fear being deceived at all." The Nolan therefore gives his own advice: "They do not favour anyone, except maybe those to whom they spontanously turn. Those who question them for bad purposes are unhappy and desperate men, and certainly deserve to be punished."[169]

We can doubt whether Bruno really thought Cecco, whom he introduced as "born in an age of light", was punished deservedly. It would not be the first passage of Bruno we encounter that is marked by a certain kind of prudence. On the other hand, Bruno clearly judges those who pose questions to demons for bad purposes. They are said to be desperate men, just like the Breschian monk, possessed through the *ars notoria*, who, once he was cured by Bruno, appeared to be "the same donkey he had always been".[170]

At the end of his discussion of Cecco, the Nolan renders the reasons of Solomon and the Christian necromancers as to why "the most hostile and pernicious enemies are said to be found in the Arctic Circle, following the saying that 'all evil comes from Aquila'".[171] The demons residing here are said to be

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168 *The* Sphere, p. 407: "Si totam umbram habueris, te non decipiet sicut umbra. Ut intelligatis, debetis scire quod cum luna est plena, spiritus a natura dant responsa nec decipiunt sicut quando fit experimentum ad inveniendum furtum cum puero virgine in corpore polito sicut in ense, speculo, crystallo vel ungue, ubi est deceptio magna."

169 Bruno, *De monade*, BOL, vol. 1, part 2, pp. 467–68: "Nulli favent nisi fortasse quibus se sponte offerunt. Qui eos quaerunt/ importune, infelices sunt et desperati homines, et certe supplicio/ non indigni."

170 See chapter 2 above, note 130.

171 Bruno, *De monade*, BOL, vol. 1, part 2, p. 468 "... Arcticum circulum potentissimi et perniciosissimi ho-/stes hominum dicuntur tenere, iuxta illud: Ab Aquilone pandetur/ omne malum. Unde non temere refert propheta, Principem Samae-/lem dixisse: Sedebo in

of a very noble nature for they were driven away from the superior hierarchy of the Cherubim because of their pride. And about the spirits residing in the Antarctic Circle, Bruno refers again to Solomon, and his book on the Shadows (*in libro de Umbris*): "O spirits of the Antarctic, driven away by divinity, why does a nobility of such a great nature seem to be captured in a metal mirror? For sometimes they answer from mirrors, sometimes from statues of gold, silver or tin."[172]

Whether Bruno wanted to allude to this book of Solomon with his own *De umbris idearum*, we cannot know for sure. But from his interpretation of Cecco's ruin due to the deception of Floron in *De monade*, where he explicitly refers to Solomon's *liber de Umbris*, it is clear that Bruno knew about the audacious demonological content of this suspicous work, in which the deceiving demon Floron was discussed.

We can conclude that one of the beneficial effects of the Nolan's art is that it prevents its student from being manipulated, which may happen, for example, through the intercourse of demons. But we arrived at this conclusion by looking predominantly at the presence of *belief* and *deceit* in the functioning of the cognitive faculties, and at Bruno's description of demons in his magical writings. We ended with Cecco, who, according to Bruno, became prey to Floron's deceit, and the references with regard to this deceptive demon being to Solomon's *De umbris idearum*. Therefore, I now raise the question as to whether this magical element is affirmed by the mnemonic treatises *De umbris idearum* and *Cantus Circaeus* themselves. In *Cantus Circaeus* Bruno stresses that the advantage of his art, compared with the ancients, is that it teaches the student to regulate his spirit (*spiritum regulare docet*).[173] The last section of this chapter asks whether our observations on his magical writings can help us to situate the magical allusions present in his early mnemonic works.

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monte Testamenti in lateribus Aquilonis, ut/ similis altissimo siem; et istos circulum arcti-cum incolentes nobi-/lioris esse naturae, testatur Salomon hebraeus, et quidam christia-ni/ necromantae dicunt, eorundem relatu, eos a Cherubin Hierarchia su-/periore propter superbiam deturbatos ...."

172 Bruno, *De monade*, BOL, vol. 1, part 2, p. 468: "ANTARCTICUM circulum inco-/lentes ita alloquitur ille in libro de Umbris: O Antarctici manes, di-/vinitate depulsi, cur tantae naturae nobilitas videtur astringi speculo/ mineraliae? Respondent enim tum ex speculis, tum ex statuis, au-/reis, argenteis, stanneis, et aliis ...." Cf. *The* Sphere, p. 397.

173 Bruno, *Cantus Circaeus*, BOMNE, 1:702.

4.5 Deceiving Demons in the Early Mnemonic Treatises

4.5.1 *De umbris idearum/Ars memoriae*

I have emphasized the ambiguity about magic present in Bruno's works on the art of memory. *De umbris idearum*, as we have seen, is introduced by a number of poems attributed to Merlin which encourage the reader to enter the labyrinth. In the introductory dialogue Hermes, who holds the book *De umbris idearum* in his hands, expresses doubt about whether he should make it public or not. In the same dialogue Bruno's art of memory comes under heavy attack from several doctors. The criticism linking Bruno's art to magic is ridiculed immediately.[174] In this way the author dismisses a link which he seemingly suggests from the very beginning of the book and which he continues to suggest until the end by means of the list of astrological images.

As we found in the first chapter of the present book, these images led Yates to interpret the mnemonic system of the concentric wheels as a kind of psychologized Ficinian magic, in which the astrological images function as talismans to attract the heavenly powers into the soul of the mnemonist. Sturlese, on the other hand, absolved these astrological images of their magical charge, arguing instead that their function was simply to translate the possible fifth syllable of a given word into images, part of the Nolan's great mnemonic device for *memoria verborum*.

But in the preceding section I argued that he who has mastered his faculties might succeed in preserving them from demonic influence. Instead of *attracting* heavenly powers, as Yates suggested, I propose the art serves to *reject* demons that confuse the lower faculties. It is not Ficino's magic in *De vita coelitus comparanda*, but rather the idea of deceptive demons of a pneumatic nature, penetrating our cognitive faculties (as found in Psellus), that make intelligible the magical allusions in his mnemonic treatises. To reinforce my thesis I indicate a passage of *Ars memoriae* in which Bruno, without explicitly naming the demons that confuse *phantasia*, evokes them by means of an echo of Psellus (hitherto not indicated).

Discussing the *subiecta* (the traditional *loci*), Bruno first presents the *primum subiectum* according to the mnemonic tradition as "a technical extension, a womb ordered in the faculty of *phantasia*, strewn with species of receptacles, which flew in through the windows of the soul, divided into different parts, receiving all things seen and heard in order and retaining them according to

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174   See chapter 1 above, note 44.

the wish of the soul."[175] As such, the first subject is an artificial construction in the fantastic faculty. This construction is an assemblage of different "species of receptacles" acquired by the senses, that is, places (*loci*) ideal for storing information, like a cathedral, a monastery, or a theatre. Bruno stresses that "this definition concerns the common subject of common forms from the common art, transmitted to us from antiquity."[176] It seems that such a subject is all too common for the philosopher. On the contrary, Bruno's *primum subiectum* is called a "fantastic chaos". He "explains" this idea of the first subject according to the principles of *Clavis Magna*, a lost treatise functioning in the context of Bruno's oral teaching[177]:

> Primum autem subiectum ex principiis *Clavis Magnae* est phantasticum chaos ita tractabile ut, *cogitativa potentia ad trutinam redigente visa atque audita*, in talem prodire possit ordinem et effigiem, quale suis membris primis ultimisque partibus *felicissime valeat ipsa per aures vel oculos percepta constanter presentare*, tanquam novae arboris vel animalis vel mundi prospectum incurrens. Haud enim secus tale chaos se habere videtur *quam nubes ab externis impulsa ventis, quae pro impulsuum differentiis atque rationibus infinitas omnesque subire valet specierum figuras.* Hoc sane subiectum quam foelix extet atque nobile, melius ipsa experientia quam ulla vi potest iudicari. Verumtamen qui ex *Clavi magna* poterit elicere, eliciat: non enim omnibus dabitur hanc adire Corynthum (my italics).[178]

Once again we have a crucial passage in the enigmatic, albeit mannered, style proper to Bruno. The passage is deliberately vague, not only for us, but also for the 16th-century reader. It claims that

> [...] the first subject is the fantastic chaos, which is so malleable that – while the cogitative power judges things heard and seen – it can result in such an order and shape as it can faithfully represent the things

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175   Bruno, *Ars memoriae*, BOMNE, 1:148: "Primum ergo subiectum est technica extensio, sive sinus in phantastica facultate ordinatus, ex speciebus receptaculorum consitus, quae ex animae fenestris influxere, diversis distinctum partibus, visa omnia atque audita suo recipiens ordine et ad animae libitum retinens."

176   Bruno, *Ars memoriae*, BOMNE, 1:148: "Quae definitio respicit subiectum commune formarum communium ex arte communi, quae ex antiquitate ad nos usque deducta est."

177   See chapter 2 above, note 188.

178   Bruno, *Ars memoriae*, BOMNE, 1:148.

> themselves perceived by the ears and eyes with its first members and its last parts, as if resulting in the sight of a new tree, animal or world.

It is difficult to make anything of this sentence. What does Bruno mean? We know he does not *want* to be clear. This is apparent from the last phrase. He who has access to the principles in *Clavis Magna* is privileged and can make use of them. After all, not everyone may land at Corinth, repeating one of Erasmus's *adagia* to emphasize that hard and dangerous things are not accessible to all.[179] Perhaps reading *Clavis Magna* would shed light on this obscure passage. Unfortunately, it is lost. However, given the preceding section on misleading demons, certain words do draw our attention. First, the fantastic chaos is said to be very malleable (*tractabile*). Obviously, this is a principle of the *ars memoriae*. The fantastic magma is sculpted and painted by the mnemonist. But in Bruno's magical doctrine *phantasia* is also worked upon. The magician should insist on the bond of *phantasia*, because through it he can bind the *cogitativa* as well. The mnemonist is not the only one capable of working on *phantasia*, which is also *tractabile* in the sense that it is beset by demons.

A second observation is that this phrase is concerned with the relation between *cogitativa*, *phantasia*, and perception. The fantastic chaos has the potential to be formed, just as it may faithfully represent the things perceived by the ears or eyes (*ipsa per aures vel oculos percepta*), as if it produced the image of a new tree, a new animal, or a even a new world, while the *cogitativa* checks and judges this information brought in through the senses (*cogitativa potentia ad trutinam redigente visa atque audita*). In other words, *phantasia* can form new images with the information derived from the senses, while *cogitativa* passes its first judgement on the sensory data.

The relationship between *cogitativa*, *phantasia*, and perception is clearly at stake. This relation between the internal senses was also subject to Bruno's reasoning in *Theses de magia*, where *cogitativa* was called the first level at which true deception can occur.[180] In *De magia naturali* Bruno claimed that even *ratio* is deceived while demons insert illusions in the internal senses.[181] Thus, demons are able to make humans believe that the illusions in *phantasia* truly derive from the senses (that they do see what they see and hear what they hear). Clearly, demonic deception is also a case in which *tractabilis phantasia* is worked upon, albeit from the outside, in opposition to the mnemonist's internal activity.

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179   Erasmus, *Adages* (1.4.1), in *Collected Works of Erasmus*, 31:317–19.

180   See note 125.

181   See note 145.

But is there, apart from the analogy indicated (the relation between the internal senses), any reason to suppose Bruno had demonic deceit in mind? I believe that the next phrase indicates this possibility, for it states that such a fantastic chaos is "like a cloud, moved by external winds, that can take all and infinite figures of species, according to the differences and reasons of these movements." This formula is taken almost verbatim from Psellus's treatise, where it is used as a comparison to describe the metamorphic nature of demons. For Psellus, however, demons can change shape like clouds do, but demons do not need external winds, for they can transform from within.[182] This echo colours Bruno's *subiectum primum* in a magical way. The fantastic chaos is presented as a malleable zone between the senses and the *cogitativa*. Where Psellus ascribes to demons the ability to adopt different forms from the inside, Bruno suggests that *phantasia* can be worked upon from the outside, by echoing a metaphor for the transformative skill of demons. However, it remains difficult to conclude from this echo of Psellus alone that Bruno wants to suggest that the fantastic chaos can be worked upon by demons. Perhaps those acquainted with *Clavis Magna* could affirm this suspicion. On the other hand, from his magical writings we know that Bruno was concerned about the demonic deception of *phantasia*.

4.5.2   *Cantus Circaeus*

A closer look at the first dialogue of *Cantus Circaeus*, which takes place between the master sorceress Circe and her disciple Moeris, confirms my suspicion. In this dialogue Circe tries to conjure up the planetary spirits, starting with the sun standing at its zenith. In her words directed to the sun, she complains about the present situation and asks where justice is to be found, since feral souls inhabit human bodies. Her question recalls, albeit in a reversed order, the famous Sileni of Erasmus.[183]

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182   Psellus, *De daemonibus*, p. 348: "Corpora vero daemonum, simplicia sunt ductu, flexuque facilia, ad omnem configurationem naturaliter apta, sicut enim nubes suscipimus nunc hominum, nunc ursorum, nunc draconum aliorum praeferre figuras, sic et corpora daemonum: sed hoc interest, *quod nubes externis agitatae ventis figuras varias agunt, daemones autem proprio consilio, prout ipsi volunt corporum formas in se variant*; et modo in breviorem molem contrahuntur, modo rursus in longiorum se extendunt." Demons are not formed from outside, like clouds are by external winds, but possess the possibility to change form from within.

183   See chapter 2 above, note 10.

For Renaissance authors, such as Ficino and Agrippa, Circe was the personification of superstitious magic.[184] Barbarian Circe had also been the subject of the *Balet comique de la Royne, faict aux nopces de Monsieur le Duc de Joyeuse* that was presented to Henri III in 1581 and published in 1582, the same year as *Cantus Circaeus*. At the end of the *Balet*, the magic wand of Circe is laid at the king's feet. This gesture symbolizes the transfer of power from the infidel hands of the sorceress to Henri III and announces a new period of harmony and justice for France.[185] Bruno's Circe, by contrast, is benign. She is not the cause of chaos and corruption, but the one who overcomes and reorders this chaos. Here I propose a reading of this dialogue from the perspective followed throughout this chapter: the magical allusions of Bruno's treatises on mnemonics make sense if we take into account the possibility of demonic influence on the *phantasia*.

Let us return to the sorceress's chant. The relation between the art of memory and nature has been touched upon several times. But Circe's song expresses a radical view of nature, charging it with injustice and fraudulence.

> Quis, quaeso, rerum modus est? Ecce sub humano cortice ferinos animos. Convenitne hominis corpus ut caecum atque fallax habitaculum bestialem animam incolere? Ubi sunt iura rerum? Ubi fas nefasque naturae? [...] Ecce subivimus minime occultum chaos. Cur non miscentur ignibus maria et limpida nigris terris astra, si in terris ipsis et earum gubernaculis nihil est, quod faciem demonstret suam? Ipsane nos mater natura decipit? Matrem dixerim an novercam? Veritati nil ipsa odibilius esse debet falsitate; bonitati nil ipsa malitia molestius. Non est, non est certe modicum, o clarissima mundi lampas, quod et visibilium et non sensibilium ratiocinantum circumveniamur ingeniis. Cur ergo similem debuimus in ipsa natura ypocrisim experiri? Si perpauci hominum animi sunt effincti, cur, quaeso, tot hominum sunt efformata corpora?[186]

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184   On Circe as the personification of superstitious magic, see Perrone Compagni, "*Minime occultum chaos*," pp. 282–83.

185   On the political context and interpretation of the *Balet*, see Ricci, *Giordano Bruno*, pp. 166–67.

186   Bruno, *Cantus Circaeus*, BOMNE, 1:602. On flowing spirits living in human bodies, see also Bruno, *De magia naturali*, BOM, p. 230: "Alii spiritus humana, alii aliorum animalium incolunt corpora, alii plantas, alii lapides et mineralia, et omnino nihil est spiritu destitutum et intellectu, et nusquam spiritus aeternam sedem sibi destinatam comparavit, sed fluctuat materia de uno in alium spiritum et naturam seu compositionem, fluctuat spiritus de una in aliam materiam."

"What order is there in the world?" asks Circe. "Behold the brutish souls beneath human skins. Is it right that a bestial soul should inhabit the human body as a blind and fallacious habitation? Where is the justice of things? Where is the right and wrong of nature?" In this way Circe evokes the fraudulence of nature, and thereafter she states that we have entered a time in which chaos is barely hidden (*subivimus minime occultum chaos*) because souls no longer fit their proper bodies. Animal souls have taken possession of human bodies, although nature does not present them as such. At first sight, we believe this great quantity of bodies to comprise real humans. But nature is not as it seems. "It is not insignificant, certainly not, o brightest light of the world", continues Circe, "that we are surrounded by rational beings both visible and imperceptible." Does Circe suggest that all these rational beings are implicated in this illusive conspiracy of nature?

Given Bruno's cognitive system, we may understand how corruption can take place. Sometimes the internal senses are perturbed so that the first judgement in the *cogitativa* is wrong. Sometimes a disconnection between *ratio* and the senses, due to demonic influence, makes people believe that they see and hear things which are not actually there. It seems that in this Parisian mnemonic treatise, Bruno also already has in mind the form of demonic deception, which he will later expound in his magical treatises.

Circe then asks the sun and the other gods to grant her the power by which one can command the serving spirits and proximate fashioners of these corporeal forms.[187] To conclude her first conjuring endeavour she entreats the ministers of error who have deceitful faces, and who possess the high power of the governors of nature, to tear the human faces away from each individual of the animal species and to make apparent each one's real and external figures.[188] But when she asks her disciple whether anything has changed yet, the answer is negative. So far, her spell remains ineffective.

The sorceress tries to conjure for a second time. "Why do you linger, conveyers of forms, falsifiers of the seals of nature? It is truthful Jove, whose majesty you have offended, who commands you."[189] Now that her first endeavour has

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187   Bruno, *Cantus Circaeus*, BOMNE, 1:602: "Insignito Circem tuam, tu caeterique praepotentes dii, ut eidem potentia qua ministerialibus spiritibus proximisque corporum istorum formatoribus imperare valeat."

188   Ibid., p. 602: "Adiuro vos per mendaces vultus errorum ministros, per altam praesidum naturae potentiam, ut a singulis brutalium specierum individuis humanam abstrahentes faciem, in suas ipsas faciatis extrinsecas atque veraces prodire figuras, [...]".

189   Ibid., p. 604: "Adiuro vos iterum: quid trepidatis? Quid haeretis, vectores formarum, sygillorum naturae falsificatores. Iuppiter verax, cuius per vos est laesa maiestas, vobis imperat."

failed, Circe introduces the betrayal of those responsible for the corruption of the seals of nature (*sygillorum naturae falsificatores*). In their lie they hurt truthful Jove himself. And it is he (*Juppiter verax*) who commands them now.

> The father of men, who forces you, and by whose power I compel you three and four times. Also in the name of the other gods who have power over the other sorts of animated beings, I order you not to hinder, when the sophisticated face of men has been removed, the figures of the single beings from coming to be seen in the light.[190]

Thus she tries for the second time, also in vain. When she asks Moeris to look, still nothing has happened.

It is only after her third attempt that the spell succeeds. Now the seven planetary spirits are conjured by calling on the animals related to each, by enumerating the epithets fitting these spirits, and by listing a set of compound terms that describe their specific virtues. In the process, pages and pages are filled with enumerations of animals, epithets, and compound terms. From the second dialogue of *Cantus Circaeus*, between a novice and a more advanced student of Bruno's art of memory, we know that these lists serve as a mnemonic exercise. New mnemonic inventions of the master expounded in this second dialogue help the students to memorize these pages filled with enumerations of Circe's third conjuration.

At the end of this third endeavour it becomes clear that the sorceress's major concern is to conjure up the planetary spirits in order to use their power over the inferior spirits, called "conveyers of forms" and "falsifiers of the seals of nature". As such, her ceremony does not capture planetary spirits in a talisman in a Ficinian way, nor does it attract prophetic demons in statues, as in the *Asclepius*, but instead uses higher spiritual powers to bind the lower ones: a ritual of theurgical magic to which Bruno regularly referred in his magical writings.[191] To realize her objectives, Circe puts into practice the magical rules found in chapters 32 and 33 of the third book of Agrippa's *De occulta philosophia*.[192] For example, in Agrippa's book it is said that "when demons

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190   Ibid., p. 604: "Cogit vos pater hominum, in cuius virtute vos ter atque quater adstringo. Impero quoque vobis per caeteros, qui supra caetera animantium genera habent imperium, deos, ut sophistico hominum remoto vultu non impediatis, quominus singulorum in lucem conspiciendae prodeant figurae."

191   Perrone Compagni, "*Minime occultum chaos*," p. 290.

192   See especially the chapters 32, "Quomodo alliciantur a nobis boni daemones et quomodo mali daemones a nobis convincantur", and 33, "de vinculis spirituum eorumque adiurationibus et exterminiis". Agrippa, *De occulta philosophia*, pp. 497–502.

are conjured by the true god, they immediately yield and speak to us" (*daemones, adiurati per Deum verum, nobis statim cedunt et fatentur*).[193] To meet this rule, Circe calls on *Juppiter verax*. Another piece of advice in Agrippa was that evil demons are often bound or dispelled by threats and insults (*Saepe etiam solis minis et contumeliis malos daemones,* […], *vel astringimus vel repellimus*).[194] This hint is likewise followed up. Circe intimidates the unjust devastators (*vastatores iniqui*), who are most shameless, impious, and stubborn (*impudentissimi, impii, pertinaces*), so that they will not flee from her. She threatens these lower spirits, responsible for the fraud in nature, with Jove and the other gods who will avenge their neglect.

> Iterum ergo atque iterum coniuro vos atque confirmo, vastatores iniqui, impudentissimi, impii, pertinaces, non me fugietis. Recedant, recedant – vel invitis vobis – humani vultus a bestiis. Potenter vobis impero in conspectus solis istius, per Iovem altitonantem et per deos omnes, qui segnitiem et tergiversationem vestram ulciscentur. Creditis ista deos non curare? En literae deorum sacrae, quas in hac lamina ostendo. En quos in aerem explico characteres. En vestigium magni sygilli. Moeri, explica membranam, in qua sunt potentissimae notae, quarum mortales omnes latent misteria. Haec sunt, quibus ipsas credimus nos posse mutare naturae leges: cur non per ipsas licebit easdem impie prophanatas instaurare? Adde ignibus thura fumigiorumque caeteras species, haecque dum ipsa submurmeravero, respice de fenestra, quid se turba fiat.[195]

In this final stage of her ritual Circe deploys all her magical "tools". She shows the sacred letters of the gods (*literae deorum sacrae*), written on a sheet. She unfolds characters (*characteres*) in the air and shows the vestige of the great seal (*vestigium magni sygilli*). Moeris is charged with showing her parchment, on which powerful signs are written (*potentissimae notae*), whose mysteries are hidden to all mortals. With all these items Circe believes that the laws of nature themselves can be altered (*nos posse mutare naturae leges*). "Why would it not be allowed to restore them [the laws of nature] by means of these tools, when they have been so impiously profaned?"

Thereafter Circe asks her disciple to put more incense on the fire while she pronounces her formulae, and to go look through the window and see what

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193   Agrippa, *De occulta philosophia*, p. 499.
194   Agrippa, *De occulta philosophia*.
195   Bruno, *Cantus Circaeus*, BOMNE, 1:618.

happens to the mob outside. This time, the spell of her mistress has succeeded. "Amazing, Circe, amazing!" responds Moeris.

> Of all the humans that were outside before, only three or four are left. And they take refuge in a safe place. All the rest have been transformed into various kinds of animals, some of whom hide in caves nearby, others fly onto the branches of the trees, others hastily run to the seashore, and the domestic ones approach our gates.[196]

"These few persisting", explains the mistress, "are true humans and could not be affected by the spell."[197] Thus, the sorceress succeeds in unmasking the animals that were hidden in human forms. Thereafter the two leave the palace, and each time they encounter an animal, Circe describes its special features.

Of course, this gives Bruno an opportunity to criticize, allegorically, the different types of people in society. But to interpret this first dialogue as a 16th-century *Animal Farm* would be too limited an approach. Certainly, if I call to mind that one of the heretical points raised during his trial concerned the theory of metempsychosis (*circa animas hominum et animalium*), we will be dissuaded from any superficial reading. Already in antiquity, Circe's myth was interpreted by the Pythagoreans as an allegory for the cycle of reincarnation.[198] In opposition to the moral-allegorical reading – which denied true metempsychosis – of some of his contemporaries, Bruno believed that souls really transmigrated into other bodies, both human and animal.[199]

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196 BOMNE, 1:620: "Mirabile visu, Circe, mirabile: de tot, quos vidimus, hominibus tres quatuorve tantum, qui trepidi ad tuta confugiunt, remansere. Caeteros omnes, quorum alii in proximas se recipiunt cavernas, alii in arborum ramos advolant, alii se dedunt in proximum mare precipites, alii domestici magis ad nostras fores adproperant, in diversi generis animantia video transformatos." In Vergil's eighth Eclogue, Moeris appears as a werewolf.

197 Ibid., p. 620: "Ii, qui adhuc perstant, veri sunt homines: illos nec vult neque potest cantus noster attigisse."

198 F. Buffière, *Les mythes d'Homère et la pensée grecque* (1956; repr. Paris: Les Belles Lettres, 1973), pp. 506 ss.

199 Pico and Ficino interpreted Plato's and Plotinus' adhesion to metempsychosis allegorically, in opposition to the Nolan's literal reading. See M.A. Granada, "Giordano Bruno et la '*dignitas hominis*'. Présence et modification d'un motif du platonisme de la Renaissance," *Nouvelles de la République des Lettres* 12 (1993), 35–89. See especially pp. 42, 50–51. Besides many allusions to metempsychosis in the Nolan's *Cabala* and *Lo Spaccio*, an amusing reference to the doctrine is found in the testimony against Bruno of a former fellow prisoner in Firpo, *Le Procès*, p. 341: "Essendo egli in letto, andai a trovarlo e trovandoli vicino un ragnetto, l'ammazzai, e lui mi disse ch'havevo fatto male, e cominciò a discorrere, che

Taking into consideration Bruno's belief in metempsychosis, we can agree with Sturlese and Matteoli that for Bruno, one of the marvellous powers of his art was that it went beyond the world of appearances, and penetrated and judged the real nature of beings (i.e. unmasked the true soul in a body). Thus, the spell of Circe, after which the true nature of beings is revealed to her disciple, symbolizes – as argued by Matteoli and Sturlese – this "magical" effect of Bruno's art.[200]

But the "magical" effect is set aside by the Italian scholars, for "the art of memory does not make use of external forces, just like the magic that is theorised in his later works".[201] Although in a strict sense this may be true, this interpretation does no justice to Bruno's concern for demonic deception, the avoidance of which I think is certainly one of the aims of his art of memory. Of course, whether Bruno's "magic" in *Cantus Circaeus* needs to appear between brackets depends on what Circe's ceremony meant for Bruno. Did the conjuration just offer a difficult mnemonic exercise with lots of exotic terms? Is the dialogue between Circe and Moeris a pleasant way to amuse his students, and convince them to attend (and pay for) his lessons? Or does the dialogue point to the link between his art of memory and magic?

If we return to the sorceress's third, successful endeavour, it seems that Bruno seeks to illustrate a specific use of certain signifiers that he has revealed before in the passages dedicated to the different categories of signifiers in *Ars memoriae*. It is striking that the means that Circe invests to manipulate the corrupters of the natural forms (*characteres, vestigium sygilli, notae*) are almost the same as those enumerated in his terminological exposition of *Ars memoriae*, where he suggested that some signifiers (*signa, notae, characteres*, and *sygilli*), most suitable for his art, were used in a magical context by saying that they could operate "beyond, above and – when necessary – even against nature".[202] Here these signifiers appear in the conjuring ceremony of Circe, who believes the laws of nature can be altered. Indeed, the result of the "magic" of the art of memory is "the marvellous power to go beyond appearances, to arrive at

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in quelli animali poteva esser l'anima di qualche suo amico, perché l'anime, morto il corpo, andavano d'un corpo in un'altro, et affirmava, che lui era stato altre volte in questo mondo, e che molte altre volte saria tornato dopo che fosse morto, o in corpo humano, o di bestia; et io ridevo, e lui mi riprendeva, che io mi burlassi di queste cose."

200   Cf. chapter 1 above, note 73.

201   Matteoli e Sturlese, "Il canto di Circe", p. 480: "Risulta chiaro, infine, che l'arte della memoria del Bruno non si avvale di forze esterne neppure la magia che teorizzerà nelle ultime opere."

202   Cf. chapter 1 above, note 94.

knowing even the most elusive being, man – in other words, the diverse characters, temperaments, inclinations of individual persons."[203] But to obtain this result, the influence of deceptive demons must be rejected, a task for which the faculties have to be mastered, the spirit has to be regulated, and, perhaps, the help of higher spirits must be invoked. Whether Bruno really combined his mnemonic practice with conjuring, we will never know. At any rate, Circe's ritual may suggest that Bruno really practised the art of memory in combination with rites of ceremonial magic, intertwining two methods which aimed at exactly the same goal.

I have tried to make sense of the many magical suggestions present in the Nolan's mnemonic treatises. These suggestions appear in a new light after an explanation of the philosopher's psychology in view of his magical writings. A passive psyche risks becoming receptive to demonic influence, but an active mnemonist may overcome this obstacle.

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203   Cf. Matteoli and Sturlese, "Il canto di Circe," pp. 479–80: "Ecco allora che sotto la magia di Circe, che tramuta gli uomini viziosi in bestie, dando alle anime viziose il corpo giusto, si scopre la 'magia' dell'arte della memoria, il potere mirabile di andare al di là delle apparenze, arrivando a conoscere anche l'ente più sfuggente, l'uomo, cioè i diversi caratteri, temperamenti, inclinazioni dei singoli uomini."

Conclusion

I began my research by presenting two major currents in 20th-century Bruno scholarship related to the art of memory. Yates's magical reading, initially successful, was rejected in the 1990s by Sturlese's interpretation of the mnemonic machinery as being a sophisticated invention for the memorization of words. Both readings can be supported by certain passages in Bruno's works.

For this reason, the focus of my second chapter was on Bruno's writing strategies. Like many other mnemonic treatises, Bruno's books on the art of memory are clearly marked by a kind of cryptic writing. Magical allusions are overtly contradicted by a denial that the art has anything to do with magic. Were these allusions meant to appeal to students, to attract their interest and business? We know from other sources that this commercial aspect played a role, and this may help to explain why these mnemonic treatises are so obscure. If a master expounds his entire doctrine in a treatise, oral lessons would be unnecessary, and so the master would risk losing his earnings. Bruno earned his livelihood by teaching mnemonics. Nevertheless, interpreting the magical allusions in his books on memory as being mere bait to attract potential students fails to take into account the interest in magic present throughout the philosopher's *oeuvre*. In opposition to his mnemonic writings, most of the magical works, preserved in manuscript, were simple in form and style. As such, our understanding of them is not hindered by any cryptic passages. Given this fact, a study of the magical writings seemed promising: as clear expositions of their subject, they shed a light on the obscure magical allusions in the mnemonic writings. In particular, Bruno's categorization of different types of magic spoke volumes, for his criterion to distinguish good from bad types of magic was of a psychological kind, showing his concern with keeping the mind free of demonic influence, and his art unblemished by associations with the *ars notoria*.

Having formally compared both textual corpuses, we analysed the philosophical underpinning of both Bruno's magic and his art of memory: *similitudo*. We discovered that the narrow definition of the term in *De imaginum compositione* did not do justice to its use in many passages of both the mnemonic and the magical writings. As we have seen, horizontal and vertical similitudes, together with the similitudes between the outer and the inner world, were crucial for both arts.

With this in mind, I have described Bruno's mnemonics and his magic as being two sides of the same coin, rather than distinguishing between them as cognitive and operative, respectively. I have put forward several arguments for rejecting this distinction. First of all, besides the fact that his use of words to

describe his art of memory betrays a vision geared towards operation, mnemonic practice itself was understood as a form of participation in divine creativity, bringing forth forms in the mind analogous to the divine creation of forms in nature. As I have shown, this is a crucial issue for Bruno, who sees both types of creation as occurring through the same universal spirit. In several passages Bruno emphasizes that his art is to be practised in connection with the universal spirit or World Soul. Secondly, in *De vinculis in genere*, there is a clear reference to his seal "*de vexillo*", which is said to be necessary for the practice of binding. Before the magician is capable of binding the souls of men, he must understand the "universal principle of things"; that is, he must know how, in the species of mankind, the species of all other things can be seen – which men refer to fishes, which to birds and snakes, and which to reptiles. By understanding this "universal principle" he will see how the same underlying matter gives rise to the variety of forms and figures in the world. Such knowledge is a necessary condition for the magician, as binding requires ever-changing types of knots. The disciple in Bruno's art of memory, well instructed in the natural language of forms and figures, would be a good candidate for becoming a magical binder: operation and cognition, magic and mnemonics, are inextricably linked.

Whereas the seal "*de vexillo*" might still be interpreted as a mnemonic and cognitive practice preceding the magical action, my last chapter outlines a much more explicit unification of magic and mnemonics present in Bruno's works. I have focused on the connection between the mnemonist and the universal spirit by looking at Bruno's psychology, a conception of the mind regulated by a flux of spirits. Bruno's description of the fantastic spirit shows several resemblances to his description of the universal spirit: he focuses on their shared power to create everything out of everything. The mnemonic activity seems to have a magical relevance as well, for apart from the personal and universal spirit, Bruno's infinite universe is full of demonic spirits, some of which are clearly dangerous, as they are capable of insinuating themselves into the cognitive faculties. This issue leads Bruno to discuss the infiltration of magical powers into the field of cognition. In my view, his ideas about deceptive spirits partly explain the magical allusions in the mnemonic treatises. After all, according to the rules of magic, higher spirits can dominate the lower spirits, as is illustrated by my reading of *Cantus Circaeus*.

The way in which the imagination, crucial for the cognitive process, is linked to the world of demons seems to put Bruno before an epistemological challenge far removed from today's issues in the cognitive sciences. Delusions which he believed were caused by demons have been labelled in medical terms and categorized by the psychological sciences, which, in accordance with

Lemnius's view, explain these states of mind in a purely natural way. Hence, our current view on epistemology and psychological states makes it difficult to understand how two categories, distinct in our perspective (epistemology and magic), were in fact assimilated by Bruno.

Scholars seeking to characterize the epistemology of the early modern period have tended to focus on figures such as Bacon, Descartes, Hobbes, and Hooke. Unfortunately, this almost canonized selection shows how the issue of continuity between Renaissance epistemology and epistemologies associated with the "new" science has overlooked the 16th-century epistemic contribution and its intellectual context. As a consequence, magic (and certainly demonic magic) has hardly been considered in relation to epistemology, although its epistemological impact reaches far into the 17th century (as is well illustrated, for example, by Descartes's *malin génie*). Moreover, due to the present-day distinction of these disciplines, the Renaissance thinkers' demonological interests have often been opposed to their scientific contributions as being the credulous part of their split personality. It goes without saying that such anachronistic diagnoses ascribing demons to a credulous domain opposed to natural science show a lacuna in the history of philosophy and that historians of philosphy are incapable of seizing what the epistemological "quest to penetrate nature" really implied for these thinkers (who often considered demons as being natural causes, albeit from a specific type).

This can already be seen from Agostino Nifo's *De daemonibus* (1503, published in addition to his *De intellectu*), which strove to reconcile the author's Aristotelian formation with his fascination with Neoplatonic demonology. *De daemonibus* advances proof for the existence of demons based on the effects they have on the human intellect (*ad intellectum pertinentia*).[1] As such, the effects of demonic spirits on human cognition have a central position in this barely studied treatise.

The same endeavour to accommodate Neoplatonic interests with an Aristotelian formation is found in Cardano, who discusses demons both in his *De subtilitate* (1550) and in his *De rerum varietate* (1557). What makes this astrologer and physician extremely interesting is his emphasis on empiricism. On the other hand, he believed he owed some of his remarkable cognitive skills, such as prophetic dreams and related ways of foreseeing the future, to his interaction with demons. How does he reconcile this belief in demonic influence with his empirical approach to knowledge?

It was not only for the aforementioned Italians that the fields of demonology and epistemology overlapped. Physicians from the Low Countries, like Jan

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1   A. Nifo, *De daemonibus*, Venice, 1503, f. 79r a.

Wier and Levinus Lemnius, described the physiological aspects of demonic deceit in detail. Wier, famous for his defence of witches, claimed that weak women easily fall victim to the illusions of the devil, a position already uttered in Cardano's *De rerum varietate*. Wier's *De praestigiis daemonum* (1563) is directed against the horror of the witch-hunts. Yet its third book also comprehends the professional vision of a physician explaining how demonic illusion came about, that is, how demonic spirits infected the bodily spirits.

And although in *De occultis naturae miraculis* Lemnius did not ascribe certain diseases to the influence of malign spirits (a position, we recall, that was heavily ridiculed by Bruno), he admitted that on some occasions a specific type of demonic spirit (airy spirits) mingles with the bodily spirits (book 2, chapter 1: *Humores, non malos genios morbos inducere: spiritus tamen aereos se iis, ut tempestatibus immiscere, ac faces subdere*).[2] The issue returns in his *De habitu et constitutione corporis* (1561), a chapter of which is dedicated to good and bad spirits, which, when mingled with the bodily spirits, cause different states of mind (book 1, chapter 3: *de bonis malisque geniis qui humoribus spiritibusque immixti varias mutationes humanis animis inferunt*). In brief, Lemnius had an elaborate view on the issue of how demonic spirits affected the soul and mind, for which he was often quoted by contemporaries, and his success, seen through the many editions and translations of his works, implies that his specific views on demonic illusion and inspiration were widely spread.

These examples show that it is at exactly this point, where demons enter the mind, that the histories of epistemology and demonology intersect in an interesting, albeit unexplored, way. By directing us to Bruno's ideas on magic and memory, these mind-invading demons have drawn our attention to this lacuna. Thus, I have pleaded for the acknowledgement of the role of demonic spirits in the epistemic field and hope to have opened a door to a broader and more accurate view of the epistemic problems philosophers had to tackle in the Renaissance.

Let us now return one last time to the Campo dei Fiori, where last spring my students admired the Nolan's statue. In the preface of this book I stated that Bruno scholars often interpret his execution at the stake as a milestone in the history of thought but that listing the heretical points only partly answers the question of *why* the Nolan was sentenced to death. For Bruno stated that "he

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2 Despite the success of Lemnius's *De occultis naturae miraculis* (1559) – it ran through many Latin editions after its first publication in Antwerp, and soon translations appeared in Italian, English, French, and German – this author has hardly been studied (apart from a PhD thesis by Van Hoorn, 1978).

died willingly, as a martyr, and that his soul would go up with the smoke to par-adise". I then proposed a quite literal reading of these well-balanced and right-ly chosen last words. The fact that attaining divinity through *similitudo* was an aim of Bruno's art of memory, and the fact that the heroic act of enduring pain could be described as a magical contraction involving fiery spirits, indeed point to a more literal reading of these last words. Unlike Cecco, who (accord-ing to Bruno) was crucified on the Campo dei Fiori because he was deceived by the demon Floron, Bruno, who always armed himself against demonic deceit using his art of memory, believed he could attain divinity and ascend to heaven as a heroic fiery spirit. I propose a reformulation of the question. Instead of asking why the Nolan was sentenced to death, we rather should wonder why he did not simply abjure his ideas. Why, after eight long years in prison, did he die *willingly*? Why did he prefer martyrdom to freedom? From his life story it appears that this high-spirited philosopher was always in search of immortal-ity. Whenever he could, he grabbed Fortune by her hair to write his life story with indelible ink. It made him a grand master in spectacularly impressing his audience, making them curious and leaving behind the feeling that there were many more secrets to discover and learn from his adept and mysterious mind. And this still counts today, for Bruno scholars, laymen, and seventeen-year-old students alike. Like many great philosophers, Bruno's writings made him im-mortal, so to speak. However, by focusing on his magical and mnemonic ideas, this book has shown that, according to Bruno's philosophy, gaining immortal-ity was not only a poetic way of speaking, but rather a realistic possibility.

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For Bruno's works on memory and magic, I made use of the recent critical editions, accompanied by Italian translations and ample comments, published by Adelphi Edizioni (*Opere mnemotecniche, Opere magiche*). For his Italian dialogues I referred to the bilingual edition (Italian-French) of Les Belles Lettres (*Oeuvres Complètes*) that was initiated by the great philologist Giovanni Aquilecchia. For other Latin works of Bruno I still rely on the 19th-century edition (*Opera latine conscripta*). Below I first show the major editions with their seals as generally used in Bruno studies, and thereafter enumerate Bruno's works used in this study, accompanied by the place and date of publication (or composition, in the case of his magical works). Then follow the historical documents with regard to Bruno's life and the few English translations I have used.

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Cena delle ceneri (London, 1584, in BOeuC, vol. 2)

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De triplici minimo et mensura (Frankfurt, 1591, in BOL, vol. 1, part 3)

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