

UNIVERSITY OF TARTU

Faculty of Philosophy, Department of Semiotics

Alina-Ruxandra Mircea

DR. BERINGER'S *LÜGENSTEINE* AND THE SEMIOTIC DILEMMA OF
'NATURAL HIEROGLYPHS' IN EIGHTEENTH-CENTURY NATURAL
PHILOSOPHY AND VISUAL PRACTICES

Master Thesis

Supervisors:

Sabine Brauckmann, Ph.D.

Timo Maran, Ph.D.

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I have written the Master Thesis myself, independently. All of the other authors' texts, main viewpoints and all data from other resources have been referred to.

Author: Alina-Ruxandra Mircea

A handwritten signature in blue ink, appearing to read 'Alina', with a long, sweeping flourish extending upwards and to the right.

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TABLE OF CONTENTS

INTRODUCTION

1. THE ‘BERINGER AFFAIR’ AND THEMATA OF INQUIRY

1.1. The Farce

1.2. The Questions

2. THE HIEROGLYPH AS SEMIOTIC TEMPLATE, 1650–1750

2.1. Portentous Signs and the Idea of the Hieroglyphical

2.2. The Seventeenth-Century Notion of Hieroglyph

2.2.1. Hieroglyphs in Linguistic and Aesthetic Theories

2.2.2. ‘Real Characters’ and ‘Natural Hieroglyphs’

2.3. The Idea of a Concrete Language of Objects and Beings: Vico and Warburton

2.4. The Morphological Templates of the Eighteenth Century as ‘Real Characters’

3. THE *LÜGENSTEINE* AS ‘NATURAL HIEROGLYPHS’

3.1. The Question of Agency and Meaning

3.2. The Idea of Hieroglyph in Beringer’s Tract

3.3. The Case for a ‘Semiotic Microhistory’

CONCLUSIONS AND PROSPECTS FOR FUTURE RESEARCH

KOKKUVÕTE

FIGURES

REFERENCES

INTRODUCTION

Aim of the paper. The present master thesis aims at elaborating on the semiotic aspects of the Early Modern notion of 'natural hieroglyph', furnished by a historical case study of pictographic fake fossils, known as 'the lying stones of Dr. Beringer'.

Research hypothesis. The main hypothesis of the study is that Beringer infers from an implicit semiotic premise that these pictographic stones represent divine ideas in concrete form and that this implicit semiotic premise is largely consistent with the idea of 'natural' or 'material hieroglyphs' as contemporaneous treatises of linguistics and religious and cultural history presented it. The 'natural hieroglyph' harbors an inherent ambiguity (artificial vs. natural, rule-governed vs. fortuitous, meaningful vs. trifling) that poses a dilemma of interpretation. I argue that the Beringer affair allows us to delineate the profile of the 'natural hieroglyph' as a distinct semiotic construct that straddled the boundaries between the linguistic, the aesthetic, and the scientific theories of the early eighteenth century, and, therefore, opens up another perspective on the history of Early Modern sign conceptions.

Materials. The main empirical material is constituted by the infamous *Würzburger Lügensteine* case of 1726, known in the history of science as the fraudulent stones of Dr. Johann Beringer. In constructing my argument, I drew upon written as well as visual sources.

The main written sources comprise: (1) the text of the *Lithographiæ Wirceburgensis*, including the *Foreword* of the medicine candidate Georg Ludwig Hueber; (2) the records of the court trial that followed the scandal; (3) contemporaneous treatises of cultural and

religious history that elaborate upon the idea of ‘natural’ or ‘material hieroglyph’, namely, Giambattista Vico’s *The New Science* and William Warburton’s *The Divine Legation of Moses Demonstrated*.

The visual sources comprise: (1) the plates and frontispiece of the *Lithographia Wirceburgensis*, together with photographs of the extant *Lügensteine*; (2) plates featuring figured stones from Early Modern tracts of mineralogy and natural history (c. 1650–1750); (3) plates featuring examples of visual writing (what Early Modern writers termed ‘hieroglyphs’) from egyptological, sinological, and archaeological tracts of the same given time frame.

Overview of literature. The first scholarly commentary on the Beringer affair is provided by Melvin Jahn’s and Christian Wolf’s translated edition of the *Lithographia Wirceburgensis* (Beringer 1963 [1726]). Both Jahn’s *Preface* and the extensive erudite apparatus that accompanies the translation contain detailed information about the state of mineralogical and paleontological sciences at the time Beringer was writing, implicitly and, at times, explicitly arguing for better situating the case within its historical context. This endeavor to place Beringer’s case against the sundry background of Early Modern scientific discourses is of course necessary but insufficient, for, as Martin Rudwick pointed out in his survey of the history of paleontology, the case is ‘a bizarre manifestation’ that is not reducible to any of the theories then in existence (Rudwick 1976: 89–90). Jon M. Mallatt (1982) penned the first study specifically devoted to the problem of Beringer’s (mis)interpretation of the *Lügensteine*, which he ascribed to a (supposedly) strange reminiscence of a sixteenth-century Neo-Platonist worldview. Other writers who have taken up the Beringer affair discussed it at an anecdotic level, either as a historiographic curiosity (Krüger 1999), or as the earliest and most famous precedent of modern-day paleontological frauds (Poty 2001, Gould 2003). Recent overviews of the farce’s history (Niebuhr and Geyer 2005, Niebuhr 2006) tried to explain-away the implausibility of the doctor’s assessment of the stones by suggesting that Beringer might have been himself the main wrongdoer, thereby bracketing the problems posed by the interpretation *per se*. Reasons for doubting this hypothesis are discussed below, in section 1.2. Alix Cooper (2007) approached the Beringer affair solely from the vantage point of regional history, focusing on *Lithographia Wirceburgensis*’ patriotic rhetoric, which she

analyzed in the context of eighteenth-century natural historians' new interest in the investigation of local nature. Petra Hubmann's doctoral dissertation (2010) provides an ample and systematic retracing of Beringer's intellectual biography, but is not particularly concerned with the problem of his interpretation of the stones.

Research questions. As has been partly suggested by this overview of literature and as is shown in more detail in section 1.1., Beringer's response to the finding is not to be ascribed to credulity, nor to superstition, nor to lack of information, nor to an inaptitude for direct empirical observation. Certain paragraphs in the *Lithographiæ Wirceburgensis* suggest that he might have, in fact, envisaged an original theory to account for the seemingly wondrous petrifications, being prompted by the belief that his discovery will substantiate 'a new course of argumentation in thorny questions which have not been completely resolved' (Beringer 1963 [1726]: 22). It is this view of the Beringer affair which seems to have escaped previous commentators, although to overlook it would be to obtain an incomplete picture of the case's implications.

Bearing the afore-mentioned aspects in mind, this research seeks to address the following questions:

1). What was that 'new course of argumentation in thorny questions which have not been completely resolved' that his stones seemed to entail?

2). How would such a new course of argumentation look like, in order to provide an explanation for the coexistence of so different realms – animals, insects, plants, celestial bodies, and writing – within the same medium? What could, in the terms of eighteenth-century worldview, bind together natural products, pictures, and language?

3). Where would his theory (reading) of the stones fit in the wider context of Early Modern episteme or general cultural make-up?

4). Does it have any analogues, contemporary or older, and, if so, how is it different from them?

Method. Given the specificity of the research questions and the particularity of the topic require an intensive analysis of the event under attention in close relation to its contextual factors, a case study approach of the qualitative sort was adopted. The case study

research design is, admittedly, the most suitable framework for addressing ‘how’ and ‘what’ type of research questions (Yin 2009, Swanborn 2010: 16–17). It is also the recommended approach for those instances where the boundaries between the event under analysis and its context are not sufficiently clear (Yin 2009). Another feature of the case study approach that seemed particularly advantageous here is its predilection for the use of multiple data sources and techniques of analysis (Johansson 2003: 8, Swanborn 2010: 2, 12 and *passim*).

In devising the framework for analysis, I followed the methodological criteria expounded by Rolf Johansson (2003), John Gerring (2004), Peter Swanborn (2010), and Robert Yin (2009, 2012). According to the taxonomy devised by Yin (2009: 7–8 and *passim*, 2012: 89–90) and subsequently developed by other writers (Johansson 2003: 4–5, Swanborn 2010: 77 and *passim*), this is a case study of the explanatory type. It seeks to build an explanation for the peculiar character of Beringer’s assessment of the *Lügensteine*. In doing so, it proceeds by way of abduction. Admittedly, abduction is the most suitable reasoning strategy for developing an explanation to address a problematic or in other way surprising set of facts (Johansson 2003: 9, Locke 2010: 1–2, Reichertz 2014: 126–127).¹ It means selecting or constructing a hypothesis that accounts for a particular case better than any other candidate hypotheses (Burks 1946: 303–305, Niiniluoto 1999: S442, Thornberg and Charmaz 2014: 153).

According to its main proponent, Charles Sanders Peirce, the abductive mode of reasoning runs as follows:

‘The surprising fact, C, is observed; but if A were true, then C would be a matter of course. Hence, there is reason to suspect that A is true.’ (CP 5.189)

In the present case, this pattern of reasoning would translate as:

The surprising fact, that early eighteenth century physician and natural historian Johann Beringer interpreted pictographic-looking fake fossils as natural productions, is observed. But if it were true that the idea of natural hieroglyphs had (some) currency in the

¹ See Charles Sanders Peirce: ‘[Abduction] is where we find some very curious circumstance, which would be explained by the supposition that it was a case of a certain general rule, and thereupon adopt that supposition.’ (CP 2.624)

early eighteenth century, then the reading of pictographic-looking figured stones as plausible products of nature would be a matter of course. Hence, there is reason to suspect that the idea of natural hieroglyphs did indeed have (some) currency in the early eighteenth century.

Given that this type of reasoning relies upon the confrontation between the specifications of the observed set of data (C) and those of the hypothetical explanatory concept (A), in the absence of direct factual evidence (a putative B), the main techniques of analysis employed are interpretive analysis and pattern matching. The empirically observed pattern of Beringer's interpretation was compared with the expected pattern of the 'material' or 'natural hieroglyph' sign conception, as it appears in the writings of Giambattista Vico and William Warburton (see 2.4., 3.1. and 3.2.). On occasion, I used vocabulary analysis and analysis of visual practices.² The first was employed in the section devoted to the Renaissance and Early Modern artists' and natural historians' discourse on figured stones and in the section devoted to the occurrence of the idea of 'natural hieroglyphs' in the writings of the early Romantics (see 1.2. and 2.4.). The latter comprises an iconographical analysis of *Lithographia Wirceburgensis*'s frontispiece and a formal comparison between the appearance of the *Lügensteine* and that of the contemporaneously available examples of visual writing (see 3.1.).

Abduction means the inference of the case from the applied rule and the empirically observed result. Applied to case study methodology, this procedure leads to a type of generalization which Rolf Johansson termed 'case synthesizing' (Johansson 2003: 9–10). This describes a situation where a case (here, the semiotic purport of the Beringer affair) is synthesized from facts in the case (the particulars of Beringer's interpretation) and a theory (the contemporaneous semiotic idea of 'material' or 'natural hieroglyph'). The outcome is a (re)construction of the case, i.e., a potentially more revealing reinterpretation of the Beringer affair. The generalization proceeds from facts and a theory to a more comprehensively developed case (Johansson 2003: 10). The order of chapters follows this sequence of reasoning.

² I take 'visual practices' in the sense coined by James Elkins (2007), i.e., as 'image-making' and 'image-interpreting' activities, in the broadest sense.

A potentially problematic aspect of the inference by way of abduction is its ambiguity of focus. This can occur because, as Reichertz observed, '[a]bduction proceeds [...] from a known quantity (= result) to two unknowns (= rule and case)' (Reichertz 2014: 127). Thus, it happens that the explaining of causes (elucidating the case) and the devising of theory (elucidating the rule) are mutually dependent and are worked out concomitantly in the process of analysis. Because of this, it can be said that an analysis that follows the abductive pattern is intrinsically bifocal. This is, however, an inevitable, if not always comfortable, feature not just of the abductive mode of reasoning, but of the case study approach in general. Given that case studies seek to understand both what is particular about the event under scrutiny and what is general about it, it follows that 'a certain degree of ambiguity [with regard to the focus of research; my note] is *inherent* in the enterprise of case study' (Gerring 2004: 345; italics in orig.).

Methodological concerns. Even though this difficulty cannot be entirely eschewed, I choose, for the sake of convenience and in accordance with the distinction outlined by Swanborn (2010: 5–9), to differentiate between the case as such and the more general phenomenon that manifests itself in the context of the case. The research aims to illuminate a single case (the peculiarity of Beringer's interpretation), but to explore a phenomenon of wider relevance. Thus, the *case* under scrutiny and around which the analysis revolves is the Beringer affair, while the *phenomenon* of interest – the thesis' semiotic aspect proper, as well as its theoretical core – is the 'material' or 'natural hieroglyph' as a sign conception. It is in this sense that my study is pertinent to the history of semiotic ideas. It underscores an event of interpretation which, given its readiness to admit the possibility of divinely-determined, meaning-laden sign action in nature, is suggestive of an implicit semiotic consciousness.

It could be argued that the farcical aspect of the Beringer affair renders it an exceptional character and may consequently hinder the potential for generalization of this paper's conclusions. To this possible objection I answer that, normally, farces have an impelling aspect to them, in that they often play on, and consequently bring out, presuppositions that would otherwise remain understated or unarticulated. Ultimately, a farce is nothing other than a carefully arranged *mise-en-scène* where, due to a mischievously

induced impression of coherence, the pieces of an initially hazy conjecture begin to fall more rapidly into place. In order for a farce to be successful, it has to give an illusory confirmation to a previously unsupported guess or, at the very least, it has to comport with a mental predisposition of some sort. As Beringer's testimonies in the treatise and as the court proceedings of the trial that followed the scandal serve to show, the predisposition to believe in the plausibility of naturally-formed pictographic-looking figured stones was not restricted to an individual level, but had a wider social ambit.

In the attempt to address this issue of the problematic relation between the whole (the general cultural outlook) and the part (the individual event of interpretation), I propose to regard the Beringer affair as an 'exceptionally "normal"' document in the history of Early Modern sign conceptions and to frame this study as 'semiotic microhistory'. In section 3.3. I discuss this proposal in conjunction with similar attempts to ascribe a place for marginal semiotic practices, namely Jürgen Trabant's 'antiquarian history of semiotics' (1981) and Umberto Eco's 'encyclopedic hypothesis for a history of semiotics' (1983a, 1997). No research instruments, let alone a rigorous methodology, have been developed for either Eco's 'encyclopedic hypothesis' or Trabant's 'antiquarian history of semiotics'. They exist only as historiographic proposals. In its turn, my argument for a 'semiotic microhistory' is strictly a proposal for historiographic framing, based on the particularity of the case as a marginal semiotic practice and on what I perceived as the compatibility between the two aforementioned proposals and microhistory's methodological stance.

Thesis structure. The thesis consists of three chapters. The first two chapters examine the historical background onto which Beringer's interpretation of the 'lying stones' was carried out. The third chapter contains a detailed analysis of the interpretation itself.

The first chapter presents the history of the farce and circumscribes the themata of inquiry. Section 1.2. introduces the problems of figured stones in the Renaissance and Early Modern geology and paleontology. It discusses specific aspects of terminology that relativised the borders between art and nature and subsequently allowed for the products of one to be interpreted in the terms of the other, thus entertaining speculation on the problem of agency and meaning.

The second chapter provides a more general overview of some of the Early Modern views on the issues of sign creation and sign action in nature and briefly discusses 'natural hieroglyphs' in contradistinction to the other non-artificial pictorial signs – signatures and stigmata –, showing that they yield different semiotic statuses. The discussion then follows the avatars of the term 'hieroglyph' from the Renaissance till the latter half of the seventeenth century, when its referential area was extended to encompass concrete objects and beings, as well as non-artificial marks of matter. A special emphasis is put on the early eighteenth century definition of the 'material hieroglyph' as delineated in the works of Vico and Warburton, in both its semantic and pragmatic dimensions. Arguments are put forth in order to prove that, roughly around the time Beringer made his 'discovery', the notion of a concrete language of objects and beings ('real' hieroglyphic characters) which can signify naturally was a matter of concern on a relatively wider scale. A brief subsection therefore points to the structural similarities between the 'material hieroglyph' and the idea of morphological template in the works of Robinet, Buffon, and Goethe.

The final chapter contains a detailed analysis of Beringer's interpretation of the stones. Drawing upon direct testimonies, as well as upon indirect proofs (his use of visual comparisons, the recurrence of Egyptian topoi in his discourse, etc.), the analysis concludes that Beringer interpreted the stones as divinely determined, self-pictured 'hieroglyphs of nature'. The study argues that Beringer's reading of the 'lying stones' as hieroglyphs was the principal cause of his inability to decide whether they were of natural or artificial origin.

The last section explains why this study should be framed as semiotic microhistory. The reasons for my approach of a semiotic microhistory is discussed in relation to earlier attempts to assign a place to the study of marginal semiotic practices within the wider scope of semiotic historiography. Finally, I suggest to consider the Beringer affair as an 'exceptionally "normal"' case in the history of semiotic practices, arguing that, although seemingly eccentric, it nevertheless affords a glimpse into the deeper layers of its cultural context.

1. THE ‘BERINGER AFFAIR’ AND THEMATA OF INQUIRY

1.1. The Farce

The story of Dr. Beringer’s *Lügensteine* is one of the earliest recorded cases of fossil fraud and arguably the most famous scientific hoax of its time. It had a considerable echo in its day and quickly became something of a regular anecdote in the majority of the accounts on the development of paleontology. Beringer’s name thus came to be forever linked with one of the most blatant oddities that punctuate the rocky road of the scientific revolution. Rather far from the image of superstitious dupe his reputation after the hoax had won him, however, records suggest the portrait of a man well versed in the sciences of his time and an industrious scholar, perhaps, as historian Heinrich Kirchner maintained, ‘the most active man of his time’ (apud Beringer 1963: 126). Having been trained as a doctor, Johann Bartholomäus Adam Beringer (1667–1738/40) was court physician and advisor to the Prince-Bishop, Professor of Medicine at the University of Würzburg and chief physician of the Julius Hospital.³ He was also a *virtuoso* (a learned dilettante), showing a keen interest in matters of natural history and engaging in correspondence with scholars and collectors across Europe. His intellectual pursuits brought him to the study of ‘lithology’ or ‘oryctics’ - two synonymous cover terms for what would now be mineralogy and paleontology - and, like many *virtuosi* of his time, he set up a private cabinet of natural rarities, containing both local and exotic ‘lithological’ specimens.

³ For a thorough intellectual biography of Dr. Johann Beringer, see Hubmann 2010. Details about Beringer’s formation and scholarly activity, together with an overview of the hoax and its aftermath can be found in Melvin Jahn’s and Christian Wolf’s excellent English edition of the *Lithographiæ Wirceburgensis*, 1963 [1726]: 1–7 and 125–127.

According to Beringer's own words, the collection was unremarkable, for the local quarries provided only the already usual ammonites and petrified shells. That was about to change in the spring of 1725. On May 31st 1725, three local boys reported to him the finding of three stones bearing the most bizarre appearance on the nearby Mount Eivelstadt: one bore the image of a radiant sun, the other two featured strange creatures in the likeness of worms. Apparently skeptical at first (Beringer 1963 [1726]: 139), Beringer grew more and more enthusiastic as the repeated expeditions on the mountain seemed to reveal a genuine 'underground' thesaurus, replete with the most unusual petrifications he had ever seen (Fig. 1.1.a–1.1.y). The unearthing, carried off 'at no small cost and labor' (Beringer 1963 [1726]: 21), yielded a variety of compact and well-shapen stones, roughly the size of a palm, with figures in bold relief featuring not just shells, nautili, and ammonites, but also 'small birds with wings either spread or folded, butterflies, pearls and small coins, beetles in flight and at rest, bees and wasps (some clinging to flowers, others in their nests), hornets, flies, tortoises from sea and stream, fishes of all sorts, worms, snakes, leeches from the sea and the swamp, lice, oysters, marine crabs', frogs, lizards, scorpions, spiders weaving their web, crickets, ants, locusts 'and countless rare and exotic figures of insects obviously from other regions', as well as 'leaves, flowers, plants, and whole herbs, some with and some without roots and flowers', even stars, the moon, an anthropomorphic sun, comets, '[a]nd lastly, as the supreme prodigy commanding the reverent admiration of myself and of my fellow examiners, were magnificent tablets engraved in Latin, Arabic, and Hebrew characters with the ineffable name of Jehovah' (Beringer 1963 [1726]: 21).⁴ In fact, so extraordinary was the nature of these stones, that Beringer quickly and enthusiastically set up to write a treatise on them, urged by the desire to bring them to the attention of the international scientific community. The monograph that he

⁴ It appears that a total of 2000 stones have been produced and 'excavated', of which 494 are extant today. A selection of 92 specimens was published within the tract's pages as illustrated plates. All the plates, as well as the allegory set as frontispiece, were engraved in copper by Johann Georg Puschner. A total of 434 stones are currently found in museums and private collections in Würzburg, Bamberg, Erlangen, Munich, Schleusingen, Waldenburg, Marbach am Neckar, Stuttgart, Köln, Jena, Graz, Oxford, and Haarlem. All the stones were crafted out of shell lime. See Niebuhr 2006: 16–17.

hoped would bring glory to himself and his native Franconia appeared in 1726, under the title *Litographiæ Wirceburgensis, ducentis lapidum figuratorum, a potiori insectiformium, prodigiosis imaginibus exornatæ*. What Beringer did not know, or at any rate, obstinately ruled out as a possibility (Beringer 1963 [1726]: 82, 95–100, 105–106), was that his stones were a sham. Soon after the tract was published, it turned out that the ‘wondrous’ stones had been in fact handcrafted and planted for Beringer to find, as part of a farce intended to discredit the gullible doctor. The perpetrators were two fellow academics, Johann Ignatz Roderick, Professor of Geography, Algebra, and Analysis at the University of Würzburg and Georg von Eckhart, Privy Councillor and Librarian to the University, both of whom, knowing Beringer’s penchant for figured stones, sought the chance to ‘accuse [him] before his Grace [the Prince-Bishop] because he was so arrogant and despised them all’ (apud Beringer 1963 [1726]: 137). A third party seems to have been a local nobleman, the Baron von Hof, although his implication in the conspiracy remains somewhat unclear. The three young diggers, Christian Zänger, who had been bribed to bury the stones, and Niklaus and Valentin Hehn, who were apparently innocent of the fraud, conclude the list of *dramatis personæ* (Beringer 1963 [1726]: 125–141).

It is not altogether clear how Beringer came to acknowledge the fraudulent nature of his ‘thesaurus’. Legend has it that one day he found his own name carved in Hebrew letters on one of the stones; another possibility, suggested by Melvin E. Jahn (Beringer 1963 [1726]: 130), is that the Prince-Bishop himself intervened to sort out the rumors circulating around town with regard to the doctor’s discovery. However the realization had occurred, it certainly did so too late to save the amateur lithologist from ridicule. Angry and embarrassed – and, moreover, faced with the allegation of having had produced the spurious stones himself – Beringer took legal action against Eckhart and Roderick, and won. As the trial records and later private letters serve to prove, the scandal ended badly for everybody involved. Eckhart was forbidden future access to the library archives and so his projected history of the Duchy of Würzburg remained unfinished at his death, four years later. Roderick was either banished from, or found it convenient to leave Würzburg once his teaching career had been cut short by the scandal. Beringer resumed his academic work and published another two books before his

death, some twelve or fourteen years later (Beringer 1963: 128, 139–140). However, his reputation remained forever tainted by the lying stones (the *Lügensteine*) affair.

1.2. The Questions

Not surprisingly, the scandal was the one thing Beringer would be remembered for. As the anecdote passed on from one biographical encyclopedia to another, the details of the conspiracy went into oblivion and the story eventually merged with an even older similar anecdote circulating on Athanasius Kircher's account.⁵ However, if the story lost its original contours over time, its moral became ever clearer, turning Beringer into an exemplary figure of that 'later-day dark ages', as Jonathan Simon memorably termed it (Simon 2002: 132), that

⁵ Mencke 1721: 84–85: 'They say that [one time] in Rome, a group of bantering youths, having decided to amuse themselves at the expense of this Jesuit [Athanasius Kircher], engraved several fantastic Figures on an inform Stone which they subsequently buried in a place where they knew they were going to build something within a short time. What happened? Soon the Finders gathered; soon they started to dig the earth in order to uncover the foundations of the new Edifice, and soon they discovered the Stone, this new Remnant of Antiquity; a Monument all the more admirable, since the fury of time respected it in its entirety. We are looking for an *Oedipus*; it is the Father: they present him with the Stone. In the face of this spectacle, he feels transports of joy which cannot be put into words, he jumps, he prances, and, as if inspired by Apollo, he instantly sets out to make the most beautiful Discourse in the world on the signification of the Crosses, the Lines, the Circles, and of all the irregular Traits which covered the Stone: Never has the world seen such Eloquence, nor such Erudition.' ['On dit qu'à Rome une Jeunesse badine, aiant résolu de se divertir aux dépens de ce Jésuite, grava plusieurs Figures fantasques sur une Pierre informe, qu'ils enterrent dans un endroit, où ils savoient qu'on devoit bâtir dans peu. Qu'arriva-t-il? Bien-tôt les Ouvriers s'assemblent; bien-tôt on creuse la terre pour jeter les fondements du nouvel Edifice, & bien-tôt on rencontre la Pierre, ce nouveau Reste de l'Antiquité; Monument d'autant plus admirable, que la fureur du temps l'a respecté tout entire. On cherche un *Oedipe*; c'est le Perre: on lui présente la Pierre. A ce spectacle, il sent des transports de joie, qui ne se peuvent dire, il saute, il trépigne, & comme s'il étoit inspire d'Apollon, il fait à l'instant le plus beau Discours du monde, sur la signification des Croix, des Lignes, des Cercles, & de tous les Traits irréguliers, dont la Pierre étoit chargée: Jamais tant d'Eloquence, ni tant d'Erudition.'] This is the earliest account of the scenario, to the best of my knowledge; see Beringer 1963 [1726]: 129 and 196. All translations are mine, unless otherwise stated.

late seventeenth- and early eighteenth-century history of paleontology and mineralogy appears to have been when contemplated from the vantage point of modern science (Poty 2001: 154, Gould 2003, Cooper 2007: 103).

But the story's easily graspable teaching, which essentially comes down to a call for prudence and scientific modesty⁶, and its undeniably humorous overtones delayed or at any rate overshadowed more serious questions. One such question is purely technical: how did Beringer come to believe that the stones were genuine products of Nature, when all the material clues, above all, pointed to the contrary? It should be noted that this was not an immediate conclusion, nor an unreflective one: the matter whether the 'parentage' of the stones is to be ascribed to Art or to Nature is debated throughout fourteen chapters, systematically reviewing all the theories then in existence. In relation to this, an aspect most commentators overlooked is Beringer's own perplexity in the face of such strange items. In his own words:

This only I contend, that not one of all these opinions is so general or so universally true that it can be applied, without encountering the doubts of other thinkers, to all the species of figured fossils, much less to the Würzburg stones which we have produced. (Beringer 1963 [1726]: 38)

Another, equally curious, aspect – and this would make the subject of a separate interrogation - is his conviction that the stones would endorse 'a new method of learning and teaching, a new course of argumentation in thorny questions which have not been completely resolved' (Beringer 1963 [1726]: 22). The two questions are, naturally, correlative; the second requires a more ample treatment (see Chapter 3), therefore I will start by addressing the former.

The very fact that he has been tricked to believe that crudely handcrafted stones were genuine petrifications remains something of a mystery (Gould 2003) and his obliviousness all the more incredible since Beringer seems to have been well aware of the most progressive theories on fossil formation issued in his time. As his bibliography testifies, he was acquainted with the groundbreaking works of Fabio Collonna, Agostino Scilla, Nicolaus Steno, Paolo

⁶ In 1804, James Parkinson wrote that 'the quantity of censure and ridicule, to which the author was exposed, served, not only to render his contemporaries less liable to imposition; but also more cautious in indulging in unsupported hypotheses' (apud Beringer 1963 [1726]: 5).

Boccone, and Leibniz.⁷ Furthermore, he admits to the organic origins of at least some fossils when he scrupulously notes that ‘the petrifying quality of earthborn salts and of mineral springs was shown, the alteration of vegetable or testaceous bodies into rocks and stones was demonstrated’ (Beringer 1963 [1726]: 32). As one who customarily engaged ‘in gratifying exchange with learned men of other lands’ (Beringer 1963 [1726]: 20), it is unlikely that he did not know of the newest methods of classifications based on chemical and formal analysis that were being developed among scientists and collectors right at that time (Simon 2002: 134–135). Nor was he an inapt empirical observer: he even states in one place that ‘[o]ne would swear that he discerned on many [stones] the strokes of a knife gone awry, and superfluous gouges in several directions’ (Beringer 1963 [1726]: 83), whereas others ‘exhibit a smooth surface on top, as though they had been highly polished with pumice’ (Beringer 1963 [1726]: 35). Yet so great was his obstinacy in the face of all evidence, that some authors (Niebuhr and Geyer 2005, Niebuhr 2006) speculated that he must have been himself a part of the conspiracy, perhaps even its mastermind, ‘not the duped one, but the primary liar’ (Niebuhr 2006: 18).⁸

⁷ See Beringer 1963 [1726]: 29–31, together with the list of works compiled by the editors Melvin Jahn and Daniel J. Woolf in Appendix A, pp. 111–124. On the state of the mineralogical science in the time Beringer was writing, see Schneer 1954, Rudwick 1976: 49–100, Oldroyd 1996, Rappaport 1997, Morello 2003.

⁸ This hypothesis seems, however, extremely improbable. There are clear indications that his reputation and, in all probability, his fortune as well, were seriously damaged following the public exposure of the farce. Perhaps the weightiest argument is that Beringer could not afford to discredit the Duke of Franconia himself, under whose auspices he had published the tract. See Georg Ludwig Hueber’s dedication to Christoff Franz von Hutten, the Duke of Franconia: ‘whatever the scholars may opine concerning the origin and nature of these stones upon seeing this first exemplar, your indulgence in suffering us to dedicate this first harvest of the Würzburg Lithography to Your Most Exalted Name is our irrefragable testimony and impenetrable shield against all emulous charges of imitation and artificiality’ (Beringer 1963: 14), and Beringer’s own words: ‘For how could I tarry in bringing to publication those things which our most learned leader in the sacred and profane sciences has, as the supreme arbiter, decided and, by indications of his most indulgent will, approved that I should edit?’ (Beringer 1963: 23). It is very unlikely that Beringer and, implicitly, Hueber would knowingly and willingly expose themselves and their patron to ridicule.

More readily, as Melvin E. Jahn (Jahn 1963, Beringer 1963), Jon M. Mallatt (Mallatt 1982), and Stephen Jay Gould (Gould 2003) have suggested, Beringer's story must be understood against the sundry background of the theories on the formation of fossils then still in circulation – although, I would add, it should be remembered that his account is not reducible to any of them (cf. Rudwick 1976: 89). Researchers have called in Beringer's defense an array of 'theoretical circumstances' that considerably mitigate his fault, the most weighty of which are the idea that art and nature share similar, perhaps identical, creative and aesthetic virtues (Krüger 1999: 174, Poty 2001: 149), together with the related thesis of nature being endowed with a *vis plastica*, a 'plastic' or 'formative power' (Gould 2003: 9–26). While, as it has already been implicitly suggested above and as I will explain at large in the second chapter, these ideas do not exhaust the problematic in Beringer's tract, they form, nevertheless, a recurrent theme of reflection (his arguments are organized according to the art-nature polarity end-to-end) and a convenient starting point for inquiry:

If you would know the good offices of Lithological studies, consider for a moment the worthy arts of depiction and sculpture. By the graces of these arts, things dead and past are restored in image and are endowed with something very like immortality. [...] Nature in its works uses a similar artistry, and though it may not open to you a group of great statues or a pantheon, still it does offer a most delightful and unexpected collection of iconoliths of an all but extinct art, such as you will not find among the inspired works of bygone ages nor in the earthen chambers of graven crypts, nor amid the hieroglyphic sculptures of the Egyptian pyramids. (Beringer 1963 [1726]: 28)

The notion of nature as artist was still a strong 'conceptual reflex' (Daston and Park 1998: 276) at the time when Beringer composed his tract. A number of important issues can be detached from this paragraph: nature as an image-making power, the 'iconoliths' as a repository of images (implicitly compared here to hieroglyphic friezes), the theme of memory conjoined with that of the representative function of the visual arts. A related theme is that of fraud:

There is not an era, nor a province that has not suffered from counterfeiters and money spoilers. There are men who can copy the coins of Rome, of Greece, of Egypt, etc., and engrave gems so skillfully as to deceive even the most experienced antiquarians. The same is done in the field of painting and statuary. What, then, must we say of the coins that we use in our daily transactions, of those we find in the fields, villas, vineyards, the rubble of cities and graves, in the abodes of the Greeks and Romans, of all the gems, pictures, and statues preserved in royal and princely collections? No one in his right mind would venture such an assertion. No more would he relegate our genuine stones to the limbo of frauds simply

because a few had found their way among them from an artistic hand energized by envy, and had been deceitfully sold to the Lithophile. (Beringer 1963 [1726]: 95–96)

This paragraph repeats a common place: the spoils of Antiquity are supposed to contain data not intended to deceive or mislead, therefore, ‘[t]o call something a monument or medal [...] was to express confidence in its reliability’ (Rappaport 1982: 29).⁹ Robert Hooke employed a similar rhetoric (Rappaport 1982, Stevenson 2005: 63–64) and so did Fontenelle (Rappaport 1991: 294–295), among others. But beyond its rhetorical convenience, this *topos* reveals a type of analogical reasoning that had proven very misleading at times, when followed to its last consequences. It is rather interesting that the most acute problems tackled by the art - nature analogy were exactly those of genuiness and fraud. A famous example is that of the Jesuit Jean Hardouin, who went farther than anybody else along this line of reasoning and claimed that, apart from coins and medals, all the documents of Antiquity were the fabrication of a fourteenth-century occult society of forgers (Mencke 1721: 73–74, Grafton 1999). At the other extreme, the German antiquarian Samuel Simon Witte – whose theories stand in a sort of reverse symmetry to Beringer’s (see Chapter 2) – held that the pyramids and the monuments of Persepolis were all the fortuitous outcome of volcanic activity and other geological catastrophes, and that it would be useless to consider their inscriptions as reliable historical documents, for they are naturally illegible, being the traces of volcanic scoriae and of random perforations made by pholades (*L’esprit des journaux* 1793: 5 - 14, Stafford 1984: 237).

It was within the logic of this type of analogical thinking that a fusion of vocabulary, both technical and aesthetical, eventually occurred. I will give two quick examples (there are many others) of virtually interchangeable terminology. As late as 1763, Élie Bertrand describes fossils, Florentine marbles and all Graptolyths as stones permeated by ‘painting’ (Fig. 1.2.a – 1.2.b), and takes as a case in point the Dendrachates, ‘the painting of which permeates the often transparent mass of the stone, and which represents a city or an entire

⁹ Rappaport 1982: 30: ‘For many of these geological texts, and especially for the earlier ones, one may say that the vocabulary of monuments and medals was being used to suggest reliability, freedom from bias, and a resultant confidence in the conclusion drawn from such evidence.’

landscape’ (Bertrand 1763: 214).¹⁰ Similarly, Litoglyphs are ‘singular stones which by their outward figure represent something that seems to have been cast into a mold or sculpted’ (Bertrand 1763: 318).¹¹ However, Bertrand makes sure to warn his reader that, at least in some of the cases, ‘art or imagination assist, or have assisted, nature’ (Bertrand 1763: 206).¹² Conversely, in the sphere of artistic vocabulary, we learn from Filippo Baldinucci that ‘macchia’ (which can be translated as stain, blot, but also as mark or sign) is a customary term painters use to express the quality of certain drawing and painting ‘made with extraordinary ease, and with such seemliness and freshness, without the use of drawing pencil or color, and in such a way that *it looks as if it did not come from the hands of the Artificer, but appeared by itself* on the paper or on the canvas, and so they say: this is a beautiful blot’¹³ (Baldinucci 1681: 86, emphasis mine). Interestingly enough, ‘fare alla macchia’ means both representing from memory, in the absence of a model, and ‘to counterfeit’, in the manner of money forgers (Baldinucci 1681: 86 and 137).

The employment of aesthetical terms follows the same discursive pattern: ‘In the anthropomorphization of Nature, both the human mind and the natural world possessed the faculty of *invenzione* or *fantasia*’ (Elkins 1999b: 144). Again, a brief inventory of shared keywords would comprise, alongside *invenzione* and *fantasia*, such terms as *scherzo*, *diligentia*, *industria*, *disegno*, sketch, draft, effigy, emblem, and hieroglyph.¹⁴

It is easy to imagine how confusing all these terms and ideas must have been for the Early Modern researcher and taxonomist; considered together, they amount to what I would call *a reversible discourse* – one partly inheriting the equally elusive semantic field of *lusus*

¹⁰ ‘dont la peinture pénètre la masse de la pierre souvent transparent, & qui représentent une ville ou une paysage entier’

¹¹ ‘pierres singuliers qui par leur figure extérieure représentent quelque chose qui semble avoir été jetté en moule, ou sculpté’

¹² ‘l’art ou l’imagination ont aide ou aident à la nature’

¹³ ‘fatte con istraordinaria facilità, e con un tale accordamento, e freschezza, senza molta matita o colore, e in tal modo che quasi pare, che ella non da mano d’Artefice, ma per sè stessa sia apparita sul foglio o su la tela, e dicono: questa e una bella macchia’

¹⁴ For *scherzo* and ‘the notion that [Nature’s] play could create order’, see Findlen 1990: 294.

which had perfused Renaissance natural histories – that can only obfuscate attempts at a pertinent taxonomy and hence perpetuate dilemmas of interpretation.¹⁵ Above all, it is a discourse that obscures the problem of agency: by relativizing the borders between art and nature and by allowing for the works of one to be interpreted in the terms of the other, it downplays the question as to how either works of art or of nature came about. Only within a context that can simultaneously and indiscriminately account both for mimetic appearance and for the lack thereof is it possible to conceive of an anthropomorphic sun or of a toad trapped in a shell as genuine fossils and of genuine monuments as remnants of a geological catastrophe or that obvious chisel strokes can be taken as the workmanship of a ‘plastic power’ and obviously sculpted friezes as networks of grooves randomly cut by pholades.

It is not by chance that some of the very first researchers to rightly identify the organic origin of fossils and to provide a plausible description of how the process of fossilization had occurred were artists – names like Bernard Palissy and Agostino Scilla come to mind –, in other words, the people who had the (above all) technical knowledge and the aesthetical discernment to reestablish the true links between terminology and empirical observation, to put, so to say, the words in their right place.¹⁶ Nevertheless, so pervasive was this reversible terminology, that it took roughly another century from the time Scilla was writing before the scientific discourse on fossils was finally purged of ambiguous terms. It was on this slippery conceptual ground, compound of ‘all those beautiful obscurities, the cause of much delightful

¹⁵ Cf. Findlen 1990: 323: ‘the semantic field of *lusus* offered a flexible terminology that succinctly, if imperfectly, taxonomized the confusion of the scientific and philosophical world’. The Early Modern *virtuosi* inherited this flexible terminology from the Renaissance scholars and ‘natural magicians’. It should be stated, however, that its impetus began to wane by the beginning of the eighteenth century.

¹⁶ On Bernard Palissy’s theory on fossils, see Beringer 1963: 160–161 (with several excerpts of his *Discours Admirables* of 1580) and Daston and Park 1998: 286. For the role of artistic competence in determining the organic origin of fossils, see Scilla 1670: 4, 37 and 155–156. Scilla’s arguments appear to have had a significant bearing on Leibniz’s paleontological theories. See Leibniz 1749: 75: ‘To these [speculations on the mimetic virtues of an ‘artist Nature’] I oppose a learned painter, who declared in a recently published book that, though he had been shown many such things, the more carefully one observed them, the more tenuous the similarity.’

disputation, where doubt and curiosity went hand in hand, and eternally exercised the speculations of the learned' (Pope 1822 [1741]: 86), that Kircher, Beringer, Robert Plot, John Woodward, Niklaus Lang and countless other 'natural antiquarians' carried out their analysis of figured stones, whether aleamorphs, true fossils, antique spoils, or later-day manufactures. It could be argued at this point that better scientists submitted to the same discursive determinants: there is no essential difference between the interaction of fire, sulfurs, water and salts as it is provoked in the workshops of chemists and the one taking place in the 'workshops of nature', deep in the bowels of the earth, Leibniz maintains in his *Protogæa*, '[f]or nature is nothing other than a great art. And the entire class of artificial things is not always distinct from natural productions' (Leibniz 2008 [1749]: 27). However, if Leibniz, as Steno and Francis Bacon before him, could concede that works of art and nature could be similar (almost indiscernible) with respect to their material and formal causes, yet different as to their efficient and final causes (Daston and Park 1998: 291, Redin and Bora 2006), not the same can be said of those who held that an artist Nature could sport for no apparent purpose whatsoever or for a purpose that transcends human understanding. The confusion surrounding the efficient cause and the inability to identify a final cause have long obscured the problems of agency and purpose, or, as we have seen, it was precisely the task of determining agency and purpose that was the cause of such embarrassment in Beringer's case.

But figured stones tackle these two problems in yet another way. If what has been said above on ambiguous terminology pertains firstly to technical issues that can sidetrack attempts at classification and only implicitly to interpretative issues, the following observations are more directly concerned with problems of interpretation proper. For heuristic reasons, I will start by referring to aleamorphs (or 'chance images') and then I will try to explain how the difficulties they pose to interpretation ultimately hold true of all figured stones. As James Elkins explained, '[t]ypically, aleamorphs are collaborative projects between "nature" and the artist, or (in the modern terms) between the artist's tendency to see things that aren't there, and the related tendency to bring images "out" of their inchoate matrices in the material' (Elkins 1999b: 145). This, of course, is especially clear in those works of art that purposefully straddle the line between casual forms in the medium and ulterior figurative enhancements and

superpositions (Fig. 1.2.c) and where the aleamorph has already been fixed into a determinate composition (Daston and Park 1998: 277–280). Yet, as Bertrand had noticed, the same tension between what is really there to be found in the medium and what is projected into it hovers over all aleamorphs; whatever meaning is to be ‘extracted’ from, or stabilized within, the inchoate image, it will necessarily be the object of a kind of negotiation between the source medium and the interpreter. Here is a telling example: in the chapter dedicated to aleamorphs from his *Ars magna lucis et umbræ* of 1646, Kircher speaks at one point of a seemingly miraculous image of the Virgin Mary holding the Holy Child in her arms that can be seen in a mountain cavity in Chile (Fig. 1.2.h):

In the cavity of this [Chilean] mountain, when seen from a certain and established angle, the Image of the Blessed Virgin with her Son in her arms can be discerned, depicted in such a variety of colors, that almost no man can convince himself that this is the result of nature’s play, but all [those who have seen it] tenaciously claim that it is a divine apparition [...] (Kircher 1646: 808)¹⁷

Significantly, Kircher’s text does not make it clear whether the image would impose itself to the hypothetical beholder because the agglomeration of taches is so compellingly iconic as to distort anybody’s perception or because it is indeed a *vera effigie*, in which the full meaning of the divine prototype is so immediately and undeniably present as to command anybody’s assent. It matters greatly, of course, whether the image is an instance of *acheiropoiesis* – for in this case, as Kircher made sure to point out elsewhere, the image will certainly ‘ad aliquid significandum dirigi’ (Kircher 1678: 47) - or of mere pareidolia, whether agency is to be ascribed to God or to the beholder. Still, if the paragraph seems to concede that the matter is indecidable, it also reveals that there is a compelling aspect in both alternatives: the image is nevertheless there to be seen, regardless of its author, as if the medium would have an agency of its own and the power to create sense (a recognizable depiction) independently of who made it and of how one would read it. This is perhaps the most striking quality of aleamorphs:

¹⁷ ‘In huius montis concavo, ex certo tamen, & constituto puncto, Imago Beatissimæ Virginis cum filio in brachiis tanta colorum varietate depicta cernitur, ut nemo sibi ferè id ludentis naturæ opus persuadere possit, sed omnes apparitionem divinam mordicus teneant [...]’

‘seen from a certain angle’ (to paraphrase Kircher), they are always the site of a possible coalescence of meaning – however faint, vacillating, or difficult to ascribe to a determinate factor that meaning may be. This compelling aspect of the aleamorph – which is nothing else but *the persistent possibility* of it ‘ad aliquid significandum dirigi’ – is just as relevant in the case of fossils, which ‘emulate’ aleamorphs by virtue of a faulty habit of association (Fig. 1.2.d – 1.2.g), and twice as relevant for the *Lügensteine*, which purposefully emulate both aleamorphs and fossils, and which, in addition, bear inscriptions (some in the likeness of fossils; see Fig. 1.1.h, 1.1.j, and 1.1.n) with the sacred name of God.¹⁸

As James Elkins remarked and as the example from Kircher serves to show, aleamorphs and, together with them, all the figured stones that emulate them in one way or another, always introduce a ‘conceptual disorder’ (Elkins 1999b: 145) – although I believe it would be more precise to speak of a ‘semiotic disorder’. Because of their irresolute (and hence abundantly suggestive) nature, figured stones entail a crisis of association – or, Peirce tells us, ‘[a]ll association is by sign’ (EP 1.51). The marks of matter – casual or otherwise – are also *signs*, they are potential vehicles for meaning and, because of this, they are falsifiable, either in the direction of overinterpreting, or in that of outright counterfeiting.¹⁹ To fix meaning – or to exclude it altogether –, to pick up on one of the possibilities of interpretation granted by the mark-bearing stone (fortuitous image, organic trace, sign of a higher power, or, in a more general and better-known formula, icon, index, symbol) and to ‘bring it out’ in the shape of an argument requires from the investigator a correspondent sign theory, or, at the very least, a semiotic competence of some sort. Thus, I would argue that Scilla’s ability to correctly recognize an organic imprint – an index – when he sees one counts as a semiotic competence. The ‘iconolyth’ is the privileged place where dilemmas of interpretation are played out. The

¹⁸ For the faulty habit of association, see Daston and Park 1998: 286: ‘The coherence of the category [of fossils] did not depend upon a common explanation of their origins, but on the implicit analogy between the forms of nature and the forms of art.’

¹⁹ Kircher, for instance, considers the ‘paintings of nature’ among instances of *Magia Parastatica*, that is, among natural phenomena and/or artificial techniques having the property of representing (or staging the likeness of) something before the mind. See Kircher 1646: 799–801.

Lügensteine affair is particularly interesting not only because it exacerbated such dilemmas, but also because of Beringer's claim to have wrought a new theory on the origin and meaning of 'iconolyths'. Given that it would have to account for a seemingly marvelous class of items featuring well-shapen images from all realms of the physical world, as well as (apparently naturally-derived) Hebrew names of God, it is pertinent to suspect that such a theory can reveal some implicit assumptions on signification and sign creation in nature. What was that 'new course of argumentation in thorny questions which have not been completely resolved' that his stones seemed to entail? And how would such a new course of argumentation look like in order to provide an explanation for the coexistence of representations belonging to such different realms – animals, insects, plants, celestial bodies, and writing – within the same medium? What could reasonably bind together natural products, pictures, and (holy) language?

These are the main research questions with which I start my inquiry.

2. THE HIEROGLYPH AS A SEMIOTIC TEMPLATE, 1650 – 1750

2.1. Portentous Signs and the Idea of the Hieroglyphical

It should be clearly stated from the onset that no consensus ever existed in the Renaissance and Early Modern times with regard to fossils as inorganic sports of nature (Gould 2004: 212–218). In fact, the tripartite taxonomy of possible answers to the question on the origin and nature of fossils (inorganic theory, flood theory, modern organic theory) was already a matter of course in the first decades of the sixteenth century (Morello 2003, Gould 2004: 213) and it appears as such in Beringer's tract, as well, a century and a half later (Beringer 1963 [1726]: 38, 46). 'Iconolyths' were placed somewhere in an inscrutable limbo between the miraculous and the ordinary course of nature. As Helge Kragh pointed out, iconolyths

were not miracles but belonged to the fabric of nature, something to be placed between the commonplace and the miraculous. Also they were not unique (as miracles were), for they occurred regularly enough to be studied by philosophers across learned Europe and enter the scientific (and not only the theological discourse). (Kragh 2006: 15)

The problem, therefore, became how to account for an unpredictable and, consequently, unsystemizable lot. Figured stones needed to be understood, of course, but as long as their efficient cause remained unknown, they could not be made to fit an established taxonomy (Kragh 2006: 15).

In these circumstances, the sole criteria for interpretation were form and the frequency and conditions of occurrence (e.g., a relation to an external, perhaps supernatural, event). This was a situation which perpetuated deep into the seventeenth century and which often led to contradictory results (see section 1.2.).

The *Lügensteine* were produced to emulate such figured stones and, implicitly, to determine a certain response in the form of a certain interpretation. Now, the imagery

displayed in the figured stones belongs to a wider but distinctive class of images, which I term ‘non-artificial pictorial signs’. By ‘non-artificial pictorial signs’ I mean material formations suggesting the likeness of recognizable pictures, the cause and/or coming about of which has been ascribed to a non-human agent (God or *Natura naturans*), and which were believed to convey a certain meaning – i.e., to stand for something other than themselves.

Historically, until the latter half of the seventeenth century, non-artificial pictorial signs, including figured stones, were interpreted either as signatures or, in exceptional cases, as stigmata (see Park 1994, Park 1998).

An important landmark in the Early Modern discussion on the occurrence of natural markings is Athanasius Kircher’s *De diatribe prodigiosis crucibus* (1661). Here Kircher investigates the seemingly wondrous appearance of crosses on linens and other materials after the eruption of Vesuvius in 1661. Kircher’s tract concentrates all the critical problems: natural vs. supernatural provenance; a matter of routine vs. an accident or perhaps an exceptional event; iconic (mere resemblance), indexical (a natural or divine imprint), or symbolic, or all at once.

Kircher considered the seemingly prodigious occurrences of crosses as signatures (the cross is a commonly found structure or mark in a great number of plants, flowers, fruits, insects, etc.), as stigmata (as a result of direct divine agency), and finally as ‘hieroglyphs’. This is the first time a material mark is associated with the idea of hieroglyph: ‘Prodigies are like hieroglyphics, mysteriously portending uncommon events’ (Kircher 1661: 84).²⁰ It is interesting to note that Beringer used the word ‘hieroglyph’ and associated his stones with hieroglyphic writing several times throughout his tract, directly and indirectly (I will discuss this at large in the Chapter 3).

According to Kircher:

There are, thus, rare and wondrous apparitions of this kind in every realm of the natural World, shining forth like hieroglyphic symbols swathed in enigmatic and allegorical meanings, which the Divine

²⁰ ‘Prodigia sunt veluti hieroglyphica, arcanè rarios eventus significantia.’

Wisdom records in Heaven, earth and the elements as if in a book and sets it before mortals to read [...] (Kircher 1661: 84)²¹

In order to understand what Kircher meant by employing the term ‘hieroglyph’, it is of course necessary to turn to the available definition penned by him. Given that all hieroglyphs are symbols (Kircher 1650: 120), these natural ‘portentous hieroglyphs’ must fit Kircher’s definition of symbol, as well. Such a definition can be found in one of his Egyptological tracts, *Obeliscus Pamphilius*, published only a decade earlier, in 1650. Here, in chapter V, *De Symbolis & hieroglyphicis in genere (Of Symbols and Hieroglyphics in General)*, against the various conflicting attempts to explain the term, he formulates ‘the true definition of symbol’ (‘vera Symboli definitio’):

a nota significativa of mysteries, that is to say, that it is the nature of a symbol to lead our minds, by means of certain similarities, to the understanding of things vastly different from the things that are offered to our external senses, and whose property it is to appear hidden under the veil of an obscure expression. [...] Symbols cannot be translated by words, but expressed only by marks, characters, and figures. (apud Eco 1995: 154)

It is not easy to determine the exact meaning that ‘hieroglyph’ had for Kircher when he wrote that spontaneously appearing crosses could be interpreted as ‘hieroglyphic symbols’ – or, for that matter, what Beringer meant when he explicitly compared his figured stones to the amulets of the ancient Egyptians. Nevertheless, the mere use of hieroglyphic terminology affords, in both cases, some insight into a certain philosophy of symbolism.

²¹ ‘Sunt itaque rara & insolita huiusmodi phasmata in omnibus Mundi ordinibus elucescentia veluti hieroglyphica quaedam symbola ænigmaticis allegoricisque involuta significationibus, quæ Divina sapientia in coelo, terra, elementis, veluti libro quodam descripsit & mortalibus legenda proposuit [...]’

2.2. The Seventeenth-Century Notion of Hieroglyph

2.2.1. Hieroglyphs in Linguistic and Aesthetic Theories

The philosophy in question has a long and tangled history that began with the discovery, by Cristoforo Buondelmonti, of Horapollon Niliacus's *Hieroglyphica* in 1419, an event which led to 'a linguistic and semiotic revolution' (Assmann 2001: 297). What made the discovery so momentous was that it met Humanists' interest for Neo-Platonism, Hermeticism, and Kabbalah (Gombrich 1972, Dieckmann 1957, Iversen 1958, Calvesi 1988, Dempsey 2000). Humanists like Marsilio Ficino and Piero Valeriano thus found a definition of a visual language that felicitously suited their own age's quest for a perfect, universal, and divine means of communication. Horapollon's *Hieroglyphica* became the literary and iconographical fount and the practical model for a plethora of emblem books, collections of *imprese* and 'heroic devices', mythographies, and symbolic contrivances of all sorts, which quickly perfused many provinces of the Renaissance and Early Modern art and thought.

Here I will summarize only the most salient points of this history in order to (1) detach a definition of the hieroglyph as it has entered Western intellectual (philosophical and artistic) consciousness, and to (2) follow the term's referential expansion towards what came to be called 'hieroglyphs of nature'.

As varied and convoluted as the history of the employment of the term is, the underlying principles of the 'hieroglyphic' are reducible to a few recognizable traits. In the fifth *Ennead*, Plotinus defined hieroglyphs as 'pictures by means of which the initiated could manifest, not the name or the form of the thing, but its very essence and true meaning: its true idea' (Iversen 1958: 16):

Inscribing in their temples one particular image of one particular thing, they [the Egyptians] manifested the non-discursiveness of the intelligible word, that is that every image is a kind of knowledge and wisdom and is subject of statements, all together in one and not discourse or deliberation. (apud Schroeder 1999: 346)

Speculation on the properties of hieroglyphic language was grounded in the belief that seeing and understanding can occur simultaneously. The hieroglyph does not appeal to discursive

reason – it is a *totum simul*, suggesting a plenitude of meaning in a single instant of time, in a manner analogous to the one in which the Divine Mind apprehends the world (Gombrich 1972: 159.²² When contemplating a hieroglyph, the interpreter must note not just the (quasi-discursive) combination of symbols or iconographic elements, but also their spatial relations, their proportions, the way they are juxtaposed or superposed, which are to be perceived at once and that cannot be properly translated into spoken language. This is why the ‘hieroglyphic’ component of the emblem cannot be supplanted, nor properly explained, by the *sententia* (the tag) or the accompanying poem (Hill 1970: 263). The *sententia* and the poem may chart, summarize or otherwise mediate the meaning of the picture, but can certainly not exhaust it. In the Renaissance theory, the hieroglyph – by itself or as part of an emblematic complex – is an indivisible semiotic unit that signifies in its own right. In theory, it is not only indivisible, but also unique and irreplaceable, for it is believed to stand in a *necessary* relation to the thing or notion (e.g., the notion of impossibility, the notion of eternity, the notion of immortal glory acquired through labor, etc.) it signifies.

Some writers argued that the hieroglyph is not just the visual vehicle of an idea, but, and at the same time, that very idea. To give a famous example, John Dee’s *The Hieroglyphic Monad* (1591) hypothesizes that ‘sign is itself reality’ (Dieckmann 1957: 315), that the entire universe, material and spiritual, is not just *re-presented* by, but *condensed* in, the hieroglyphic figure. It was believed, in other words, that the hieroglyph ontologically partakes in the thing or idea it embodies.

This unifying aspect of the hieroglyph was expounded by Singer:

In the Renaissance picture, notes, notions, and things could form a trinity wherein each was of equal value. This is more readily apparent in the way that anyone of the three could easily serve as something more than just a metaphor for the others. Nature, for example, is both an idea in the mind of God and a language, the book of the world. Language itself is a thing of nature, a *res*, as the very expression *natural* language and *real* character indicate. Speculation on the hieroglyphs flourished in this climate, for they composed a *language* that used the *things* of nature to represent *ideas*, thereby uniting notes, notions, and things. (Singer 1989: 66–67; italics in orig.)

²² According to Ficino’s frequently cited gloss to Plotinus’s description, ‘God has knowledge of things not by way of multiple thought but like the pure and firm shape of the thing itself’. In a similar manner, ‘the Egyptian can comprehend the whole of this discourse in one firm image’ (apud Gombrich 1972: 158–159).

2.2.2. 'Real Characters' and 'Natural Hieroglyphs'

The seventeenth century brought a breach in the study of and reflection on hieroglyphs. The universal language projects of the mid-century meant a lesser interest in the “archeology” or the “hermeneutics” of the hieroglyph and, by contrast, a greater concern for its intrinsic qualities and structure.²³

For scholars like John Webster, Seth Ward, John Wilkins, Leibniz, as well as for later eighteenth-century writers like Rowland Jones, the writing on hieroglyphs is no longer driven by the desire to unearth some secret knowledge or to retrace the genealogy of hermetic thought, as was the case for Marsilio Ficino or Piero Valeriano (Dieckmann 1957: 310–313, Iversen 1958: 20), nor by an archaeological interest (they are no longer concerned with what the ancient Egyptians might have meant on their walls and obelisks). What motivates research now is the intention to abstract the hieroglyph's features and to work upon them in order to accommodate a more pragmatic project. Even after the Neoplatonic idea of the hieroglyph as a repository of secret knowledge lost its prestige sometime around 1600, the concept of a non-alphabetic writing system that would make universal sense by virtue of some natural resemblance or congruity to the thing represented still appealed to scholars, so much so that it informed all subsequent attempts to configure a universal language (Singer 1989: 55–56, Rossi 2006: 145–150).

Naturally, this tendency coincides with an expansion of the term's field of reference. By the beginning of the eighteenth century every pictographic writing system was called 'hieroglyphic' (Webster, Vico, Warburton speak of 'Chinese', 'Indian', 'Mexican', and 'American Indian hieroglyphs') and was a possible model for the forging of a similar, only more effective – i.e., truly universal – unconditional language.²⁴ To put it very briefly, the

²³ Kircher's Egyptology is a complicated exception - the exception that proves the rule. His Egyptology, like many of his scholarly enterprises, is an already outdated concern at the time when it was written. See Stolzenberg 2001a.

²⁴ See Webster 1654: 24 and passim, Vico 1948 [1744]: 30 and 128, Warburton 1765 [1741]: 93–95; see also Connelly 1993. In a polemic with the French linguist Nicolas Fréret, Warburton insists that 'what truly denotes a

hieroglyph is no longer something to be uncovered, but something to be achieved, and an obvious way to set out this project is to make the term itself more comprehensive.

The belief that the structure of language mirrors the structure of the world was supported by an ‘atomist’ view of both language and nature. John Wilkins defined hieroglyphs as ‘signs [...] used for the expression of things and notions’, arguing for the benefits of designing a ‘universal character to express things and notions, as might be legible to all people and countries’ (Wilkins 1802 [1641]: 51 and 54). ‘Real (universal) characters’, therefore, were conceived of as improved, re-calibrated hieroglyphs. They were called ‘real characters’ because the graphic mark was composed in such a way as to be structurally isomorphic with the object (*res*) or the idea it was meant to stand for. Such a mark, if correctly constituted, could express, in a contracted form, the true nature of the object or idea represented.

John Webster also called the hieroglyph-like universal character a ‘Catholic cure’ for the confusion of languages inflicted upon humanity at Babel (Webster 1654: 24–25), only he has a different kind of real character in mind (Singer 1989, Rossi 2006: 149). In a pamphlet directed against the methods of learning practiced in the University (Webster 1654), he attacked Wilkins’ project as just another artificial superstructure, whereas a truly universal language should enable men to ‘read’ the ‘legible characters’ of nature:

Many do superficially and by way of *Analogy* (as they term it) acknowledge the Macrocosm to be the great unsealed book of God, and *every creature as a capital letter or character* [emphasis mine], and all put together make up that one word or sentence of his immense wisdom, glory and power; [...] Alas! we all study, and read too much upon the dead paper idolls of creaturely-invented letters, but do not, nor cannot read *the legible characters that are onely written and impressed by the finger of the Almighty*; (Webster 1654: 28; emphasis mine)

For example, the linguist/natural philosopher could reconstruct this primeval universal language by studying, for instance, the cries of pain and grief immediately recognizable in any living being in order to find that ‘true *Schematism* of the internal notions impressed’ which

writing to be hieroglyphical is, that its marks are signs for THINGS; what denotes a writing not to be hieroglyphical is, that its marks are signs for WORDS. Whether the marks be formed by *analogy* or *institution* makes no alteration in the nature of the *writing*’ (Warburton 1765 [1741]: 94).

‘agrees to the innate notions’ (Webster 1654: 32). The true purpose of linguistics, and of natural philosophy, as well, should be the study of these ‘lively characters’, as he called them:

Surely natural *Philosophy* hath a more noble, sublime, and ultimate end, than to rest in speculation, abstractive notions, mental operations, and verbal disputes: for as it should lead us to know and understand the causes, properties, operations and affections of nature; [...] But first therein and thereby to see and behold *the eternal power and God-head* of him, who hath set all these things as so many significant and lively characters, or *Hieroglyphicks* of his invisible power, providence, and divine wisdom, so legible, that those which will not read them, and him by them, are without excuse; (Webster 1654: 18–19)

In Webster’s view, the hieroglyph is at once a concrete thing in nature and a conceptual interface between the physical world and the world of divine ideas (Singer 1989: 64).

In short, the seventeenth-century brought the expansion of the term towards: (1) ‘real’ characters which exclude the transcendental explanation, but retain the idea of an essential isomorphy between the figures of language and the things of the world; (2) ‘natural hieroglyphs’ which are believed to build up a sort of natural pasigraphy and for which the transcendental meaning remains intact (see Dieckmann 1957: 318–319). This double terminological expansion is the chore of the Webster – Wilkins debate on the nature of hieroglyphs and the problem of natural language.

For both of these trends of thought, the metaphor of hieroglyphs is, essentially, a *semiotic template*. They both entail the abstracting of the hieroglyph’s features (immediacy, universality, ineffability, etc.) from its historical context and even from its historical appearance.

The generic hieroglyph loses its stylistic identity. This gradual abstraction, of course, was prefaced by Renaissance usage of the term. Already in the Renaissance books of emblems or various editions of Valeriano’s *Hieroglyphica* (1556) ‘[n]o distinction is made between symbols of Egyptian or other origin’ (Dieckmann 1957: 313).²⁵ However, the Renaissance definitions and visual practices of ‘hieroglyphs’ are rather intuitive, whereas the seventeenth century discourse on *the hieroglyphical* as a mode of signification is distinctly analytical.

²⁵ Charles Dempsey (2000: 366–374) essayed a typology of Renaissance ‘hieroglyphs’, wherein he distinguished between the ‘Neoplatonic type’, the ‘discursive, or Venetian type’, and the ‘paronomastic type’. Also, John Dee’s ‘Hieroglyphic Monad’ comes, in fact, very close to alchemical symbolism.

2.3. The Idea of a Concrete Language of Objects and Beings: Vico and Warburton

The most consistent and interesting reappraisal of the idea of hieroglyph in the early eighteenth-century appeared in two works dedicated primarily to issues of cultural and religious history.

One of them is Giambattista Vico's *Scienza Nuova* (1725–1744), an ambitious attempt to reinterpret the thought, culture, and institutions of the 'first nations'. Vico's endeavor to demonstrate the poetic nature of mythic thought included an extended analysis of language, more precisely of 'characters' or 'tropes' and their related texts. These characters – in fact, specific signs particular, but, as we shall see, not restricted to, specific periods – are the 'hieroglyphic', corresponding to the sacred language spoken in the age of gods; the 'heroic', corresponding to the symbolic language spoken in the age of heroes; and, finally, the 'agreed-upon' characters, belonging to the epistolary language spoken in the age of men (Vico 1948 [1744]: 31 sqq). This tripartite typology refers to what could perhaps be best described as specific modes of relating to the world, for each type of character appertains to a certain stage in the development of human consciousness, culture, and history. Thus, the most primitive of characters, the hieroglyphs, make up the fabric of myths, fables, and poetic (that is, artistic in a wider sense) texts in general.²⁶ Heroic characters make up the fabric of founding narratives such as the *Ennead* and the other great epic poems of the ancients, which were also the first histories and the first moral codes of the gentile nations, and agreed-upon characters make up the fabric of civil contracts, laws and philosophy. It is important to note that this tripartite typology is not just the synthetic model of an already consummate historical development, but, as Vico has argued repeatedly, also 'the design of an ideal eternal history ('*una storia ideale eterna*') traversed in time by the histories of all nations' (Vico 1948 [1744]: 6), as well as a permanence of the human mind. Vico believed that the large scale historical development of language and thought mirrors the small scale development and permanent inner structure of

²⁶ Needless to point out, Vico did not refer only, or even primarily, to Egyptian hieroglyphs as such, but had in mind the enlarged definition of hieroglyphical expression of the previous century.

the individual human consciousness. The ‘hieroglyphic’, the ‘heroic’ and the ‘agreed-upon’ modes are supra-historical categories and, in this sense, their respective characters are still at work in a variety of human activities, in more or less pure forms.

The other is William Warburton’s *The Divine Legation of Moses Demonstrated* (1738 – 1741), a work of apologetics which amasses a vast array of historical, philological, and iconographical evidence in the attempt to prove the veracity of the Mosaic Dispensation. Warburton's argument was directed against the ‘libertines’ and the ‘deists’ who denied that the Mosaic Law was divinely inspired because it did not stipulate the immortality of the soul and the existence of a future state of rewards and punishments. That doctrine, it was claimed, already existed in older Oriental religions, particularly in that of Egypt, with which the Jewish people were known to have been in direct contact. The Egyptian religion was also credited with the developing of the most complex moral and religious code, a highly sophisticated natural theology, concealed in its purportedly sacred hieroglyphic writing. Because Egyptian religion and writing were considered to be so tightly connected, it was incumbent on Warburton to prove that hieroglyphic writing was of human original and that, far from being divinely inspired, it too underwent a long and arduous journey from the most primitive to the most subtly symbolic. Just like the eschatological doctrine of the Oriental religions had to appear as an eminently human contrivance springing from a universal necessity, writing too had to appear, in the evolutionary scheme envisaged by Warburton, as a strictly human achievement dictated by universal constraints. Three years after the completion of *The Divine Legation* he published a revised version of his Book IV on hieroglyphs and the origins of animal cult in French, under the title *Essai sur les Hiéroglyphes des Egyptiens* (Warburton 1744). This latter work quickly became extremely influential in French intellectual circles, as it provided the largest part for the entries on ‘Writing’, ‘Hieroglyph’, ‘Chinese writing’, ‘Symbol’ written by Jaucourt and others for the *Encyclopédie* (Cherpack 1955).

Both Vico and Warburton are the inheritors of Francis Bacon’s ideas on the origin of hieroglyphic writing, in that they build their theories on the founding premise that the early Egyptians used a visual system of writing not because they wished to conceal their wisdom from the ignorant, but by want of more sophisticated means of symbolic expression, given the

primitive state of their learning (Vico 1948 [1744]: 27–29, Warburton 1765 [1741]: 70–108).²⁷ The notion that hieroglyphic writing arose from blunt necessity was not entirely new and could also be found, in an incipient form, in Wilkins' *Essay towards a Real Character* (cf. Warburton 1765 [1741]: 70). However, it was not followed to its last consequences until the early eighteenth-century, when Vico and, a little later, Warburton, took the old Baconian topos, placed it in an evolutionary perspective, and made it the principle of archaic thought. A crucial aspect both of them repeatedly emphasized is the consanguinity and parallel development of language and writing (Vico 1948 [1744]: 138–139, Ponzio 2006: 242).

The mutual dependence of writing and speech at the dawn of language was nicely expounded by Warburton:

LANGUAGE, as appears from the nature of the thing, from the records of history, and from the remains of the most ancient languages yet remaining, was at first extremely rude, narrow, an equivocal; so that men would be perpetually at a loss, on any new conception, or uncommon accident, to explain themselves intelligibly to one another; the art of enlarging language by a scientific analogy being a late invention: this would necessarily set them upon supplying the deficiencies of speech by apt and significant SIGNS. (Warburton 1765 [1741]: 105–108; capitals in orig.)

These 'apt and significant signs' which supplement speech and assist language in the making are mute acts and concrete objects. As I intend to demonstrate in the following pages, a direct consequence of the disenchanting view on the Egyptian wisdom and of the thorough reassessment of the history of language, writing, and thought was the emergence, on the horizon of Early Modern semiotic ideas, of the *material hieroglyph* or the 'real' character ('la parola reale', as Vico put it) in its literal, etymological sense – that is, the hieroglyph as a concrete thing or fragment (if the signification is to be realized by way of synecdoche) of nature.

Although there are earlier instances of the idea of a material, tridimensional hieroglyph (e.g., Kircher, see Stolzenberg 2001b: 128), it was only in the first decades of the eighteenth century that the notion of hieroglyph as a concrete, corporeal object came to the fore – and it

²⁷ Cf. Singer 1989: 51: 'Bacon's theory of the origin of hieroglyphic writing was to be as important for the seventeenth and eighteenth centuries as Plotinus's remarks in the *Enneads* had been for late antiquity and the Renaissance. More than anyone else, he marks the beginning of the end of the hieroglyphic tradition.'

did so in a climate of direct disagreement with the kind of conception held by Kircher and other Neoplatonists.²⁸

Rather tellingly, this concentration on the physicality of the hieroglyph occurred at a time of increasing doubt with regard to its representational properties. In his *L'Antiquité expliquée et représentée en figures* (1719–1724), the Benedictine monk and early archaeologist Bernard de Montfaucon regarded Egyptian art as horrible, ‘refused to try to interpret hieroglyphs, and even maintained that they could not be interpreted with any accuracy’ (Barasch 1990: 13). A similar view was held by Anthony Ashley Cooper, the 3rd Earl of Shaftesbury: hieroglyphs are inscrutable not because of a superabundance of meaning, he maintained, but because of a constitutive deficiency. They present the viewer with ‘gouty and lame forms, false imitation, lie, impotence, pretending’, and their purported message, far from being a repository of sacred knowledge or higher truths, is ‘merely enigmatical’ (Shaftesbury 1914 [1711]: 90–92). Much along the same line of reasoning, Samuel Simon Witte would later argue that this is so because they are naturally indecipherable. The crude meanders traced by violent eruptions of volcanic matter are in no way comprehensible to the

²⁸ In order to establish the principles of the *New Science*, Vico maintains, ‘we must here uproot the false opinion held by some of the Egyptians that the hieroglyphics were invented by philosophers to conceal in them their mysteries of lofty esoteric wisdom. For it was by a common natural necessity that all the first nations spoke in hieroglyphics’ (Vico 1948 [1744]: 127). Not surprisingly, he makes a special reference to Kircher, portraying him as the epitome of scholarly whimsy: ‘the conceit of the learned reached such an absurd extreme that Athanasius Kircher in his *Obeliscus Pamphilius* affirms that this hieroglyph [of the god Knef] signifies the Holy Trinity’ (Vico 1948 [1744]: 200). This passage may also be interpreted as a reaction to the old Neoplatonic theory of multiple semantic determinations. Warburton makes a similar point, when he complains that much of the recent writing on hieroglyphs ‘was misled by Kircher, and certain late Greek writers, who pretended that the ancient Egyptians had I can’t tell what notion of a close union between visible bodies in heaven, the invisible deities, and this inferior world, by such a concatenation from the highest to the lowest, that the affections of the higher link reached the lower throughout the whole chain; for that the intellectual world is so exact a copy and idea of the visible, that nothing is done in the visible, but what is decreed before and exemplified in the intellectual. [...] This was the senseless jargon of Jamblichus, Porphyry, Proclus, and the rest of that fanatic tribe of Pythagorean-Platonists; and this they obtruded on the world for old Egyptian wisdom; [...]’ (Warburton 1765 [1741]: 192).

archeologist and ‘only a natural historian could spell out a self-referential narrative composed of metamorphic rock’ (Stafford 1984: 237).

Vico is not far from this frame of mind when he writes that ‘the magnificence of their pyramids and other monuments might well have sprung from barbarism, which accords well with hugeness. Egyptian sculpture and casting are regarded even today as extremely crude’ (Vico 1948 [1744]: 28). While, of course, Vico does not deny hieroglyphs their representational quality, nor, for that matter, their man-made origin, the account he gives of them indicates that hieroglyphs share something of the crudeness and immediacy, if not of natural phenomena, at any rate of a type of behavior and relating to the world that is most close to the heedless and inarticulate ways of nature (see also Warburton 1765 [1741]: 106) – something that Vico thought can still be witnessed in the gestural language of mutes and in the primitive form of communication of the Amerindians who make use of objects and gestures. Thus,

Mutes make themselves understood by gestures or objects that have natural relations with the ideas they wish to signify. This axiom is the principle of the hieroglyphs by which all nations spoke in the time of their first barbarism. It is also *the principle of natural speech* [emphasis mine] [...]. (Vico 1948 [1744]: 68–69)

Hieroglyphs, therefore, or the hieroglyphic modes of expression, are the closest nexus between nature’s modes of expression and cultural modes of expression. As Jürgen Trabant pointed out, the naturalness of the first tropes is not limited to the iconic relation between the signifier and the signified, but also refers to their corporeality, to the fact that signs are concrete objects of the world. Thus, the pantomime of mutes ‘writes’ and is consubstantial with its meaning, likewise, physical objects ‘write’ and are consubstantial with their meaning (Trabant 2004: 39–41).

It should be said at this point that the hieroglyphic modes of expression belong to the class of ‘imaginative universals’ (‘*universali fantastici*’). Even though the exact meaning of the ‘imaginative universal’ is still disputed among Vico scholars because Vico never took the trouble to define it, most agree that it circumscribes ‘a theory of the image and not of the concept in any traditional sense’ (Verene 1981: 68). In other words, the ‘imaginative

universal' is a visual configuration, and, in this sense, it shows a marked affinity with the pictorial arts.

As Moshe Barasch observed, in Vico's works:

the hieroglyph is conceived as a concrete shape (or physical object) that makes an idea manifest. Our mode of experiencing the hieroglyph is probably best described as direct contemplation of ideas; in other words, it is a sensuous experience of an abstract universal. That experience is not aided by any contrived symbolism. [...] *Both the creation and the reading of the hieroglyph occurs naturally.* (Barasch 1990: 14; emphasis mine)

Barasch assimilates Vico's definition to the work of art and there are indeed well-grounded arguments for that identification. For both the hieroglyph and the work of art, the signifier is a material object²⁹ in which 'universals' and 'particulars' are not distinguishable (Verene 1981: 76, Kunze 1983: 243); moreover, the conditions of creation and those of reception are virtually the same for the one, as for the other. Vico draws explicit parallels between the activity of the painter and that of the sculptor and the production of hieroglyphs. Thus, he conjectures, the first nations contemplated ideas and tried to explain the nature of things in a manner analogous to painting or to the casting of forms in concrete media.³⁰ Similarly, the mode of experiencing

²⁹ As already remarked upon by Barasch (1990: 10–11) and Trabant (2004: 39–40), and implicitly acknowledged by Gombrich (1972: 184–186), Vico's notion of image is not sufficiently distinct. Thus, it may mean a mental image, an idea, but just as well it may mean an image embodied in some material medium or a material object as such. Not only is this difficulty ineludible, but it is, in fact, central to Vico's theory of 'poetic logic', as it suggests that in the hieroglyphs or the 'first tropes', just like in the case of artworks, the signifiers and the signifieds are inextricably bound. As Jürgen Trabant explains, '[e]ven when Vico differentiates between physical object and the ideas they signify, all of his examples make it evident that from a structural point of view the naturalness of primitive semiotic entities represents an amalgam of expression and content, a synthesis of material signifier and mental idea' (Trabant 2004: 40). Further on the epistemological paradigm of the image in Vico's writings, see Sanna 1995.

³⁰ There is plenty of evidence for the pictorial nature of the first characters in the *New Science*: 'For when we wish to give utterance to our understanding of spiritual things, we must seek aid from our imagination to explain them and, like painters, form human images of them' (Vico 1948 [1744]: 115). And elsewhere: 'These very rude and simple nations [...] gave the things they wondered at *substantial being* [emphasis mine] after their own ideas [...]' (Vico 1948 [1744]: 105). Surely, the technical metaphor of 'modeling' introduces a supplementary ambivalence, making it difficult to determine if the hieroglyph's meaning is a meaning *ascribed to*, or

the hieroglyph – intuitive, subjective, and somewhat hazy – comes very close to a kind of aesthetic experience in front of a work of art (Barasch 1990: 14 - 15). But while Barasch's observation is of course legitimate, Vico's formulation allows for an even greater scope: the hieroglyph can stand for any concrete object that can serve a representative (understood in the broadest sense) function. It is a palpable signifier – whether artifact or fact of nature – that can and does perform³¹, at the same time, as language. Here we have, under the same conceptual

projected into, the object or a meaning metaphorically *abstracted from* it, or otherwise *inspired by* one or more of its properties – in other words, if the meaning is attached to the object like a tag or is (perceived of being) inherent to, or emanating from, it. While Vico's text gives virtually no guidance out of this dilemma, I believe I can see a possibility to surpass it by invoking a chief notion of the Renaissance and Early Modern Italian rhetoric and art theory: that of *invenzione*, meaning 'discovery' or 'finding'. *Invenzione* carries a similar ambivalence, as it can be understood in the sense of invention or creating anew (*ritrovamento*), but also in the sense of finding something (a visual configuration, a *concetto*, an expressive entity of some sort) already in existence (*trovato*), before the artist, poet, or rhetorician were to seize it for his own creative ends (Baldinucci 1691: 78). In other words, it may be that the meaning of the first characters is as much created as discovered. For best study on this notion, see Kemp 1977.

³¹ There is the problem of determining if the material or natural object signifies by itself or by designation. Jürgen Trabant tried to explain away this difficulty by arguing that 'Vico does not say that signifiers actually have or had natural relations to their signifieds, but that they are supposed to have had such relations. [...] The naturalness of the relation between sign and idea is one that the poets established subjectively. It is a posited or thetic naturalness and not an objective one inherent in the object' (Trabant 2004: 39). However, there are two major objections that can be brought to Trabant's interpretation. Firstly, it contradicts Vico's theory on the crudeness of the primeval language. A thetic 'natural significance' would mean a simple, one-to-one semantic relation between the signifying object and the signified notion, whereas the entire thesis Vico wishes to demonstrate is that, in the hieroglyphic mode, communication must have been crude, imperfect, and utterly frustrating. It was not until the second and third stages of the 'heroic' (allegorical) and 'epistolary' (agreed-upon) expressions that a true thetic, one-to-one type of signifying relation was developed. Secondly, it undermines Vico's theory on the nature of the first poetic texts. These two aspects are directly related, because it is precisely in the inherent plurivocity of the hieroglyphic mode that its kindredness to artistic expression is to be found. The inconvenience, but also the expressive richness of the 'first tropes' rests in the fact that there is always a potential 'residue of expression' (so to say) in the object/hieroglyphic entity that can and does acquire a poetic aura. In this sense, poetic expression is an epiphenomenon of plain, primitive expression: 'because of the excessive poverty of expression, the grammarians have assumed an excess of art behind it' (Vico 1948 [1744]: 118). This is to say

(semiotic) template, *a perfect isomorphy between language, the pictorial arts, and natural objects*. It could be argued that this kind of isomorphy is central to the original understanding of hieroglyphs. In the Renaissance formulation, the hieroglyphic concept did, of course, refer to a visual writing system able to express the essence of things. However, early eighteenth-century developments of the idea give an unprecedented preeminence to the 'thing-ness' of hieroglyphs [see Fig. 1]. As Thomas C. Singer explains,

The hieroglyphic tradition was nurtured during an age in which there was an equivalence, more or less, between language, ideas, and nature. The hieroglyphs themselves served as a metaphor linking notes, notions, and things. Being a kind of writing, the hieroglyphs necessarily emphasized language over the ideas and things. But being a silent script that used things to represent ideas, they maintained a remarkable balance between the elements that constitute human experience. (Singer 1989: 70)

But it was not long before this balance was broken. The universal language projects of the seventeenth-century, which deliberately discarded the previously unquestioned ontological connection between notes and things in order to accommodate a philosophical construct where notes would be 'answerable to the concepts of our mind' (John Wilkins, apud Clauss 1982: 541), already entailed a definitive departure from the perfect equilibrium implicit in the metaphor of hieroglyphs (Singer 1989: 67). After that, the empiricist mindset of the late seventeenth- and early eighteenth-century again altered this equilibrium by shifting the emphasis on the hieroglyph's corporeal dimension. The explicit rejection of the Neoplatonic philosophy of symbolism, as well as the skeptical reading of the ancient sources and of the exegetical tradition (from Jamblichus and Horapollo to Kircher) led the rationalistic and historically-minded scholars of the new age to an increasing mistrust towards the link between notes and notions, some, such as Shaftesbury and Montfaucon, even going so far as to deny the existence of any intended meaningful correlation between the figures on the Egyptian or other hieroglyphic-looking friezes and cartouches. Others, such as Vico and Warburton, chose to concentrate on what, beyond any esoteric or erudite speculation, remained readily available

that, while it would be of course untenable to claim that they have inherent 'natural' meanings, hieroglyphic signifiers (material or natural objects) are, in a certain sense, 'unruly' items, as they tend to exceed the confines of their punctual linguistic usage and have the capacity to produce meaning beyond, and independently of, the one designated for them at one time or another.

to the senses, that is, on the physical-ness of hieroglyphs, which they interpreted as the original – both in the sense of precedent and of originator – of all types of expression falling under the hieroglyphic mode (pictography, ‘language of action’, speech by physical things, pantomime, metaphors). The major theoretical tenet underlying Vico’s *New Science* is the idea

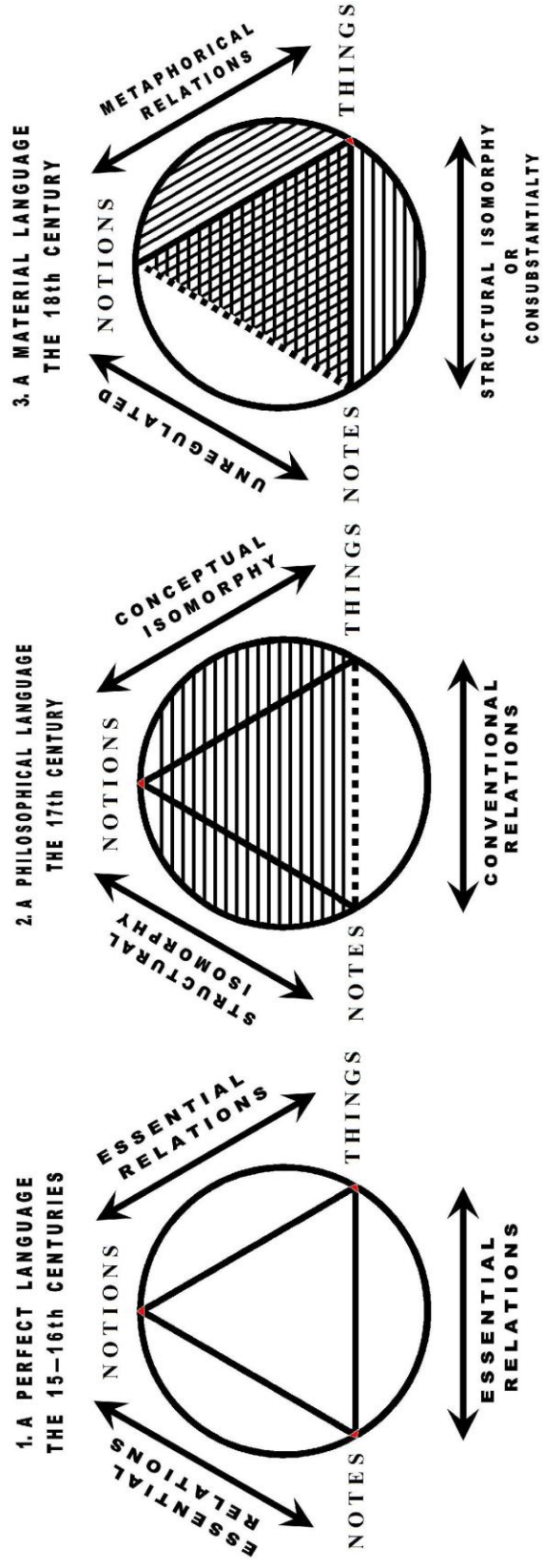


Fig. 1: The shift of emphasis – marked with red – between the relata (notes, notions, and things) within the hieroglyphic template.

that the font of expression is corporeal: ‘the universal principle of etymology in all languages’, Vico wrote, is that ‘words [read notes or, generally, signifiers] are carried over from bodies and from the properties of bodies to express the things of the mind and spirit’ (Vico 1948 [1744]: 70). Notions, too, fulfill a correspondingly subordinate role: ‘[t]he order of ideas must follow the order of things’ (Vico 1948 [1744]: 70). Following a train of thought not dissimilar to Vico’s, Warburton discovered that hieroglyphs refer to things, and not to words, because they originally *were* things. Before being picture-writing, Warburton tells us, hieroglyphs were, simply, ‘thing-writing’. Within this new empiricist framework, the distance between language and nature, between notes and things tends to collapse. Signs and objects are consubstantial, as in the material hieroglyph or the ‘real word’, or are structurally isomorphic, as it happens in the case of pantomime or in that of the ‘mere picture’ (cf. Trabandt 2004: 40).

The figure below represents this change of relations:

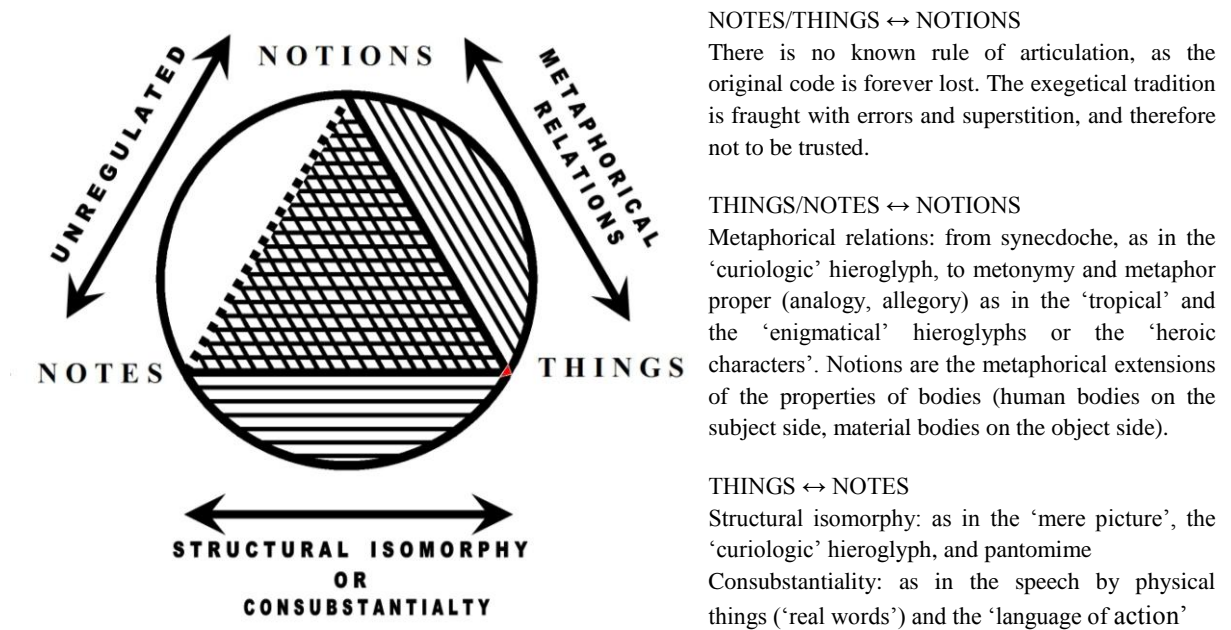


Figure 2: The semiotic structure of the material hieroglyph.

But to make the thing-part of the hieroglyph the privileged vantage point of sign production and interpretation has its difficulties, because things typically have multiple properties, any of which can become the driving factor of signification, on the producer’s end,

and, correspondingly, of interpretation, on the receiver's end.³² It thus follows that every potential meaning – which can be the expression of *any* of an object's properties – is placed on an oscillating route between the self-referential and the metaphorical.

As a type of sign, the material hieroglyph is abundantly informative: all the interpretative possibilities – the entire gamut between the literal and the most abstrusely symbolic – are simultaneously and isomorphically present in a sort of informational continuum (symbolized in the diagram by the area where hatches intersect) circumscribed by the hieroglyphic template.³³ Interpretation, which is nothing other than the coupling of notes and notions, can cut across this semiotic continuum in any available direction. Because there is no way of discriminating a sole figurative meaning, every meaning is potentially figurative (Kunze 1983: 243); likewise, because there is no way of separating a figurative from a literal meaning, every figurative meaning can be taken literally. As a result, the 'semantic leap' from the 'literal' or self-referential sense (the animal cat as such or the pictographic character meaning 'cat') to the metaphorical one (the character 'cat' as a symbol of the moon by virtue of the fact that the dilatation of the cat's eye pupils recalls the phases of the moon) and from

³² As Umberto Eco has pointed out, this is the general fallacy of any visual system of communication: 'Any language of images is based on the alleged fact that images exhibit some properties of the represented things. Yet in any representable thing there will always be a multitude of properties, and there are infinite points of view under which an image can be judged similar to something else.' (Eco 1995: 169). Vico and Warburton were of course aware of this fact.

³³ Warburton believed this is in fact the reason behind the age-old confusion concerning hieroglyphs. They were used simultaneously: they coexist and even fuse in the same textual fabrics, 'for all the several modes of writing by THINGS having had their progressive state, from less to more perfection, they easily fell into one another' (Warburton 1765 [1741]: 140). Similarly, Vico: 'To enter now upon the extremely difficult [question of the] way in which these three kinds of languages and letters were formed, we must establish this principle: that as gods, heroes, and men began at the same time (for they were, after all, men who imagined the gods and believed their own heroic nature to be a mixture of the divine and human natures), so these three languages began at the same time, each having its letters, which developed along with it' (Vico 1948 [1744]: 134). On the cyclicality of the Vichian model, cf. Eco 1983b: 238–239. Eco too remarked that 'the line between the first and the last tropes is very thin, not so much a question of semantics as of the pragmatics of interpretation' (Eco 1983b: 256).

there back to the literal again (the animal cat as *the* Moon-Goddess) becomes uncontrollable.³⁴ This is not only the cause of a virtually incessant proliferation of symbolic expressions, but also the underlying mechanism of idolatry, which both Vico and Warburton considered to be directly related to the nature and development of hieroglyphic writing.³⁵ The danger of idolatry is the greatest pitfall of expression by sensible images, as well as the best indicator of the hieroglyphic sign system's capacity to model the interpreter's perception of the world.³⁶ 'Numinousness' – understood both as the capacity to induce the sense of a supernatural presence and as the ability to suggest the persistence of a hidden meaning (as defined by Halmi 2007: 7) – could aptly describe this particular property. The paradoxical figure of the hieroglyph, viewed at the same time both as a self-declarative sign and as a locus of mystery³⁷, that pervades the Romantic poetic and scientific imaginary (Tucker 2010: 39, 50 – 59, Kuzniar 2003, Halmi 2007: 1–26, Holland 2009) has its intellectual roots in the early-eighteenth century linguistic theories. For the Romantics, the hieroglyphic figure, whether literary, artistic or natural, may lead directly to its immediately apparent meaning, but it can also 'open' to an infinite number of utterances, in a manner the context simply cannot or will not

³⁴ This example, along with others of the same kind, is discussed in Warburton 1765 [1741]: 141–142.

³⁵ 'The tablet with the alphabets is put between the divine and human symbols because with letters, from which philosophies had their beginning, the false religions began to disappear [...]' (Vico 1948 [1744]: 22). Warburton expounded to length the connection between hieroglyphic writing and idolatry: 'We have observed, that in those improved hieroglyphics, called Symbols (in which, it is confessed, the ancient Egyptian learning was contained) the less obvious properties of animals occasioned their becoming marks, by analogical adaptation, for very different ideas, whether of substances or modes; [...]' (Warburton 1765 [1741]: 197). See also chapter XLVI from the *Essai...*, suggestively titled *Comment l'écriture Hiéroglyphique a porté les Egyptiens à adorer les animaux* (Warburton 1744: 254–258).

³⁶ As remarked upon by Derrida, in Warburton's interpretation, 'hieroglyphic writing does not surround knowledge like the detachable form of a container or a signifier. It structures the content of knowledge' (Derrida 1979: 126). Similarly, Jan Assmann noted 'the correlation of media, epistemology and religion' as one of the most striking features of Warburton's theory on the hieroglyphic sign system (Assmann 2000: 310).

³⁷ Cf. Friedrich Schlegel: 'The *entire* Egyptian system of pictographic writing [Bilderschrift] is a *natural* script [Natureschrift], at the same time a *riddle-language* [Räthselsprache] [...] – hence also the [mystico-spiritual] attention and inclination toward it.' (apud Tucker 2010: 50–51; italics in orig.)

regulate. As the iconic and the symbolic coexist and habitually slide into one another, interpretation naturally vacillates.

The peculiarities of the material hieroglyph's inner configuration also pertain to specific problems of representation. A remarkable feature of the hieroglyphic template – one that makes Vico's and Warburton's argumentations so hard to follow at times – is that, within it, notes and things collapse not just in the sense that the things *are* the notes, but also in the sense that there is no functional discrimination between things and the notes of things. It is as if the painted (or otherwise figured) notation would be just a translucent interface allowing the object's agency – the 'force and activity of nature', as one contemporaneous writer put it – to manifest itself intactly, without any caesura or syncope. As Moshe Barasch observed with regard to Vico's theory of hieroglyphic representation, 'there is no intrinsic tension [within the sign] between the content that is being conveyed and the shape in which it is expressed, between the idea and the form' (Barasch 1990: 10), whereas 'form' may mean the object's actual form, but also its mimetic *re*-presentation, its pictorial double. This non-differentiation between the inherent qualities of objects and their means of expression or outward figuration reveals a rather interesting aspect of the early eighteenth-century semiotics and aesthetics, and that is *the complete transparency of the pictorial sign*.³⁸

³⁸ It is worthy of notice that a very similar idea is contained in the most important art theoretical treatise of the time, namely in *Réflexions critiques sur la poésie et sur la peinture* (1719), written by the French critic and historian Jean-Baptiste Du Bos (sometimes spelled Dubos). Du Bos' theory of mimetic representation entails no formal distinction between natural and artificial signs: 'Painting makes use of natural signs, the energy of which does not depend on education. They draw their force from the relation which nature herself has fixed between our organs and the external objects, in order to attend to our preservation. *Perhaps I do not express myself properly, in saying, that the painter makes use of signs; 'tis nature herself which he exhibits to our sight* [emphasis mine]. Tho' our mind be not imposed upon, our senses at least are deluded. The figure of the objects, their color, the reflection of light, the shades, in short, every thing that can be the object of sight, present themselves in a picture, just as we see them in nature.' (Du Bos 1748 [1719]: 322). This aspect of Du Bos' writing is briefly discussed in Rudowski 1974: 683–684 and in Barasch 1990: 30–31. It should be noted that painting 'exhibits nature' not in the sense of committing to a naturalistic mode of representation, but in the sense of communicating the actuality (the force and energy) of the thing represented. For an extensive discussion of expressive imitation as opposed to

Warburton is particularly keen on proving this point. In his discussion of the historical accounts on hieroglyphs provided by the Late Antique texts of Clement of Alexandria, he noted that

the first kind of symbolic writing [the curiologic] is by a plain and simple imitation of the figure of the thing intended to be represented; which is directly contrary to the very nature of a symbol; a symbol being the representation of one thing by the figure of another. [...] Clemens therefore, we conceive, should have said, hieroglyphics were written curiologically and symbolically; that the curiologic hieroglyphics were by imitation; the symbolic, by conversion; [...] (1765 [1741]: 130–131; italics in orig.)

Commenting on this passage, Barbara Maria Stafford observed that ‘the curiologic mode involves the smallest possible gap, or displacement between object and its copy, neither departing from nor transforming the real thing’ (Stafford 1984: 239). The translation into another medium does not affect, hinder or alter in any way the semioticity of the first (material) hieroglyphs. ‘The first and most natural way of communicating our thoughts by marks or figures’, Warburton explained, ‘is by tracing out the image of things [...] Thus the first essay towards writing was a mere picture’ (Warburton 1765 [1741]: 71). In short, the concept of ‘mere picture’ suggests the semiotic and visual equivalence of things and their mimetic counterparts. It is true that Warburton’s argument, despite the appearance of common-sense that made it so popular among the Enlightened scholars, makes it in fact difficult to imagine just how a ‘mere picture’ might have looked. James Elkins is right to observe that Warburton gives very little evidence for the existence of ‘mere pictures’ (the examples with which he illustrated his text are already contracted pictures or ‘pictured characters’) and it is indeed very likely that they ‘might only exist as an ideal’ (Elkins 1999a: 125). But to dismiss Warburton’s sequence as untenable or unverifiable would be to overlook the fact that the ‘mere picture’, just like the other hypostases of the hieroglyphic template, is

trompe l’oeil imitation in eighteenth-century artistic and literary theory, see Rothstein 1976, especially pp. 313–320.

only a theoretical proposal and that, more than being an attempt at historical reconstitution, Warburton’s theory – no less than Vico’s – is *a semiotic construct*.³⁹

| THE HIEROGLYPH AS SEMIOTIC TEMPLATE | | | | |
|---|---|----------------------|----------|---|
| hieroglyphic proper | | symbolic or ‘heroic’ | | ‘epistolary’ |
| material | curiologic | | tropical | enigmatical |
| thing as such | ‘mere picture’ | ‘pictured character’ | | hierogrammatical |
| <div style="border: 1px dashed black; padding: 5px;"> corresponding to body as such on the subject side (‘speaking by action’) </div> | <div style="border: 1px dashed black; padding: 5px;"> corresponding to pantomime on the subject side </div> | | | highly stylized ‘pictured character’ (mark) |

visual and semiotic equivalence

non-differentiated employment inside texts, aided by a relative visual equivalence

Figure 3: The possible modes of expression within the hieroglyphic template.

What Warburton sought to demonstrate is that within this all-embracing template (see figure above), pictorial or graphic representation – and here ‘graphic’ is to be understood in its full equivocality – progresses along relations of contiguity (Warburton 1765 [1741]: 124 sqq). To prove this point, he resorted to several examples of American Indian and Siberian picture-

³⁹ It is almost impossible to imagine a reading of Egyptian hieroglyphs – or of any other Ancient artifacts, for that matter – based on Vico’s and Warburton’s interpretative criteria. If attempted, such a reading would probably render results no less abstruse and far-fetched than those of Kircher (cf. Gombrich 1972: 185). That it is the conceptual hardcore of their theories that ultimately matters and not their pretence to historical truth, can be testified by the aesthetic writings of the Early Romantics, who took over – directly or through the mediation of the *Encyclopédie* or of Condillac’s and Rousseau’s writings – Warburton’s schema while largely forswearing its historical and documentary scaffold.

writing, as well as of Chinese characters, which he believed could better illustrate the close sequence tying in material hieroglyphs, ‘mere pictures’, and ‘pictured characters’. Warburton based his analysis on examples like these for heuristic reasons: he reckoned that non-Egyptian ‘hieroglyphs’ followed a course of development unimpaired by ‘quaint and far-fetched allusions’ (Warburton 1765 [1741]: 169–170) and so they never reached an exceedingly ornamental or purposefully abstruse phase. He exemplified what he thought was the progress from ‘mere pictures’ to ‘pictured characters’ through several images featuring samples of pictographic writing, which he believed to be the primeval method of recording laws and history, as could still be seen, in Warburton’s time, amongst the Mexicans and in some Siberian tribes. In the first stage, they are purely referential, as the pictorial doubles of real entities and particular events and not abstract concepts (Fig. 2.3.a). Warburton thought that, in the course of time, people gradually learned to abridge the painted notations, from the ‘mere picture’ to the ‘pictured character’, a progress he believed could be documented in the history of the Chinese writing system. He attempted to do that following the fanciful reconstructions published by Kircher in his famous *China illustrata* (1667), the most comprehensive sinological treatise available at the time.⁴⁰ Owing to his assumption that, unlike the Ancient Egyptians, the Chinese are ‘the least inventive people upon earth; and not much given to mystery’ (Warburton 1765 [1741]: 91), Warburton (1765 [1741]: 86) was convinced that the development of their writing system was less subjected to metaphorical displacements, and therefore could better illustrate the various intermediary stages between the curiologic and the symbolic (Fig. 2.3.b).

Looking at the varied examples of Chinese ‘curiologic hieroglyphs’ which inspired Warburton (Fig. 2.3.c and 2.3.d), we find that it is not always easy to determine the boundary between the mimetic representation and the contracted graphic character. Some, like the still vaguely patterned agglomerations of fish, turtles, and leaves, appear closer to their natural prototype, in a manner reminiscent of what must have been Warburton’s idea of ‘mere

⁴⁰ As Umberto Eco (1995: 160) pointed out, despite the naiveté of his reconstructions, Kircher has the merit of being the first among his contemporaries to have recognized ‘Chinese hieroglyphics’ as extremely stylized images.

pictures’, others are already so stylized as to attenuate the potential figurative suggestions, but most of them casually straddle the line between the image and the mark. Implicit in this observation is the idea that, even in their most abstract or highly stylized versions, Chinese marks retain something of the transparency of the pictorial double, in a way that allows the onlooker to ‘travel’ the path of contiguity backwards and to contemplate the sequence described by Warburton in a sort of reversed perspective, from the graphic character to the natural object. If the ideographic mark can afford a glimpse into its figurative (and, by extension, material) prototype, the illustrations in Kircher’s and Warburton’s treatises seem to suggest that, in its turn, the natural object adumbrates or can already ‘contain’ the virtual graphic character. In Warburton’s account, ‘a physical object can exist simultaneously both as an articulating image and as a text’ (Stafford 1984: 238), or, to borrow the terminology of modern media studies, it can be at the same time medium *and* ‘written’ message. This does not seem implausible when considered that Kircher wrote that the meanings of Chinese characters remained grounded or ‘written in’ in the objects or beings to which they owed their shape:

Chinese formed their first characters from everything that they saw in nature, and that they expressed their thoughts with the arrangement of these characters. Therefore, when they are describing things with a fiery nature, they use serpents, asps, and dragons which by their particular arrangement will indicate a particular word. For describing airy things they used pictures of birds, and for water matters, fish. When they are creating characters from nature, they use branches, flowers, or leaves. For stars, they use points or circles, each of which expresses a single star. For indifferent things they used wood, globes, or thread. (Kircher 1987[1677]: 216)

The idea that hieroglyphs can and originally did function metonymically (fish for ‘water matters’, birds for ‘airy things’, etc.) and not by symbolic conversion (cf. Warburton 1765 [1741]: 74–75) is a step toward the idea that the concrete, convention-free, un-manipulated fragment of nature is also capable of expression.⁴¹ There are some such primitive hieroglyphs, Kircher candidly admits at one point, ‘which cannot be read and neither the composition or the structure of the [characters] can be figured out’ (Kircher 1987 [1667]: 218), yet their status as

⁴¹ Cf. Jean-Baptiste Du Bos: ‘The reason of the difference between the impression made by the object, and that made by the imitation, is obvious. The most finished imitation hath only an artificial existence, or a borrowed life; whereas *the force and activity of nature meet in the object imitated. We are influenced by the real objects, by virtue of a power which it hath received for that end from nature* [emphasis mine]’ (Du Bos 1748 [1719]: 23).

signifiers remains unabated. But even as (presumably) asemic signifiers, they have, at the very least, the capacity to affect human perception in a particular way. The figures of asps, dragons and serpents are used to signify ‘fiery things’ on account of their prototypes’ ‘fiery nature’, just like wood and thread are used to represent ‘indifferent things’ on account of their unimpressive nature. In any case, objects and beings borrow something of their inner properties, whether seen or known, to the concept they serve to illustrate. It is as if the agency or the ‘rhetorics’ of objects and the regulating intervention of man meet halfway in the first characters. Objects, it would seem, are active principles and often appear invested with an animating or signifying power of their own; they have a kind of autonomous agency, a quality that allows them to ‘radiate’ meaning before and beyond the strictures of particular (human) linguistic usage.⁴² This meaning is, at its origins and before the codifying intervention of man, at once tautological and ineffable. Just like the pleonastic and metaphorical language of savages with which both Vico and Warburton have explicitly compared them to, the first material characters are endowed with a sort of *expressive energy*, something that renders itself immediately (in the sense of directly communicating, as well as of having no intervening medium other than, itself), but at the same time escapes articulation (cf. Warburton 1765 [1741]: 174).

Sensible images – by which we understand objects as such, but also the tropes composing the ‘highly figurative, and full of material images’ language of primitive people (Warburton 1765 [1741]: 179) – trigger an affective (and, on a later, secondary plane, an aesthetic) response. Considered within the frame of communication theory, they can perhaps be best understood from the perspective of the emotive and conative functions: they communicate and impress through their mere presence and can dispense with syntactical organization, discourse or paraphrase. Their laconism can be awe-inspiring. This is perhaps part of the reason why, for Vico, the hieroglyph (the sensible image, whether material or

⁴² According to some interpreters, this view is supported by the wide understanding of writing in the *New Science*. Thus, David L. Marshall notes that Vico’s ‘broadened sense of *scrittura* [‘writing’] went far beyond the “epistolary” qualities of text and stressed the possibility of signs in the absence of a sign-user’ (Marshall 2011: 155).

verbal) retains its sacred meaning, or, at any rate, remains an appropriate vehicle for sacred content. Thus, he writes: ‘The hieroglyphic or *sacred or secret language* [emphasis mine], by means of mute acts. This is suited to the uses of religion, which it is more important to attend to than to talk about’ (Vico 1948 [1744]: 18). Likewise, Warburton remarked the similarities between the hieroglyphic mode of expression of savage and Oriental nations and the symbolic images and the ‘language of action’ employed by the sacred writers of the Old and the New Testaments, concluding that ‘the prophetic style seems to be a SPEAKING HIEROGLYPHIC [capitals in orig.]’ (Warburton 1765 [1741]: 181).⁴³ This is not due to any supposed ‘perfection’ of this type of communication by sensible images (Warburton remained consistent in his attempt to debunk the preconception of the ‘mystical hieroglyph’) but to a mere contingency, namely to God’s need to adjust His messages to the dim understanding of the

⁴³ ‘The old Asiatic style [i.e., the style of the Ancient Oriental people: the Egyptians, the Hebrews, the Persians, and the Chinese], so highly figurative, seems likewise, by what we find of its remains, in the prophetic language of the sacred writers, to have been evidently fashioned to the mode of ancient Hieroglyphics, both *curiologic* and *tropical* [italics in orig.]’ (Warburton 1765 [1741]: 181). An example of curiologic verbal hieroglyph would be using ‘sword and bow’ to denote ‘warrior’ or ‘balance, weight and measures’ to denote ‘magistrate’. An example of tropical verbal hieroglyph would be naming hostile invasions by ‘thunder and tempestuous winds’ or the founders of empires by ‘lions, bears and leopards’. Warburton also noted that, ‘when men first thought of recording their conceptions, the writing would be, of course, that very *picture which was before painted in the fancy* [emphasis mine], and from thence, delineated in words’ (Warburton 1765 [1741]: 179 – 180). About the language of prophets and barbarians he observed that ‘this way of expressing the thoughts by ACTION perfectly coincides with that, of recording them by PICTURE [capitals in orig.]’. The ‘relation between *speaking by action* and *writing by picture*’ is best illustrated in the prophetic texts of the Old Testament and in Clement’s story about Darius and Idanthus, King of the Scythians. Of Idanthus’ manner of speaking by things, he remarked that ‘this message being to supply both speech and writing, the purport of it was, we see, expressed by a composition of *action* and *picture*’ (Warburton 1765 [1741]: 113; italics in orig.). I would like to avail myself of this short anthology of quotes to note the adamantine semiotic unity between the mental hieroglyph (‘the picture painted in the fancy’), the bodily or material hieroglyph (‘speaking by action’ or ‘speaking by things’), the pictorial hieroglyph (‘writing by picture’), and the verbal hieroglyph (‘speaking hieroglyph’).

early men and to communicate with them in the only idiom they knew and could comprehend.⁴⁴

But if Warburton did not attach any positive values to a form of expression which in other circumstances led to such abhorrent results as the Egyptian animal cult, Vico seemed willing to recognize in it a certain ‘genius’ (Vico 1948 [1744]: 247), a capacity for eloquence which later, rationalized developments cannot match, nor fully substitute for. Furthermore, he believed that this ‘genius’ bears the mark of Providence, for sensible images were, after all, the means by which God infused an ‘idea of divinity’ into the minds and hearts of His primitive subjects. However precarious or distorted this idea may have been, it was the only one their benighted understanding could grasp (Vico 1948 [1744]: 62–63). If God Himself can resort, in His condescendence, to hieroglyphical forms of communication, then, ‘[i]nadequate as this mode of expression may have been to the divine mysteries it attempted to articulate, it can still be regarded as *a form of revelation* [emphasis mine] which proud reason should not be allowed to despise or obscure’ (Gombrich 1972: 186).

Of course, the early eighteenth-century material hieroglyph is something very different from Kircher’s portentous hieroglyphs or, for that matter, from Webster’s natural hieroglyphic pasigraphy. It is neither inherently transcendental (even if Vico and Warburton admit the possibility of its becoming a vehicle for divine revelation), like the first, nor is it tinged by the Paracelsian belief in a reticular and all-pervading ‘language of nature’, like the latter. But for all that separates the ‘down-to-earth’ material hieroglyph from its hermetic predecessors, it nevertheless still retains not just something of their fallacies (numinousness, ultimate inscrutability), but something of their fundamental presupposition, as well – i.e., the idea that objects in the world compose a language. As shown above, this does not apply solely to artifacts. Warburton’s notion of the material hieroglyph, like Vico’s idea of the ‘real word’, affords an inlet to the realm of *naturalia*. By establishing the ground zero of expression in

⁴⁴ As Warburton explained, ‘when GOD pleases to deal with men by his ministers, he generally condescends to treat them according to their infirmities; a method which hath all the Marks of highest wisdom as well as goodness’ (Warburton 1765 [1741]: 196). For the same issue, but with special application to problems of Early Modern oneirocriticism, see Browne 1981: 93–95.

material objects, whether artifacts or facts of nature, Vico's and Warburton's theories participate – albeit obliquely – in the history of (semiotic) ideas concerning the legibility of the physical world.

2.4. The Morphological Templates of the Eighteenth Century as 'Real Characters'

Taking a quick, cursory look at the both the preceding and the subsequent elaborations on the problem of a readable/decipherable world (roughly between 1650 and 1820), we find that the concept of the material hieroglyph appears as a nodal point in a web of interrelated ideas, placed somewhere midway in a concatenation that goes from the Baconian milieu of seventeenth-century universal language projects to the Romantic reappraisal of the idea of a 'speaking', 'creative' nature, in the sciences as well as in the arts⁴⁵. Seen in this broader perspective, the notion of a partly self-determined concrete language of objects and beings in the works of Vico and Warburton could be considered as a special instance or, rather, a specifically early-eighteenth century reformulation of the age-old idea of a self-expressing nature. This point is specifically insisted upon by Barbara M. Stafford, who wrote that Warburton's theory of language 'sets in a new light the tradition of a "speaking" creation' (Stafford 1984: 238).

Alongside Barbara M. Stafford (1984: 239, 1987, 1988: 12–14), researchers like Paolo Rossi (1987) and William B. Ashworth Jr. (2003: 155–156) have suggested that the early eighteenth century accounts on the nature and development of language and culture show, at times, a great keenness to the theoretical and methodological presumptions of late seventeenth-century and Enlightenment naturalists. The most obvious such congruency is the simultaneous discovery of 'deep time'. The newly determined long duration of the

⁴⁵ See Novalis' *The Disciples at Sais* (1792) and *Das Allgemeine Brouillon* (1798/1799), Wilhelm Wackenroder's *Confessions from the Heart of an Art Loving Friar* (1796), and Samuel Coleridge's *Lay Sermons* (1816–1817). See also Dieckmann 1955: 309–311.

development of language parallels the eighteenth-century historicization of nature (nature-as-history, nature-as-having-a-history). The reliable testimonies of these arduous and continual processes (the development of language and the historical unfolding of nature) – the tell-tale signs of their coming about – are corporeal expression (vestiges of archaic speech), in one case, and physical data (vestiges of nature’s transformations), in the other.⁴⁶ These signs are recurrent, they punctuate the flow of a continual development and are, in this sense, ever-present. Corporeal expression survives in the modern, fully articulated speech that built upon it and partially sublimated it (Vico 1948 [1744]: 149, Warburton 1765 [1741]: 179–181), just like the constantly-being-produced marks of matter (fossils, stony concretions, lines of growth) subsist as archival records of nature’s ongoing cycles of change.

On a related note, the belief in an expressive energy of natural objects is consonant with the recrudescence of quasi-vitalistic conceptions in natural history and philosophy after 1750. The image of an essentially dynamic nature was coupled with the belief in an inherent animation of matter, which was often described as ‘a certain energy’ or ‘force’, but which escaped clear definition.⁴⁷ In accordance with the view that processes in nature follow an ascending order, from the simple to the complex (Rigotti 1986: 215), this belief in an irreducible yet unknown actualizing force led, from 1745 onwards, to speculation on the existence of an (unseen) autonomous agency which organizes matter from within and which guides the development of beings (very often including inanimated ‘beings’, such as minerals), on both the ontogenetic and the phylogenetic levels (Rigotti 1986: 223–233,

⁴⁶ Cf. Buffon 1780: 1: ‘Just as in civil History one consults the titles, researches the medals, deciphers the antique inscriptions [...]; likewise, in the field of Natural History, one must research the world’s archives, extract the old monuments from the bowels of the earth, gather their remnants, and reassemble in a corpus of evidence all the indices of physical changes which can enable us to retrace the different ages of Nature.’ [‘Comme dans l’Histoire civile, on consulte les titres, on recherche les médailles, on déchiffre les inscriptions antiques [...]; de même, dans l’Histoire Naturelle, il faut fouiller les archives du monde, tirer des entrailles de la terre les vieux monumens, recueillir leurs débris, & rassembler en un corps de preuves tous les indices des changemenes physique qui peuvent nous faire remonter aux différens âges de la Nature.’]

⁴⁷ On the reintroduction of impulses, sympathies, synergy, magnetism, and other mysterious ‘active qualities’ in the explanation of natural phenomena, especially after the mid-century, see Reill 2003: 37–38.

Ibrahim 1987). In some cases, the workings of this autonomous agency are described as a striving for expression not devoid of aesthetic and metaphysical overtones. A most interesting development of this idea is found in Jean Baptiste Robinet's *Considérations philosophiques sur la gradation naturelle des formes de l'Être, ou les essais de la Nature qui apprend à faire l'homme*, published in 1768.

Robinet believed that all beings are conceived and formed on the basis of a 'unique design' – also called 'original exemplar' or *prototype* – of which they are nothing other than variations graduated to infinity (Robinet 1768: 1–2). This natural gradation of forms of Being is a slow march towards 'the most elegant, the most sublime, the most complicated solution, where the erudition shines with the greatest pomp and splendor...' (Robinet 1768: 8)⁴⁸, towards the summit of all creation, which he identified with man. Robinet envisaged this march as an ascent from the simple to the complex, from crude matter towards the pure intelligible. He contended that, in its seemingly unrelenting progress, this ascent might even surpass man in the future (Robinet 1768: 11–12). The multiplying, varying, complicating, the expanding and the contracting of the prototype resulted in the creation of species, which Robinet called the 'durable monuments' of Nature's gradual march (Robinet 1768: 5). But while Nature's effort to 'fill every nuance' (Robinet 1768: 202), to explore every formal possibility advances steadily, every metamorphosis of the prototype is an act of genuine creativity. Although the prototype is only one and perfect and complete in itself, it admits variations and can even render singular formations.⁴⁹ Such is the case of monsters. Far from being mere aberrations, they are an integral part of Nature's plan, helping to make the transition towards the neighboring forms at the upper levels (Robinet 1768: 197–199). Monsters are examples of the capacity to achieve stronger displacements within an established

⁴⁸ 'la solution la plus élégante, la plus sublime, la plus compliquée, celle où l'érudition éclatte avec le plus de pompe & de faste...'

⁴⁹ Robinet 1768: 7: 'A stone, an oak tree, a horse are not humans; however, they may be regarded as more or less rough types of humans, *in that they pertain to an identical primitive design and in that they are all the product of the same idea in a more or less developed form* (emphasis mine).' ['Une pierre, un chêne, un cheval, ne sont point des hommes; mais ils en peuvent être regardés comme des types plus ou moins grossiers en ce qu'ils se rapportent à un même dessein primitif, & qu'ils sont tous le produit d'une même idée plus ou moins développée']

configuration (Robinet 1768: 198) and, in this sense, it wouldn't be wrong to say that they give the true measure of the prototype's creative potency. Monsters may seem strange and exceptional in the realm of more developed beings, but they are in fact quite common in that of less complex and less regular ones, such as that of minerals (Robinet 1768: 199–200). Thus, 'fossil monsters' – the name Robinet gives to figured stones – are nothing other than prefigurations of the beings to come, 'sketches' ('ébauches') that an artisan Nature left behind from her repeated attempts to create man.

It is true that the vestiges of these trials – the half-formed human figures and the various individually formed body parts – are a far cry from the prototype's state of perfect accomplishment. It would seem that, at least in the earlier stages of the process, Nature stammers in its effort to achieve full expression (man), that she is, in a sense, tautological (Robinet 1768: 13–15). To put it another way, Nature seems endowed with a kind of creativity that is similar to the clumsy and heedless ways of the primitive artisan. Perhaps more importantly, the imaged 'fossil monsters' (possibly due to their less articulate, and hence more tractable, nature) reveal an essential aspect of Robinet's thesis, i.e., that the prototype – like Buffon's 'moule intérieur' ('internal mould') and Goethe's 'Urtyp' ('original' or 'primal type') – is a *figured and configuring template*. It is a self-picturing concrete image (concrete in the sense of being consubstantial with, and determinant of, its medium), which Stafford implicitly likens to the material hieroglyph (Stafford 1984: 234). Robinet did not use hieroglyphic terminology, although, when he had to explain the imperfect manner in which the prototype was first actualized in fossils, he resorted to a comparison with the shortcomings of the 'ancient style' of Early Greek and Egyptian idol-making (Robinet 1768: 13–14). Of course, it is possible to dismiss such analogies as the more or less rhetorical inheritance of the old Nature-as-Art topos. But even so, if we consider the 'semiotic anatomy' of the material hieroglyph, abstract its features, and compare them with those of the prototype, we find that propinquity is indeed tenable. In the sense in which the prototype is a contracted figure expressing the essence of a being and, at the same time, an actual, physical part of that being

or even that being in its entirety⁵⁰, the prototype can be called – *mutatis mutandis* – a ‘real character’, a hieroglyph in the early eighteenth century conception of the term. According to Robinet’s own definition, the prototype is a contracted figure, a being (every being, regardless of the realm to which it belongs, is an instantiation of the prototype), and an intellectual principle. These qualities – *figure-note and thing*, *being-thing and note*, *intellectual principle-notion* – coexist simultaneously in the prototype:

The prototype is *a model which represents Being reduced at its most succinct terms*: it is an inexhaustible font of variations. *Each variation thus realized produces a Being* and can be called a metamorphosis of the prototype, or rather of its first envelope which has been its first actualization. The prototype is *an intellectual principle* which does not alter when realized in matter. (Robinet 1768: 6; emphasis mine)⁵¹

⁵⁰ Similarly, the internal mould is a ‘constant form’ which concentrates the identity of a being *and* the very body of that being (Buffon 1792: 290, 299–304). The internal mould-as-form guides the growth of the body ‘in all its external and internal dimensions’ and augments proportionally to it (Buffon 1792: 300), but it itself, as a blueprint, does not change (Buffon 1792: 303). It thus follows that the form can be *conceived* separately from the body as such, even though in actuality they are consubstantial. Buffon admitted that ‘internal mould’ is an impossible metaphor (see Ibrahim 1987: 557–559), combining, as it does, two contradictory terms (‘mould’ refers to something superficial, ‘internal’ to something in-depth), though he insisted that ‘the opposition is only in the words, and that is nothing contradictory in the idea’ (Buffon 1792: 292). The notion contains a semantic tension analogous to that contained in the syntagm ‘massive surface’, where ‘massive’ is to be understood in the sense of ‘substantial’ or ‘having substance’ (Buffon 1792: 292–293). (Here I would like to observe that the syntagm ‘real character’ contains a semantic tension of precisely the same type; correspondingly, the tension lies in the association of words, not in the idea.) This ‘surface’ or bidimensional design which permeates and organizes the mass of a being is a figure or a configuration (cf. Ibrahim 1987: 574), in other words, something very much like an image. Buffon himself pointed to the visual nature of the internal mould when he wrote that if our eyes would have been so constructed as to see the internal mould, they would have surely seen it (Buffon 1792: 291–292). Likewise, the Urtyp is ‘the thing without being the thing, and yet it is the thing; an image which is condensed in the mind’s mirror and yet identical with the object’ (apud Adler 1997: 177). Just as in the early eighteenth century material hieroglyph (see scheme above), there is no discrimination between the object and its semiotic double.

⁵¹ ‘Le prototype est un modele qui represent l’Etre réduit à ses moindres termes: c’est un fond inépuisable de variations. Chaque variation réalisée, donne un Etre, & peut être appelée une métamorphose du prototype, ou plutôt de sa première enveloppe qui en a été la première réalisation. Le prototype est un principe intellectuel qui ne s’altère qu’en se réalisant dans la matière.’

Furthermore, the prototype, like the internal mould (cf. Ibrahim 1987: 559, Reill 2005: 55–56), is a ‘welding’ of form and force and can be perceived simultaneously as structure and process (Robinet 1768: 11).

Doubtlessly, naturalists of the Enlightenment – who were so acutely aware of the perils of ‘abstract systems’ and over-conceptualization (cf. Reill 2003: 29–31) – would have scorned the idea of assimilating their morphological templates to a notion so ‘heavy’ with literary meaning, such as that of ‘hieroglyph’. However, it is just as likely that they would not have had any objection to calling them ‘characters’. Defined as ‘a kind of mark or subsisting imprint’ (Diderot 1777: 285)⁵², ‘character’ was used to mean – in turn, but, most often than not, concurrently – essential feature, physical trait, and outward figuration (Coleman 1979: 22–24).⁵³ In this sense, it would not be wrong to see the character as a ‘lighter’ avatar of the hieroglyph (they were sometimes used interchangeably; cf. Diderot 1777: 264). Without the intention to press this analogy any further, I would just like to add that the term ‘character’ itself is a remnant from the times when the notion of an isomorphy between natural object and semiotic construct (whether this construct bore the name ‘hieroglyph’ or ‘real character’) was still held to be plausible and was still believed to capture an essential truth about the order of the world.

Anyway, the idea of an underlying affinity between natural object and hieroglyph somehow survived, making a bold comeback in the late eighteenth century, in the writings of the Romantics and the *Naturphilosophen*. Novalis expounded his view on what he thought should be the object of natural philosophy with a choice of words that strongly recalls the early eighteenth century material hieroglyph: ‘Should *bodies* and *figures* be nouns – forces, verbs – and the theory of Nature – the art of deciphering.’ (Novalis 2007 [1798/1799]: 163; italics in orig.). Nature is seen as a figural narrative, something very much like a hieroglyphic frieze waiting to be deciphered (cf. Dieckmann 1955: 311–312).

⁵² ‘une sorte de marque ou d’empreinte subsistante’

⁵³ Thus, Diderot observed that ‘the word “character” is one of those [words] in which the proper sense is least different from the figurative one’ [‘le mot caractère est de ceux où le sens propre diffère le moins du figuré’] (Diderot 1777: 285).

The similarities between the hieroglyphic template and the various biological/morphological templates proposed by eighteenth-century naturalists are not always symmetrical, of course, and should be taken with a pinch of salt, but they do say something of what Peter Hanns Reill called the epoch's 'epistemological temper' (Reill 2005: 256). This brief survey of common or consonant themes cannot do justice to the complexity of the bigger picture (a comprehensive argumentation would by far exceed the scope of this work); therefore I will not insist here on these aspects any further. I just want to keep them in view as a general background. What I am immediately interested in and would like to retain for my argument is that: (1.) Before the quantification and systematization of the natural sciences in the last quarter of the eighteenth century, it was admitted that nature can be creative, particular, even exceptional, in its figurations – it was admitted, in short, that nature, too, can 'speak by action' and 'write by picture'. (2.) Before the separation of faith and science became manifest sometime around the mid-century, it was accepted that this form of expression can be assumed by God Himself as a pedagogical device or as a way to manifest His providence.

Coming back to the 'lying stones' affair, it is of no little interest and relevance to remark that, in the first decades of the eighteenth century, roughly around or very shortly after the time when Beringer was tricked by a farce playing on the very idea of a (presumably) naturally formed set of figured, pictographic-looking stones, the notion of a concrete language of objects and beings ('real' hieroglyphic characters) which can signify naturally was a matter of concern on a relatively wider scale and among scholars and men of letters who thought and wrote independently of each other. Considered from the perspective of the material hieroglyph, some of the observations Beringer made with regard to the stones' properties acquire a more familiar ring. His readiness to endorse the existence of natural phenomena which straddle the boundaries between the linguistic, the pictorial, and the organic, his insistence that figures – which he chose to describe as 'characters' or 'hieroglyphic symbols' (Beringer 1963 [1726]: 88) – are consubstantial to their medium and, moreover, that they have a necessary relation to the inward reality of that medium (Beringer 1963 [1726]: 23 and *passim*) appear in a different, more revealing light. Even the fact that he considered the *Lügensteine* to be endowed with a kind of expressive energy – Beringer thought it appropriate

to write of a ‘mute eloquence’ that would ‘speak’ or testify for the magnificence of God ‘in things vile’ (Beringer 1963 [1726]: 18) – seems less like an element of pious rhetoric and more like a requisite part in a more integrated conception.

This type of approach seems especially suitable here, for it is impossible, philologically speaking, to prove other than a structural compatibility or a ‘family likeness’ between sign conceptions that were elaborated and developed in isolation from one another. At the very most, the texts afford the possibility to document the existence, in the first decades of the eighteenth century, of a particular climate of thought in which, as Isaiah Berlin appositely remarked with regard to Vico’s sources, congruous ideas must have ‘traveled without labels’ (apud Rossi 1987: x–xi).⁵⁴ It is almost certain that Vico and Warburton never read each other. There is no evidence that either of them read Du Bos. Vico began working at his *Scienza Nuova* in the early 1720s, less than decade before Warburton began started working on his own tract, and continued to rewrite and refine it in full ignorance of the Englishman’s progress. The converse must also be true, for Warburton, who was so scrupulous about his documentation that he quoted even private correspondence, would have certainly cited Vico’s writings among his sources, had he encountered them. The French naturalists of the mid-eighteenth century knew Warburton’s theory on the development of language quite well, either directly or through the compilations written as entries for the *Encyclopédie*, but they seem unaware of the deeper underlying congruencies between their descriptions of processes of becoming and his. The Romantics were familiar with the work of the Enlightenment naturalists (particularly Buffon’s), but their philosophy of symbolism, which extended to their writings on nature, as well (Halmi 2007: 18–21), is customarily referred back to Vico and Warburton (Dieckmann 1955: 308, Gombrich 1972: 186 and 189, Connelly 1993: 32–34, Halmi 2007: 20), both of whom they never cited.

⁵⁴ Referring to this aspect, Paolo Rossi added that ‘Precisely because it is true that ideas travel without labels, it is important not to establish nonexistent relationships, but to document possible correspondences or similitudes in problems and solutions. *Independently* of Vico, and on cultural terrains very different from his, doctrines and theories came to be elaborated, between the middle of the seventeenth and the middle of the eighteenth centuries, that Italian scholars designate as “Viconian” (Rossi 1987: xi; italics in orig.).

3. THE *LÜGENSTEINE* AS ‘NATURAL HIEROGLYPHS’

‘The riddles of God are more satisfying than the solutions of man.’

Gilbert Keith Chesterton, “Introduction to the Book of Job”, 1907

3.1. The Question of Agency and Meaning

The prevailing impression after reading Beringer’s tract is that of the excitement and alertness one normally experiences when one is on the verge of making an important discovery. He even excuses himself at one point for the sloppiness of his writing, stating that he had to resort to a more imperfect manner of arranging the material ‘because of the wish to hasten the completion of my work’ (Beringer 1963 [1726]: 107). This haste has its explanation in his conviction that he was writing a dissertation that was ‘highly desired by reason of the newness of the controversial objects discovered in Franconia’ (Beringer 1963 [1726]: 109). Beringer’s excitement is easy to understand, for, as it has been already noticed (1.2; Rudwick 1972: 89–90), his ‘discovery’ throws into crisis all the previous accounts on the nature and formation of fossils. No less than eight theories fell under Beringer’s close scrutiny: the Aristotelian theory of occult qualities, the theory of signatures, the theory of plastic nature, that of *panspermia*, the Diluvial theory, that of *Natura naturans* (or *lusus naturae*), as well as another unprecedented two - one that viewed the stones as ancient pagan or Jewish talismans, and one that viewed them as negatives stamped on photosensitive earthy matter (these last two I will henceforth call, for the sake of convenience, the ‘archaeological theory’ and the ‘photographic imprint theory’). All of them were examined and found wanting. It is doubtless that he believed that the stupendous ‘harvest’ on Mount Eivelstadt will revolutionize the science of Lithology:

I hold all these theories in the highest regard, and to some I give unqualified assent as explanations of other species of petrifications. This only will I attempt to demonstrate in the following chapters: that the nature of our stones is so unusual that its very novelty eludes the afore-mentioned opinions, however well-established by documentation and searching experimentation. (Beringer 1963 [1726]: 45–46)

In the following, I shall argue that:

- (1) he refuted all theories then in existence because he believed the nature and origin of the stones fit a different, altogether new, theory;
- (2) this new theory, this ‘new course of argumentation in thorny questions that have not been completely resolved’ (Beringer 1963 [1726]: 22) is one that asserts the existence of divinely determined, yet naturally formed, material ‘hieroglyphs’.
- (3) his theory is indicative of an implicit semiotic assumption which largely resembles the notion of ‘material hieroglyphs’ that was being delineated in the first decades of the eighteenth century.

It was already noted that Beringer was not a sloppy observer. Quite on the contrary, the larger part of the tract is comprised of strict, empirical observation. So how could he be so wrong? There is a strong and somewhat unsettling contrast between what is very accurate empirical observation and critical thinking in Beringer’s tract and the substantive error of his reasoning and conclusions. It has been observed that all observation/perception is theory-laden (Daston and Galison 1992, Daston 2001, Singy 2006: 56–57), but this holds even truer for the Early Modern era. Eighteenth century observation, in particular, is not the disimpassioned, objective data-reduction technique observation became after the emergence of positivism (Daston 2001 80–81 and 88 – 89, Singy 2006). Personal interpretation underlies observation at all times. It was not the acuity of perception that was considered central, but the observer’s capacity to arrive at a comprehensive understanding of the relations between the various aspects of that which was being observed – or, otherwise stated, the capacity to arrive at theory. As Patrick Singy pointed out, ‘[o]bservation in the eighteenth century always began with an eidetic reduction’ (Singy 2006: 64). The observer, in other words, began his inquiry with (and constantly bore in mind) a synthetic representation, a ‘general image’ of what he had observed. In the time Beringer was writing, observation did not preclude theory and was not free of conjecture; rather, it presupposed them (Daston 2001: 80–90, Singy 2006: 66). That

means, one observed objects and phenomena to demonstrate or confirm the validity of a theory.

It is very likely that Beringer did have a theory, even if he avoided naming it (cf. Melvin Jahn in Beringer 1963: 127). There is evidence in the text that he was planning a second, revised and enlarged, edition of *Lithographiæ Wirceburgensis* after he had received the reactions of the scientific community. For example, in several places of the tract he referred to his dissertation as ‘this first edition’ (Beringer 1963 [1726]: 62, 109). In the concluding paragraph of the book he wrote that any shortcomings of the text and of the illustrative material will be corrected in ‘a subsequent edition of the Würzburg Lithography, with a more ample set of illustrations, better arranged, and augmented by new and very rare stones of exotic figures’ (Beringer 1963 [1726]: 109). It is possible that that second edition would have contained a more boldly formulated conclusion and that elements that were left as mere hints in the first edition would have been straightforwardly articulated and better argued as a fully-fledged theory in the second. Given that his ambitions were cut short by the bitter revelation of the fraud and by the scandal that followed, we will never know. There are, however, three major clues in this sense: (1.) his repeated likening of the stones’ appearance to Egyptian hieroglyphs; (2.) the iconography of the tract’s frontispiece; (3.) the *Foreword* of Beringer’s student, the medicine candidate Georg Ludwig Hueber (Hueberg).

A number of interesting features already sets the *Lügensteine* apart from all other petrifications: their emblem-like pictorial quality, the centrality and consistency of the figures, the juxtaposition of incongruous elements (as if their design were following a symbolic ordering principle), and, in some cases, the superposition of writing.⁵⁵ The *Lügensteine* are ‘suggestive of phylacteries’ and very much ‘akin to amulets and talismans’ (Beringer 1963 [1726]: 92). The visual dimension of Beringer’s argument should not be underestimated. He is writing in an age that gave more and more credit to visual evidence. Especially after the mid-

⁵⁵ Beringer 1963 [1726]: 35–36: ‘The figures expressed on these stones, especially those of insects, are so exactly fitted to the dimensions of the stones, that one could swear that they are the work of a very meticulous sculptor. Fore there is scarcely one in which the dimensions of the figure are not perfectly commensurate to the length and breadth of the tablet.’

seventeenth century, researchers began to include images into the realm of *facts*, even if an iconographical method had not yet been established (Burke 2003: 293). I would argue that the implications of Beringer's visual comparisons should be the focus of an increased attention. Beringer draws a direct analogy between some of his stones (at least) and hieroglyphic scarab-amulets (Fig. 3.1.1.a–3.1.1.c) described by Kircher in *Oedipus aegyptiacus* (1654):

Studying these [the scarab amulets in Kircher's tract] I remarked *that they were not unlike the several small-encased frogs collected on our mountain*, one of which I included in Plate II, with only this difference, that the Egyptian scarabs have the belly elaborated to a level surface, and inscribed with Gnostic characters or with Egyptian or other hieroglyphic symbols. Our little frogs (though *I could call them scarabs, so closely do they resemble the form of those exhibited by Kircher, especially in details of the head*) are completely surrounded by perfect shell, with the underside of rough and unpolished stone. (Beringer 1963 [1726]: 88; emphasis mine)

Further on, he made a similar remark:

My stone statuettes exhibit, not a swathed infant, but a spiral or oblong shell, sometimes with the head of an idol protruding, while in other figures the corresponding place is inscribed with *a character or hieroglyphic symbol*, as we shall illustrate later. A figure not dissimilar to these, and *bearing a striking resemblance to the Egyptian penates*, can be seen in Plate II. (Beringer 1963 [1726]: 90; emphasis mine)

Similar evidence is provided by the analysis of the frontispiece print (Fig. 3.1.1.d). I would argue that, if that 'synthetic image' that accompanied observation is anywhere to be found in Beringer's tract, it is to be found in the iconography of the frontispiece. In the Early Modern times, the frontispiece concentrated the idea of a work, it gave clues as to how it should be interpreted, and also functioned as a visual memento, as an abridged version of the text. For example, Vico stated that 'We hope it [the picture placed as frontispiece] may serve to give the reader some conception of this work before he reads it, and, with such aid as imagination may afford, to call it back to mind after he has read it' (Vico 1948 [1744]: 3). The engraving, he added, 'state[s] the idea of the book in the briefest summary' (Vico 1948 [1744]: 23). This was not limited to philosophical or literary works. Martin Rudwick argued for the 'conceptual importance of *visual* modes of discourse' (Rudwick 1976: 150; italics in orig.) in the geological sciences, especially in the Early Modern era. He gives special attention to the frontispiece: 'In many books the only illustration was a single frontispiece, which for this reason always deserves especially close scrutiny, since it functioned as a visual summary of what the author and / or the publisher considered most important about the book.' (Rudwick

1976: 154). Here too, it is more than likely that the iconography was suggested by Beringer himself and, therefore, the allegory in the frontispiece should be counted as an example of understated – or, better yet, otherwise stated – theory. I believe that by analyzing the frontispiece it is possible to decant several important ideas and, thus, to grasp Beringer’s intentions with more certainty.

The viewer is ‘welcomed’ by the figure of a seated woman, who, judging by the crown of laurels on her head and the olive branch in her left hand, is an allegorical personification of Peace. (The reason behind this choice was, most probably, the intention to send a message of flattery to his patron, the Prince-Bishop, for personifications of Peace were customarily present in allegories of Good Government.) She is leaning on a cartouche-like pedestal on which it appears written a verse from Book I of Ovid’s *Metamorphoses*: ‘EDITIT INUMERAS SPECIES; PARTIMQUE FIGURAS REDDIDIT ANTIQUAS, PARTIM NOVA MONSTRA CREAVIT.’, which translates as ‘She [Nature] brought forth innumerable forms of Life; in part she restored the ancient shapes, and in part she created creatures new and strange.’⁵⁶ This *sententia* is an important piece of the puzzle, to which I shall return. Placed in the foreground, Peace ‘introduces’ the viewer into the image (she is the only character whose eyes meet the viewer’s) and, by pointing her finger at the scene unfolding behind her, directs his gaze through the composition.

Behind her we can see Mount Eivelstadt as a congregation of *Lügensteine*, represented in such a way as to resemble an imperfect pyramid. On top of the pyramid-mountain, the *Lügensteine* assemble to form an obelisk that rises to (or descends from?) Heavens. At the apex of the obelisk there stands the *tetragrammaton* or the Holy Name of God (YHVH) enclosed in a triangle. The personal coat of arms of Christoff Franz von Hutten, the Prince-Bishop of Franconia, appears attached to the obelisk, just under the *tetragrammaton*. In the geometrical center of the composition there is the child Moses, recognizable by the horns of light and the Star of David on his forehead, holding the Tablets of Law and surrounded by the stones bearing Hebrew inscriptions. The Hebrew theme is reinforced by the presence of King

⁵⁶ The translation is taken after Frank Justus Miller’s rendering of the *Metamorphoses* (Ovid 1971: 33).

David in the lower left, recognizable by the crown and his antique vestments. He is depicted here in a posture of pointing that actually seems to repeat, with slight alterations, the iconographic type of him playing the harp. With his left hand he is pointing to the Heavens and with his right hand he is pointing to the earth, perhaps to suggest the stones' heavenly origin. King David's attitude is probably meant to suggest the connection between the Heavens and the things of the earth – perhaps echoing Beringer's contention that the stones were 'vestiges from on high' (Beringer 1963 [1726]: 24). In the upper left there is Psyche, recognizable by the pair of butterfly wings, holding a dove on her left hand. The dove, a traditional psychopomp, could symbolize the elevation of the soul by contemplating the figured stones (Beringer 1963 [1726]: 27–28). In the upper right there is an allegorical figure of Abundance holding a stone featuring a crab in the right hand and a cornucopia in the left hand, most probably a reference to Franconia's fertile soils and vineyards, much praised by Beringer in the "Introduction" (Beringer 1963 [1726]: 19). In the lower right there is another allegorical figure holding a copper plate of table VI (Fig. 1.1.i). Judging by her flowery headdress and by the subject of the copper plate, she must be Flora, the goddess of flowers and the patron of the spring season (it should be remembered here that the discovery took place during springtime). At the foot of Mount Eivelstadt, one can see two children sitting among digging tools and carefully inspecting a figured stone. The children could stand for the young boys who unearthed the stones (the digging tools could point to that identification), but they could also figure the glorious posterity of the wonderful event of the unearthing. Traditionally, children were depicted as witnesses to various religious or historical scenes because they would later live to tell the story of what they had seen. If this was the intention of the iconographer here, as well, it could be a suggestion that the story of the unearthing will survive the passing of time. In the background there is the city of Würzburg.

It is important to note that, in allegories, spatial relations reproduce symbolic relations. Psyche and Abundance in the upper region signify the spiritual and the material realms. King David and Flora in the lower region signify Religion and Nature. A similar division is effected on the vertical axes of the composition: Religion and the Soul on the left, Nature and Abundance on the right. The disposition of the figures was probably meant to emphasize the

complementarity between spiritual and religious matters, on one hand, and the natural and material realm, on the other, between contemplation and knowledge of natural philosophy. This circle revolves around the Law of God, represented here in the figure of Moses holding the Tablets onto which God Himself has written the Ten Commandments. The fact that Moses is the only character who is directly pointed at by the guide within the image (Peace) reinforces the literally central position he holds in the economy of the composition. The *Lügensteine* disposed around each figure are made to act as symbolical attributes – as ‘hieroglyphs’ – of the qualities and virtues each character stands for. Airy things (birds, bees, and butterflies) surround Psyche, watery ones (crabs, shells, ammonites, and frogs) surround Abundance. King David is surrounded by beings of the earth (lizards, snakes, and snails), Flora is surrounded by figures of leaves, flowers, and fruits. Every association infuses the *Lügensteine* with *meaning* – with the kind of curiological meaning that was being ascribed to the hieroglyphs just around that time. The obelisk is mostly made up by ‘astrographical’ stones (stars, suns, and comets); the last discernible stone depicted, visible in the upper extremity of the obelisk, features an anthropomorphic sun – a stony double of the hallow surrounding the *tetragrammaton*.

That the Egyptian imagery is not the fortuitous result of the artist’s caprice, nor a mere decorative formula, is attested, once more, by the reoccurrence of Egyptian motifs in the *Foreword* written by Beringer’s student and medicine candidate Georg Ludwig Hueber. His text could almost be considered an ekphrasis of Puschner’s frontispiece:

‘Were it proper to turn one’s gaze upon the workings of ancient art, I would be tempted to say that Franconia, *rivaling Egypt of old* (thanks to the magnificence of her Dukes) had erected *a mighty monument, ornate with hieroglyphics and heroic symbols*, the fragmentary remains of which we are unearthing in our day [...] One majestic stone bearing the ineffable name of Jehovah in letters transposed yet most elegantly formed occupies *the apex of this obelisk* [...]’ (Hueber apud Beringer 1963 [1726]: 12; emphasis mine)

The coincidence between the imagery invoked by Hueber and the one deployed in the frontispiece is reasserted in the address to the King-Bishop:

The Oreads of Eivelstadt [...] have wrested from the bosom of a solitary hill and erected into *a monumental pyramid* to your glory whatsoever of a prodigious nature the petrificous earth has produced in idiomorphic stones on all the shores of this wide earth [...]’ (Hueber apud Beringer 1963 [1726]: 13; emphasis mine)

In the following, Hueber explicitly compared the ‘idiomorphic stones’ with hieroglyphic writing, calling them ‘recondite Canopican [i.e., Egyptian] enigmas, more productive of obscurity than of illumination’ (Hueber apud Beringer 1963 [1726]: 14). It should be remembered here that Hueber was just another ‘Candidate of Medicine’ who happened to defend his doctoral dissertation (the ‘Medical Corollaries’ appended at the end of the book) the year Beringer decided to publish his tract, and who, according to the custom, had to bear the costs of his professor’s publications in order to be promoted. As such, he had no bearing on the arguments examined in the tract. It is, therefore, extremely probable that – much like the engraver who designed the frontispiece – Hueber is simply reiterating the ideas he must have picked up from conversations with his professor and supervisor. Given that these conversations must have taken place in an informal, perhaps confidential, environment, it is reasonable to suspect that the hints in Hueber’s text reflect Beringer’s position more clearly than his actual treatise, where he understandably tried to maintain a more impartial and prudent tone, for the sake of scientific objectivity.

Who or what furnished these idiomorphic stones, these ‘hieroglyphs’? How did they come about? What do they mean? How are they to be interpreted? The question of meaning is inevitably interwoven with the question of the, so to say, ‘efficient cause’ – a question of agency and, accordingly, a question of classification.

The Art vs. Nature dilemma looms over the entire tract: ‘Weighty arguments favor art; no less impressive are those which argue for Nature’ (Beringer 1963 [1726]: 83). In another place he stated that ‘I hold no more for Art than for Nature as the genearch of these prodigious iconoliths, and that I reserve judgment on both possibilities [...]’ (Beringer 1963 [1726]: 101). However, he clearly favors the hypothesis of their natural origin – the frontispiece and the other clues bear testimony to the fact that he already inclined towards an answer.

Beringer ascribes the stones to ‘a generous Nature, or more correctly God, the Maker of Nature, [Who] poured out His riches upon it [Franconia] with a more lavish hand’ (Beringer 1963 [1726]: 19). In the exhortation addressed to the medical students, he wrote: ‘in this new pit a new shrine has been thrown open to you, and vestiges from on high are impressed upon its earth’ (Beringer 1963 [1726]: 24). The originator of these wonders seemed to be none other

than God, manifesting His agency ‘for the spreading of the glory of His Name in these wonderful works of His hands’ (Beringer 1963 [1726]: 24). These considerations imply two very important things, namely that, in Beringer’s view, (1) the stones were exceptional and that (2) they must have been created anew. The doctor faced considerable difficulty explaining whether the stones were to be attributed to a singular, exceptional, intention of the Godhead or they belonged to the ordinary (if sometimes surprising) course of nature. That the stones were special was undeniable, but it was less clear whether he considered them to be miracles or just marvels⁵⁷. Beringer found himself caught between two equally unpleasant options. If, on one hand, the stones were truly exceptional, that would have attracted legitimate suspicion as to their genuineness. If, on the other hand, they were nothing out of the ordinary, that would have significantly diminished the importance of his discovery. Beringer never formulated a straightforward rationale of the stones’ status – if that was because he wanted to avoid overwhelming suspicion and incredulity, because he feared the importance of the finding would be undermined, because of the hurry to complete the treatise or because he wanted to wait for the verdict of other scholars, it is difficult to tell. Whatever the reason was, he seems to have preferred to leave the matter undecided.⁵⁸

In spite of all this, he remained consistent in advancing the hypothesis of their divine origin. This is the main reason for his rejection of the plastic force, *Natura naturans*, and *lusus naturae* theories. Against ‘Ludions’ and ‘Archeists’ he quoted a paragraph from Buttner’s *Coralliographia Subterranea*:

As though the most high Majesty of the Giver of all being would ever play with the proper direction of the natural order! Indeed, this order, whether you call it Archeus, and the World Spirit, or *Natura naturata* or *Natura naturans*, depends solely upon the infinitely operative Mind and Will of the all-wise and all-just Godhead. Of itself, it intends nothing, nor, being mindless [*ἀνοος*] can it intend, propose, or

⁵⁷ On the difference between miracles and marvels within the larger taxonomy of natural, supernatural, and preternatural, see Daston 1991: 95–100.

⁵⁸ ‘[W]hy is it that Nature, recognized throughout the provinces of Europe as the parent of petrifacts, though its mode of operation is in part still a mystery, in part exposed by the researches of the scholars, why, I ask, has it thus far produced nothing elsewhere that resembles the Würzburg finds?’ (Beringer 1963 [1726]: 84). Towards the end of the tract he wrote: ‘I will content myself with an appeal to the assent of the learned, to whom *such things are neither unusual nor foreign*’ (Beringer 1963 [1726]: 102; emphasis mine).

effect anything. Therefore let those who make these statements realize with decent fear, especially such as glory in the name of Christian, that whatever wantonness is charged to Nature is, by that fact, imputed to the most wise Ruler of Nature. (apud Beringer 1963 [1726]: 42–43)

Even if he agrees with Baier, he states that ‘in a wide sense of the term a certain playfulness of Nature [*lusus naturæ*] is not altogether to be excluded from the ranks of the Genearchs – without, however, postulating other extraordinary agent distinct from God, the Author of Nature’ (Beringer 1963 [1726]: 43). The theory of plastic nature had a grave shortcoming, in that it ‘explained the unknown by asserting another quite hypothetical unknown’ (Hunter 1950: 209). The concept itself had an interesting history: it gained momentum in the latter half of the seventeenth century and eventually waned by the end of the century, only to be revived briefly in 1703 (with Le Clerc’s reprinting of Cudworth’s *Intellectual System*; Hunter 1950: 211), when it was accused of atheism. Beringer’s reprehension of it might have something to do with that accusation. His position seems more congenial with an altogether different tendency of the early eighteenth century: what Lorraine Daston called a more general ‘reassertion of authority’ – i.e., the authority of God – in the explanation of natural phenomena (Daston 1991: 120–124).

This insistence on the direct agency of God as opposed to that of a subordinate principle or a delegated force is an important departure from the cosmological views of the previous century (see Hunter 1950: 204). Beringer agreed to a certain extent with Robert Plot, who ‘sought (and considered that he had found) the beginning of earthy things in the earth itself, designating as the efficient cause of figured stones a certain formative property of the salts secreted in the earth’, but disagreed with Helwing, who ‘would seem to attribute an exaggerated graphic and plastic force to salts’ (Beringer 1963 [1726]: 39–40). He doubted, alongside Lhwyd (whose letter to John Ray he quotes), that salts could have the power to form determined and different figures, as if they were following a plan (Beringer 1963 [1726]: 40). While ignorant of its ends, the plastic power is nevertheless operative (Hunter 1950: 207), an idea Beringer would not favor, even if some aspects of it, like the presupposed possibility of the annual reproduction of gems and fossils, would have suited his account.

Panspermia would have also explained a ‘new harvest’ of figured petrifacts, but it was also found wanting (Beringer 1963 [1726]: 40–41). The theory of panspermism could be

considered the theory of a self-perpetuating text. The seed carrying the encoded structure of the original organism can 'grow', given it will find the appropriate or at least a somewhat 'welcoming' medium, into a pseudo-organism that would repeat, usually in lesser, defective forms, the structure of its original. The pseudo-organism is developed at greater or lesser extents, depending on the 'hospitability' of the medium and of the external factors (light, heat, humidity). But once more Beringer rejected the theory of panspermism in favor of a direct intervention of God. His stones have the completeness of hieroglyphs, they cannot be accidental and/or incomplete, defective formations. They are of direct, non-derivative provenance. Furthermore, he believed that the presumptive seeds could only have originated from a limited number of local species and that, therefore, they could not account for such an impressive variety of images, as the stones featured, nor could they explain the apparition of stars, suns, and comets and much less the apparition of Hebrew letters.

The completeness of the images, as well as their prodigious variety could have been accounted for by the photographic imprint theory, a rather interesting (if 'spectacular' is too strong a word) prefiguration of the modern technique of photography. This theory was advanced by one of Beringer's learned friends. This scholar, whom Beringer does not name, contended that light, as a corporeal substance,

takes on the forms and figures of all the things on which it shines, and this is the source of those visible species which we receive in the *camera obscura*, in magic lanterns, in still and limpid water, in mirrors, and in the pupil of the eye. Now, since it is admitted that light possess the very marvelous faculty of painting, representing, and forming such corporeal images as it acquires in its diffusion, is it not further possible that it is endowed with a kind of active plastic power of impressing these images on properly disposed matter? (Beringer 1963 [1726]: 44)

The photographic imprint theory could explain why the images appeared so distorted. Likewise, it could explain the presence of Hebrew writing: the corpuscles of light could have 'caught' the likeness of Jewish tombstones from a nearby cemetery. However, Beringer did not think much of it: 'I have deemed it worth repeating here, if only to illustrate how the great minds torment themselves in their quest for some plausible explanation of our figured rocks' (Beringer 1963 [1726]: 45). He compared this hypothetical photographic process with the imprinting that takes place as the result of maternal imagination, considering it as a type of *species impressa*. The corporeal light might have stamped the earth with the likenesses of

surrounding objects just like the imagination of the mother stamps the fetus with the likeness of a desired object (Beringer 1963 [1726]: 45). However, the doctor contended, if that were the case, the impression thus resulted would have been faint and confused (as can often be observed in cases of maternal ‘stamping’), but this was not the situation with the *Lügensteine* (Beringer 1963 [1726]: 56–57).

Here again, he seems to have disfavored any external operator. Beringer pointed out that the figures ‘are raised on the tablets in a kind of carved and polished relief, but so obviously a continuation of the rest of the stone that they cannot possibly be said to be affixed or superimposed by an extrinsic agent’ (Beringer 1963 [1726]: 36). Rather, they look as if they were molded by a forming agent operating from within. Solid empirical evidence, like the homogeneity of the material and the lack of extrinsic marks such as color, imprints or any other material remains, pleaded for this hypothesis.⁵⁹ Finally, the fact that the images were complete in all their parts, with their details ‘clearly and perfectly expressed’ (Beringer 1963 [1726]: 74), supported the idea of a necessary contiguity between the figured representations and their stony medium, between design and matter:

The animal and plant figures, whether solitary or set on stone, whether intact or broken or cracked, or inspected and examined by any other method of experiment are found to contain nothing of the natural color, matter, covering, or armor which might be described as congenital to them, nor have they transferred these things to the stone. Rather, they bear the exact consistency, material, and color of the stones in which they lie and *to which they owe their origin*. (Beringer 1963 [1726]: 36; emphasis mine)

We know he refused to endorse the ‘graphic and plastic force’ of petrifying salts, so what other agent, but God, could have determined the apparition of figures and letters? But here there is a tension, even contradiction, which, *mutatis mutandis*, also characterizes Robinet’s ‘prototype’ and Buffon’s ‘internal mould’. What brought the stones about must have been something like an actualizing template, a blueprint at the same time ‘impressed from on high’ *and* developed (brought to completion) from within. This ‘imprint’ that the stones seemed to have received from Heavens is concomitantly an index and a symbol (what Peirce called a legisign). Indexicality here is twofold: it designates not just causality, but also contiguity.

⁵⁹ Beringer 1963: 36: ‘the entire stone is one integral figure, complete in itself without any further matter.’

Perhaps in order to support this claim, Beringer systematically rejected the hypotheses that would have pointed to the stones' old age, namely the Diluvial and the archaeological theories.

Of the Diluvial theory, he wrote that:

[A]lthough we heartily embrace this theory, so consistent with the truths of natural history, with the Christian religion, and with the texts of the Sacred Scripture, as regards petrified exotica, we cannot possibly apply it to the origin of our stones, since not all of these are of the petrified variety. (Beringer 1963 [1726]: 42)

As already mentioned in the first chapter, Beringer knew and approved of the theory of fossils' organic origin and there is every reason to believe that, prior to the stones' discovery, this was the hypothesis he held in the highest regard (Beringer 1963 [1726]: 32, 41). His strongest argument against the Diluvial theory was that such delicate specimens as the ones featured by the *Lügensteine* could not have remained intact 'amid the violent turbulence of the sea' and then gradually petrified (Beringer 1963 [1726]: 70–71). A catastrophe of that magnitude could not have preserved frail flowers and tiny insects, much less a spider's web or an integral apricot, 'complete with pit, meat, and skin, and a mature acorn appended to a small branch' (Beringer 1963 [1726]: 70). Further on, Beringer argued that it was extremely unlikely for the sea storm to catch up and then cast a bee next to the flower it was going to pollinate and other such small *scenes*. The stones showed figurations and tiny compositions that were very unlike the usual (organically-derived) traces of animals and plants, in that they had a *pictorial quality*.

It was this pictorial quality, together with the presence of writing, which prompted the question if it wouldn't be more fitting to see them as pagan amulets or Jewish phylacteries. The archeological theory was advanced by one of Beringer's colleagues, a historian (whom he also does not name), who contended that the stones were eight-century pagan talismans, banned after the Synod of Estinnes (743) and subsequently buried in the ground, or, perhaps, judging by the Hebrew lettered stones, remnants of Judaic cult items (Beringer 1963 [1726]: 43–44). Beringer rejected this possibility on stylistic and iconographic grounds. For one, the quality of execution differs from stone to stone. Secondly, it is very improbable that the heathens of old (and much less Jews) would have worshiped or adorned their altars with the

images of so humble beings as crickets, worms, spiders, snails, tortoises and the like (Beringer 1963 [1726]: 48–49).

Furthermore, he argued, the stones' matter is very frail and could not have endured the passing of ages (Beringer 1963 [1726]: 51). As he made clear in several parts throughout the treatise, he favored the hypothesis of their recent age:⁶⁰

For whatever can or has been said concerning the origin of figured stones: that they derive from relics of the Flood, or from the marvelous fore of petrifying moisture and salts of the earth, or from the seminal and plastic influence of some subterranean Archeus or Panspermia or a generative vapor, or finally from the vagaries of Nature – none of this would seem to be applicable to the harvest of our prodigious mountain. *Possibly the parturition of these prodigies has been delayed until this later age [...]* (Beringer 1963 [1726]: 22; emphasis mine)

The *sententia* on the frontispiece provides an important clue: 'She [Nature] brought forth innumerable forms of Life; in part she restored the ancient shapes, and in part she created creatures new and strange.' It is as if his stones are constantly being generated and somehow ever-present, just like plants, animals, ideas, and language. Hieroglyphic expressions are a kind of fossils, they are remnants, 'ruins' of a bygone age. Vico maintained that the natural laws of nations should be unfolded 'by a well-informed interpretation of the hieroglyphs and fables *as the medals* of the times in which gentile nations were founded' (Vico 1948 [1744]: 149; emphasis mine). As it was already shown, medals and fossils were often times used interchangeably, both being considered the trustworthy vestiges of a time forever lost [see 1.2.; 3.]. But hieroglyphs survive not only as inert vestiges or as 'dead letters', but also as tropes constantly reoccurring in every-day speech and even making their way into the most elevated of discourses. Therefore, while they are the surviving signs of a deep time, hieroglyphs can always be created anew and are, in this sense, ever-present.

The idea that fossils were being constantly created was not new and it actually survived until the first decades of the nineteenth-century. Thus, Hegel denied that fossils ever 'actually lived and then died; on the contrary, they are still-born' (Hegel 2004 [1830]: 293). What is interesting is that it almost always appears in conjunction with the conception ascribing a sort

⁶⁰ For example, Beringer 1963 [1726]: 35: 'Many of them [...] are so soft and flexible, as though newly formed by the skill of Nature'.

of artistic creativity to nature (the ability to paint is the preferred analogy). Using a metaphor that recalled the ‘artist Nature’ of the previous centuries, Hegel contended that the ‘organoplastic’ Nature generates the organic ‘as a dead shape, crystallized through and through, like the artist who represents human and other forms in stone or on a flat canvas’ (Hegel 2004 [1830]: 293). It is not without relevance that Beringer used a similar comparison. The pictorial arts are lithology’s most apt analogon:

If you would like to know the good offices of Lithological studies, consider for a moment the worthy arts of depiction and sculpture. [...] Nature in its works uses a similar artistry, and though it may not open to you a group of great statues or a pantheon, still it does offer a most delightful and unexpected collection of iconolyths of an all but extinct art, such as you will not find among the inspired works of bygone ages nor in the earthen chambers of graven crypts, nor amid *the hieroglyphic sculptures of the Egyptian pyramids*. (Beringer 1963 [1726]: 28; emphasis mine)

There is only one form of expression that can straddle the boundary between nature’s ‘art’ and human art – the hieroglyph. As already observed in the previous chapter, hieroglyphic modes of expression are the closest nexus between natural and cultural modes of expression. Indeed, it could be said that the hieroglyph ‘inhabits’ an interstitial domain shared by both human creativity and nature’s creativity.

For this reason alone, the viewing of the *Lügensteine* as hieroglyphs – as seems to be the case with Beringer – cannot solve the dilemma of artificial *vs.* natural origin. On the contrary, it can only further it. In the wish to summarize the core of the problem in one sentence, Beringer asked: ‘Were our idiomorphic stones fashioned by the hand of the artist of old, later to be transferred by uncertain chance to this now famous mountain, or were they formed and figured by natural causes, as other petrified fossils? This is the problem.’ (Beringer 1963 [1726]: 83). But the difficulty is inescapable, for, considered as material hieroglyphs, both variants are equally probable. He does not arrive to an answer precisely because the hieroglyph can cover both possibilities with equal pertinence. As already noted, the early eighteenth century hieroglyph allows a perfect isomorphy between language, the pictorial arts, and natural objects. There is an inherent ambivalence in the hieroglyph-as-semiotic-construct; it is one of its most persistent features, regardless of the guise it can take – mode of expression or means of interpretation. To complicate matters even further, the

hieroglyph also covers an ambiguous, reversible discourse concerning technical and aesthetical terms [see 1.2.]. Barbara M. Stafford summed up this relation as follows:

[S]cientific and aesthetic theories shared a common language concerning technique, facture, and the necessary, desirable, and individual materiality of any medium – whether natural or artificial. Further, this unifying vocabulary belonged to the overriding construct of hieroglyph or material character – whether mineralogical, biological, linguistic, physiognomic, or aesthetic – that structured the Enlightenment perception of the world. (Stafford 1984: 233)

Of the various figures adorning the stones he wrote: ‘it is of the very nature of these stones to be figured, that they are uniquely formed by the Author of Nature, who, in His omnipotent creative causality, lavishes a no less generous variety upon stones than upon plants and animals’ (Beringer 1963 [1726]: 105). Thus is to be explained the sundriness and exceptionality of the petrifications, because, if there are ‘unique types of stone, as there are of gems, marbles, magnates, pyrites, and other prodigies adorning the shelves of stone treasuries’, it seems reasonable to include ‘our singularly figured stones in their number’ (Beringer 1963 [1726]: 106). The stones’ iconographical variety also becomes easier to account for. Within the hieroglyph, there are no restrictions as to what imagery can be employed and in what order:

The earth shall bear stars, bred in the same manner as animals and plants, *when the heavens are put to the plow*. Tell me, moreover, and you will indeed be a mighty Apollo, in what lands are born lettered stones, as the lithographers call them, inscribed with the Names of the Most High Godhead most elegantly traced in the letters of the sacred tongue? Are these the work of art, of Nature at play, operating by means of seeds or of salts twisting themselves into letters? (Beringer 1963 [1726]: 62; emphasis mine)

All the multifarious qualities of the figured stones - image, writing (with the notable absence of grammar), natural language (in the sense of ‘thing-ness’) – converge into an all-encompassing conceptual figure: the hieroglyph. Dr. Beringer’s stones are material units of meaning where design and nature meet,

For whatever power has fashioned and animated the plants, the animals, the testacea, etc., the agent, in this case in Phrygian style and with sculptural skill, seems to have formed in clay and stone **[things]** beautiful ideas (albeit inanimate) **[notions]** and ectypes of living prototypes **[notes]**. (Beringer 1963 [1726]: 23)

The most striking quality of these ‘natural hieroglyphs’ is that they congeal the iconical (‘ectypes of living prototypes’), the existential relation to their medium (they are images

consubstantial with their matter) and the meaningful (God's ideas) – that is, the iconic, the indexical and the symbolical, all in one, indiscriminately. Beringer would not favor any semiotic status taken in isolation. He would not concede to the preeminently iconic (sports of Nature), neither to the preeminently indexical (Diluvial theory, photographic imprint theory, spontaneous generation theory), nor to the preeminently symbolical (archaeological theory, various attempts at exegesis), but only to their conjugated properties, appearing together in the compact figure of the hieroglyph. Moreover, the hieroglyph is traditionally the sacred medium *par excellence*.

3.2. The Idea of Hieroglyph in Beringer's Tract

The *Lügensteine* seemed to be divine ideas in concrete form:

‘[W]hy should we not attribute our stones to Nature in operation – whatever the mode of this operation? Thus God, the Founder of Nature, would fill our minds with His praises and perfections radiating from these wondrous effects, so that, when forgetful men grow silent, *these mute stones might speak with the eloquence of their figures*’ (Beringer 1963 [1726]: 82; emphasis mine).

But how is the stones' 'mute speech' to be interpreted? Beringer's ideas dwell in some kind of semiotic interstice. He admits to the recondite nature of the stones' meaning, but he dismisses entirely the combinatorial interpretative strategies that would have made the delight of the Renaissance scholar.⁶¹ In contradistinction to one of the doctrine of signatures' main claims, the network of meaning running across the realms of nature is not 'navigable', reversible or manipulable in any way (Beringer 1963 [1726]: 38–39). Of the occult qualities of the Aristotelians and the astrological speculations of the Paracelsians he wrote: 'Perish such majestic inanities which flit about the heavens – seeking, by impossible trails among the stars and even in the curvature of the moon, the answers to the new and wondrous things of the earth' (Beringer 1963 [1726]: 39).

⁶¹ Beringer terms these as 'vain and empty cabalistic contrivances' (Beringer 1963 [1726]: 78).

Rather, he would contend to the stones' curiologic, 'declarative' meaning (he presupposes a direct meaning, even if he is unable to name it), and in this he belongs fully to the eighteenth century. The eighteenth century had a *philosophy* of the sign – in contradistinction to the Middle Ages, which possessed a *culture* of the sign (Halmi 2007: 13). Eighteenth-century semiotics is characterized by an absence of ideological coherence, by a 'loss of certainty' (Halmi 2007: 13–14). I would argue that the material hieroglyph expresses such a loss of certainty: meaning is no longer dependent on a lexicon-like text (Biblical hermeneutics), instead, it is dependent on the interpretation of objects and images. The interpreter is not faced with a positively graspable meaning (a knowable unit of semantic content), but with the promise or the anticipation of a meaning [see section 2.3., Figure 1]. Eighteenth century semiotics is institutive, not interpretative.

Beringer does not, however, share the eighteenth century 'doctrine of radical immanence' of natural phenomena (Stafford 1984: 235), nor its concern with the historicity of matter (for him, the mineral record, and his stones in particular, are 'vestiges from on high', not 'archives' of the earth's history). His account is devoid of any speculations on 'hidden virtues' – however, it is not free of the question of 'purpose'.

The end is contemplation and a sort of aesthetic perplexity in front of the ungraspable:

What more noble purpose for human actions can be conceived than that whereby from the marvelous effects of nature we ascend as by so many steps to the recognition of the power of the Creator? [...] The wisdom of God, to remedy this execrable folly [forgetfulness] of mortals, frequently brings to light from the Hidden treasures of His power and the unknown deposits of the earth, through the labor of honorable and zealous men, wonders and portents of that great architect, Nature. Human curiosity, fed by those morsels while it examines each of them, and stupefied by their novelty, *while contemplating them with astonishment, is gradually raised above itself, and at last is fired by sincere and holy devotion to supplicate and adore the marvelous power of the Creator, the working of Whose hand it is compelled to acknowledge in such phenomena.* In the course of this dissertation we shall demonstrate that among these wonders are to be reckoned many, if not all, figured stones [*lapides figurati*], and particularly those which our Franconia and the field of Herbipoli has borne, and that this is the more obvious, as their origin is more difficult to explain and surpasses human reason. (Beringer 1963 [1726]: 27–28; emphasis mine)

The *Lügensteine* are awe-inspiring, their 'silence' indicates an expressive energy and an actualizing force beyond them. They are counsels from God, 'morsels' of His magnificence, materialized instances of His Supreme Name.

3.3. The Case for a Semiotic Microhistory

There is something indissoluble about the ‘Beringer affair’. Although ultimately explainable by the standards of Early Modern scholarship, the awkwardness of a text like the *Würzburger Lithography* stands out even for its context. Having to provide an explanation for phenomena of such sundry appearance and of ultimately in-decidable nature normally leads to a lot of inconsistencies, and even outright contradictions, within the text and quite understandably accounts for Beringer’s recourse to obsolete theories and bygone authors (such as the Paracelsian Oswald Crollius, a rather unusual reference to have in an eighteenth-century century scientific tract), his reluctance to formulate a definite argument and his reliance on understated presumptions. I argue that all these features make the analysis of Beringer’s story not so much a case study of the *pars pro toto* type (see Swanborn 2010: 38–41) – that is, cutting out a case from a wider context and studying it in its nuances, the respective case remaining nevertheless largely consistent with that context –, but a case study in what may be called ‘semiotic microhistory’. By that I mean delineating the profile of a case so idiosyncratic, so peculiar, that it somehow creates its own context, a case that, although connected to it through numerous ties, does not fully adhere to the large-scale culture of its time.

I consider the term ‘semiotic microhistory’ to be pertinent here – and not just because this study focuses, in the fashion of microhistorical research, on the ramifications of a single case. More importantly, it is pertinent because the analysis of the Beringer affair poses a problem – i.e., the extent to which a marginal case (an event of interpretation) is representative for, or can afford valuable insights to, the state of semiotic thinking of its time – that mirrors or, at any rate, is consonant to, microhistory’s preoccupation for the relationship between the micro and the macro levels of historical reality and for the relation between anomaly and norm, in particular (Grendi 1977, Ginzburg and Poni 1991: 7–10, Ginzburg 1993, Ginzburg 2004, Ginzburg 2007: 41–44). The basic ontological assumption at the core of the microhistorical method is that historical reality is ‘fundamentally discontinuous and heterogeneous’ (Ginzburg 1993: 27), in such a way that research cannot always establish just

what must have been the cultural ‘norm’ in a given time frame only on the basis of what can be readily serialized or generalized. The anomalous case, therefore, is a potentially richer object of analysis. As Carlo Ginzburg argued,

The relationship between norms and transgression is – at least from a cognitive point of view – asymmetrical. No norm can predict the full range of its transgressions; transgressions and anomalies, on the contrary, always imply the norm and therefore urge us to take it into account as well. (Ginzburg 2004: 556)

Thus, a marginal case or a truly exceptional document can reveal much more about the deeper layers of its context than what would be considered typical and easily explainable occurrences. Marginal cases engage diverse and often conflicting elements (habits of interpretation, conceptual reflexes, systems of belief; cf. Ginzburg and Poni 1991: 8, Ginzburg 1993: 31–34). By studying the fabric of these coexisting elements (Ginzburg 1993: 33), the research can extrapolate indicators of an otherwise invisible state of affairs. Thus, according to Edoardo Grendi’s well-known contention, an anomalous document can turn out ‘exceptionally “normal”’ (‘eccezionalmente “normale”’) – however, the ‘norm’ they reveal is essentially heterogeneous and can only be grasped indirectly.⁶² It is in this sense that ‘marginal cases function [...] as clues to or traces of a hidden reality, which is not usually apparent in the documentation’ (Ginzburg and Poni 1991: 8).

Here too, the ‘Beringer affair’ uncovers a perspective on sign creation and sign action in nature which would perhaps have never been revealed, had the *Würzburger Lithography* never been written. The doctor was not the only one who believed in the authenticity of the stones (that is significant enough already, because it proves that such an interpretation was *possible* within that given milieu). Beringer’s testimonies and court documents (Beringer 1963 [1726]: 23, 43–44, 137–139) indicate that quite a few other people, including academics and city officials, were ready to admit the possibility of naturally-formed pictographic (‘hieroglyphic’) stones, as well. In fact, the matter was considered to be so serious and the

⁶² Grendi 1977: 512: ‘Caratteristicamente lo storico lavora su molte testimonianze indirette: in questa situazione il documento eccezionale può risultare eccezionalmente «normale», appunto perché rivelante.’ [‘Typically, the historian works with many indirect testimonies: in this situation, the exceptional document may turn out exceptionally ‘normal’, precisely because it is revealing.’]

hypothesis of the stones' natural origin so compelling, that a court trial was opened in order to settle the facts and sort out the confusion (Beringer 1963 [1726]: 130–141). The 'Beringer affair' is 'normal' in an exceptional way. On one hand, it is evidently exceptional because of its marginality (it is, by all accounts, a singular event, if we disregard the unverifiable anecdote circulated about Kircher). On the other hand, it is 'normal' because it reveals a particular disposition of the intellectual milieu of its time – that 'hidden reality' of understated presumptions which made Beringer's 'discovery' plausible in the eyes of a fair number of learned men. Had the farce not played on those presumptions – however diffuse they may appear to have been – it would not have been so successful. The hypothesis which propelled the present study is that those presumptions are semiotic in their nature (they could be referred to what Eco termed 'cosmological semiotics') and that they are, in fact, largely consistent with contemporaneous elaborations on the idea of 'natural' or 'material hieroglyphs'.⁶³

Such considerations raise the question as to where should the microhistorical study of the Beringer affair be situated within the larger scope of semiotic investigation. So far, two proposals have been made to assign a place for the study of marginal semiotic practices within the compass of semiotic historiography. The first was put forth by Jürgen Trabant (1981) in a paper concerning aspects of historical method. The second was put forth by Umberto Eco (1983a, 1997) in two papers discussing the possible outline of a history of semiotics.

Drawing upon the tripartite scheme elaborated in Nietzsche's essay on *The Uses and Abuses of History for Human Life* (1874), Jürgen Trabant advanced the term 'antiquarian history of semiotics' ('antiquarische Historie der Semiotik') to denote an appropriate methodological framework for the study of cultural practices and theoretical notions with a notable, if understated, semiotic import (1981). In contradistinction to the 'monumental' and the 'critical' ways of writing history, the 'antiquarian' study focuses on minor, particular, and fragmentary remnants of the past. But beyond its inherent limitations and its apparent short-

⁶³ Eco 1997: 735: 'Cosmological semiotics' defines theories 'based on the assumption that the whole universe is a semiotic process. These theories frequently use terms such as "sign", "symbol", "cosmos" or "divine language", but even when they do not so, they imply that the universe is a divine writing (liber scriptu digito Dei) or a self-expressing system.'

sightedness, the antiquarian study can act as a corrective to the grand narratives of ‘monumental histories’. This remedial side of antiquarian scholarship is stressed with regard to a would-be comprehensive history of semiotics (Trabant 1981: 45–48). The proposers of microhistory expressed a similar desiderate, arguing that, because of its potential to reveal irreducible aspects of culture, the study of marginal cases can afford a more nuanced historical understanding (Ginzburg 1993: 21–24, 33). Thus, from this perspective, the ‘antiquarian history of semiotics’, as described by Trabant, is fairly similar in its intentions to the methodological stakes of microhistory.

In a comparable vein, Eco envisaged a three-level outline for a possible history of semiotics which would comprise, alongside explicit and implicit theories, ‘semiotic practices’ of a more sundry sort (1983a: 79–89, 1997). This latter category consists of various aspects of cultural and scientific practices and/or more or less ephemeral events of interpretation that have a distinctive, if unconscious, semiotic flavor or are indicative of a semiotic awareness. Such cases make the object of an ‘encyclopedic’ history of semiotics (Eco 1983a: 80–81). I believe that the ‘Beringer affair’ would fall under this heading.

Both Eco’s and Trabant’s proposals imply that a truly comprehensive historical look would also encompass the ‘outskirts’ of semiotic thought. The present study is a small contribution to this vast project.

CONCLUSIONS AND PROSPECTS FOR FUTURE RESEARCH

The above discussion set out to explore the semiotic aspects of the Early Modern notion of ‘natural hieroglyphs’, by proposing a reinterpretation of the ‘lying stones’ affair of 1726. It was hypothesized that Dr. Johann Beringer’s counterintuitive assessment of the stones and his inability to decide whether they were of natural or artificial origin is suggestive of an implicit semiotic premise and that that premise is largely consistent with contemporaneous elaborations on the idea of ‘natural’ or ‘material hieroglyphs’, particularly as expounded in the works of Giambattista Vico and William Warburton.

The research was conducted following a case study approach and by employing the abductive mode of reasoning. The analysis drew upon written, as well as visual sources. The main techniques of analysis used were interpretive analysis and pattern matching; on occasion, these were aided by vocabulary analysis and analysis of visual practices.

Because of its relative flexibility and its tendency to combine different data sources, strategies and techniques of analysis, the case study research design provided a suitable framework for the type of intensive investigation of a singular event that was undertaken here, while the abductive procedure permitted a potentially more revealing recontextualization of the case.

Returning to the hypothesis formulated at the beginning of this study, it is now possible to state that Beringer interpreted the manufactured stones as divine ideas in concrete form, implicitly likening them to hieroglyphs, on the basis of their pictographic appearance and on what he perceived (or, at any rate, described) as their numinous quality. The results in this research support the idea that, in all likelihood, this understanding of the *Lügensteine* would have provided the basis for his new theory on the formation of fossils. The study also found out that, roughly around the time Beringer made his ‘discovery’, the idea of a concrete

language of objects and beings ('real' hieroglyphic characters) which can signify naturally was a matter of concern on a relatively wider scale, receiving considerable treatment in the writings of Vico and Warburton. As the survey of the early eighteenth century 'material hieroglyph' revealed, the hieroglyph is the closest nexus between natural and cultural modes of expression. It is an overriding semiotic construct (or a semiotic template) which inhabits an interstitial domain between human creativity and nature's creativity, allowing a perfect isomorphy between language, the pictorial arts, and natural products. Furthermore, the hieroglyph covers a set of ambivalent technical and aesthetical terms which relativized the borders between artifacts and natural objects. Although stripped of the esoteric aura Renaissance writers ascribed to it, the 'material hieroglyph' nevertheless kept, because of its naturalness, its potential as a vehicle for sacred content and as a medium for divine communication. Beringer's readiness to acknowledge the possibility of a divinely-determined, meaning-laden sign action in nature that, moreover, takes on the form of stony pictographs, together with his use of hieroglyphic terminology, echoes the characteristics of the 'material hieroglyph'. Admitting, as the results of this study suggest, that the premise from which he inferred the stones' nature is structurally similar with the pattern of the 'material hieroglyph', it is possible to see that not only did this implicitly semiotic premise not prevent Beringer from getting duped, but was the major reason behind his inability to find a way out of the dilemma he was caught in.

Considered from this perspective, the lying stones affair could, in the future, inform a semiotically-aware historical research on the thought patterns that bore on the interpretation of material remnants of the past, whether of natural or artificial origin, during the Early Modern period.

The 'natural hieroglyph' as a sign conception is in itself an intriguing notion, which could be usefully explored in further research. Thus, a greater focus on the occurrences of the term 'hieroglyph' or 'natural hieroglyph' in the nature writing of Wackenroder and Tieck and in the scientific works of Novalis, Goethe, and Ritter could produce interesting findings that would add to our understanding of the semiotic aspects underpinning the natural philosophy of the Early Romanticism.

By focusing on the notion of ‘natural hieroglyph’ as it is revealed through the circumstances of the Beringer case and by discussing it in an ampler cultural context, this research opens up a new perspective not just on the significance of the ‘lying stones’ affair, but also on the history of Early Modern sign conceptions.

KOKKUVÕTE

Dr. Beringeri *Lügensteine* ja „loomulike hieroglüüfide” dilemma kaheksateistkümnenda sajandi loodusfilosoofias ja visuaalsetes praktikates

Kokkuvõte

Käesoleva magistritöö eesmärgiks on edasi arendada varauusaegse „loomulike hieroglüüfide“ mõiste semiootilisi aspekte, toetudes ajaloolisele juhtumianalüüsile, piktograafilistele võltsfossiilidele, mida tuntakse ka „Dr. Beringeri valetavate kividena“. Uurimuse peamiseks hüpoteesiks on, et Beringer lähtub teatavast implitsiitsemist semiootilisest seisukohast, millest ta järeldab, et need piktograafilised kivid esindavad konkreetset vormis jumalikke ideid. See implitsiitne semiootiline eeldus on suuresti kooskõlas arusaamaga „looduslikest“ või „materiaalsetest hieroglüüfidest“, nii nagu toleagaegsed uurimused keeleteaduses ning kultuuri ja religiooni ajaloos neid esitasid. „Loomulik hieroglüüf“ varjab endas sisimat mitmetähenduslikkust (kunstnik vs loomulik, reeglipõhine vs juhuslik, tähenduslik vs tühine), mis on tõlgendamise jaoks dilemmaks. Ma väidan, et Beringeri afäär võimaldab meil visandada arusaama „loomulikust hieroglüüfist“ kui eraldiseisvast semiootilisest konstruktsioonist, mis haarab endasse kaheksateistkümnenda sajandi algupoole keeleteaduslikud, esteetilised ja teaduslikud teooriad ning seetõttu avab uue vaatenurga varauusaegsete märgikontseptsioonide ajaloo mõistmisele.

Töö koosneb kolmest peatükist. Esimesed kaks peatükki uurivad ajaloolist konteksti, mille taustal Beringeri tõlgendused „valetavatest kividest“ läbi viidi. Kolmas peatükk sisaldab selle tõlgenduse detailset analüüsi.

Esimene peatükk esitab figuuridega kivide probleemi Renessansiajal ja varauusaegses geoloogias ja paleontoloogias. Arutlusele tulevad konkreetset terminoloogilised aspektid,

mille abil relativiseeriti piire kunsti ja looduse vahel, võimaldades nii ühe saadusi tõlgendada teise terminites ja selle abil spekuleerimist agentsuse ja tähenduse probleemide üle. Teine peatükk järgneb seejärel mõiste „hieroglüüf“ eestkõnelejatele alates Renessansist kuni XVII sajandi teise pooleni, mil selle mõiste osutusväli laiendati lisaks mittekunstlikele ainelistele märgistele ka konkreetsetele objektidele ja olenditele. Erilist rõhku pannakse varasest kaheksateistkümnendast sajandist pärit „materiaalse hieroglüüfi“ definitsioonile, nii nagu see on visandatud Vico ja Warburtoni töödes, seda nii selle semantilisest kui pragmaatilises mõttes. Esitatakse argumendid näitamaks, et umbes samal ajal, kui Beringer oma „avastuse“ tegi, oli arusaam asjade ja olendite konkreetsest keelest („tegelikest“ hieroglüüfilistest märkidest), mis suudab tähistada loomulikult, suhteliselt laialdase arutelu all. Seetõttu osutab lühike alapeatükk struktuurilistele sarnasustele „materiaalse hieroglüüfi“ ja morfoloogilise malli vahel, nagu see esineb Robinet', Buffoni ja Goethe töödes.

Viimane peatükk sisaldab detailset analüüsi Beringeri poolt kividele antud tõlgendusest. Otseste avalduste ja kaudsete tõendite (tema kasutatud visuaalsed võrdlused, Egiptuse motiivide kordumine jne.) alusel järeldatakse analüüsis, et Beringer tõlgendas kive jumalikult determineeritute, iseend kujutavate „looduse hieroglüüfidena“. Nagu näitab ülevaade varase kaheksateistkümnenda sajandi „materiaalsetest hieroglüüfidest“, seob hieroglüüf tihedalt kokku looduslikud ja kultuurilised väljendusviisid. Ta eluneb vahepiirkonnas inimese loomingulisuse ja looduse loomingulisuse vahel, võimaldades nii täiuslikku isomorfsust keele, kujutavate kunstide ja looduslike produktide vahel. Lisaks hõlmab hieroglüüf hulka ambivalentseid tehnilisi ja esteetilisi mõisteid. Isegi oma esoteerilisest aurast ilmajäetuna säilitab „materiaalne hieroglüüf“ oma potentsiaali pühaliku sisu kandjana. Uurimuses väidetakse, et Beringeri tõlgendus „valetavatest kividest“ kui hieroglüüfidest oli peamiseks põhjuseks tema suutmatusele otsustada, kas need olid looduslikku või kunstlikku päritolu. Kuna ta pidas kive „materiaalseteks hieroglüüfideks“, olid mõlemad võimalused samavõrd tõenäolised.

Töö viimane osa seletab, miks on käesolev analüüs raamistatud semiootilise mikroajaloonaga. Põhjuseid, miks lähenesin küsimusele semiootilise mikroajaloo abil, vaagitakse seoses varasemate katsetega omistada marginaalsetele semiootilistele praktikatele

oma koht laiemas semiootilises historiograafias. Kõige lõpuks ma panen ette käsitada Beringeri afääri „erakordselt „normaalse““ juhtumina semiootiliste praktikate ajaloos, väites, et see näiliselt ekstsentriline seik võimaldab heita pilku tema kultuurilise konteksti sügavamatesse kihistustesse.

FIGURES



Fig. 1.1.a – 1.1.c: Extant specimens of *Lügensteine*.





Fig. 1.1.d: *Lügensteine*, table I from *Lithographiae Wirceburgensis*.

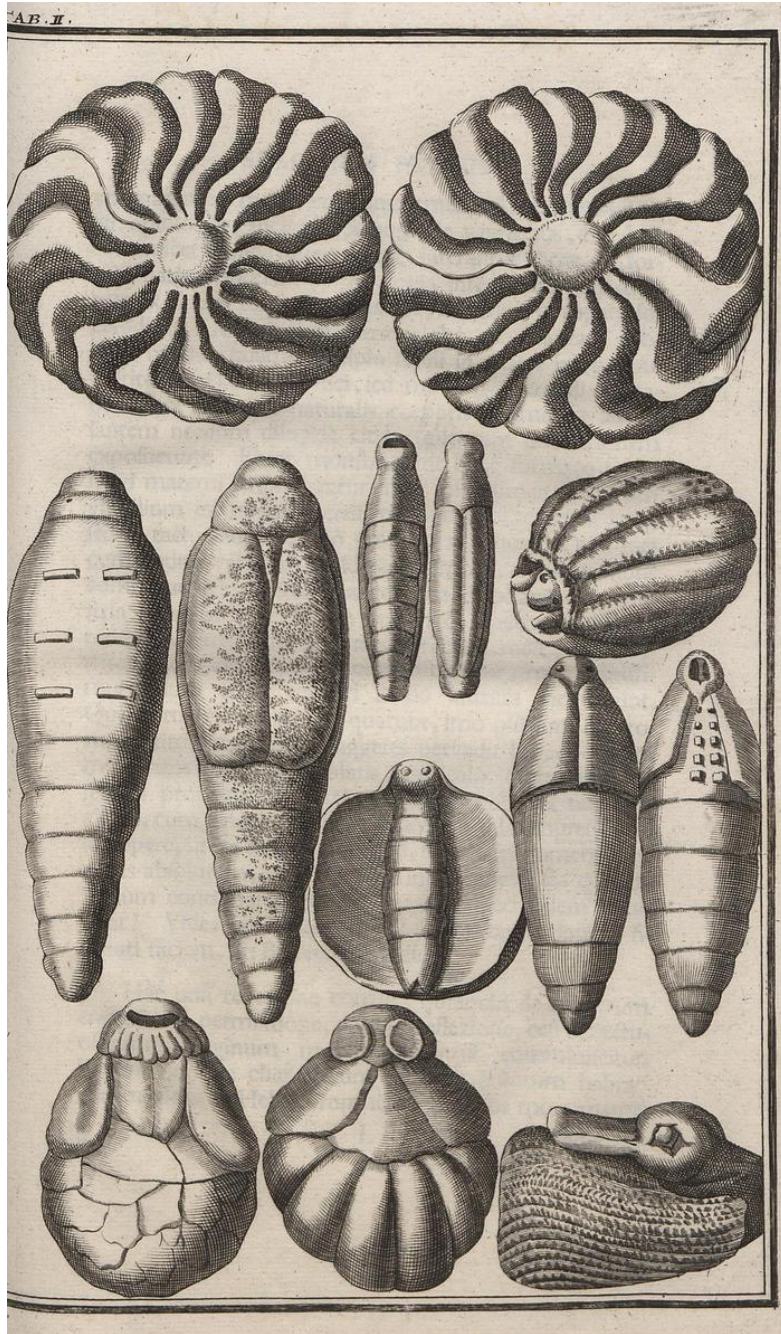


Fig. 1.1.e: *Lügensteine*, table II from *Lithographiae Wirceburgensis*.

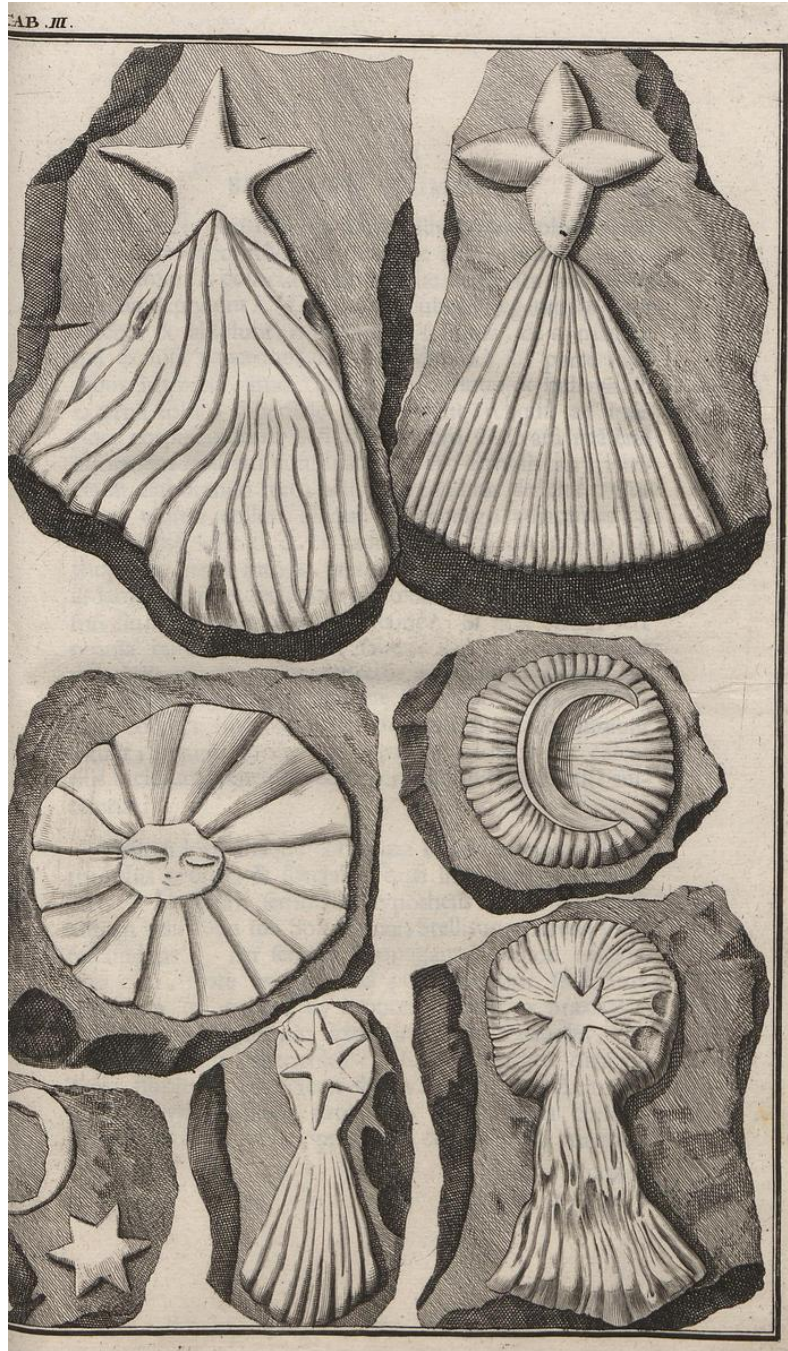


Fig. 1.1.f: 'Astrographical' *Lügensteine*, table III from *Lithographiae Wirceburgensis*.

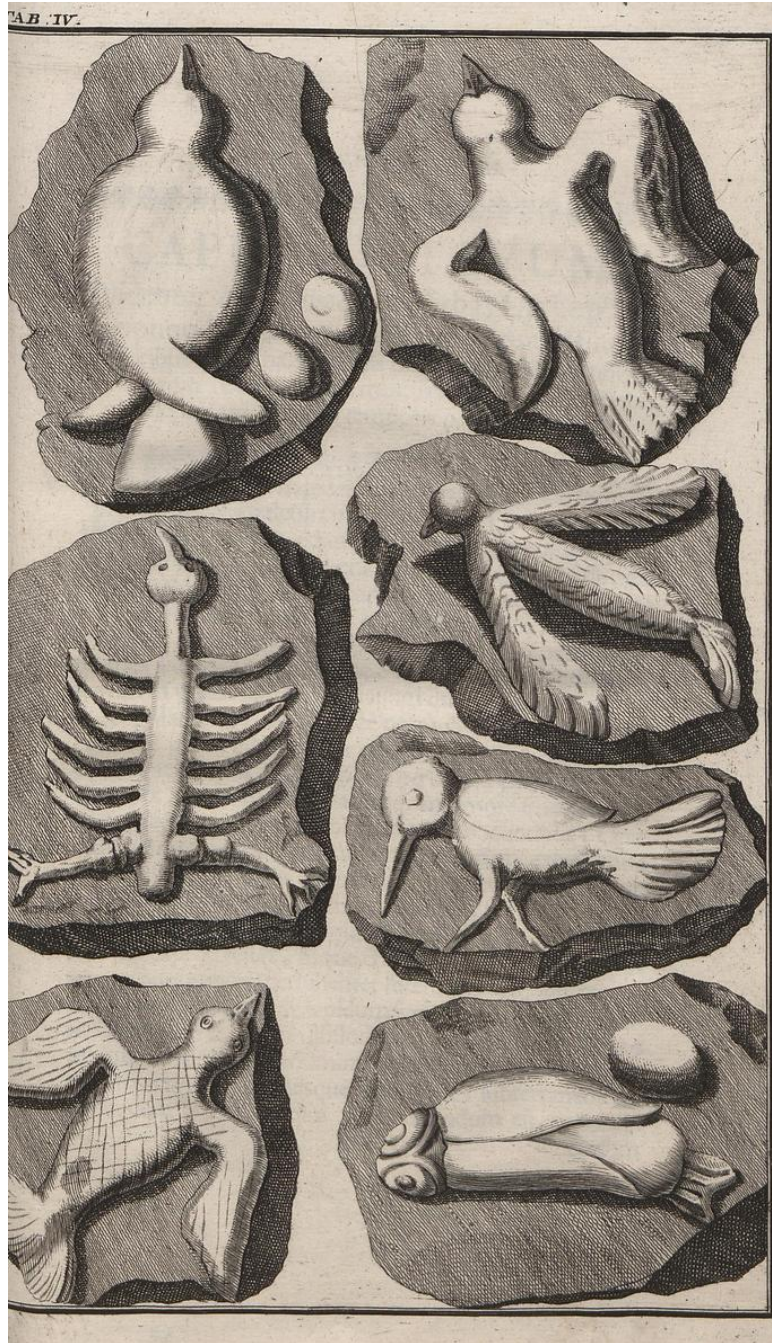


Fig. 1.1.g: *Lügensteine*, table IV from *Lithographiae Wirceburgensis*.

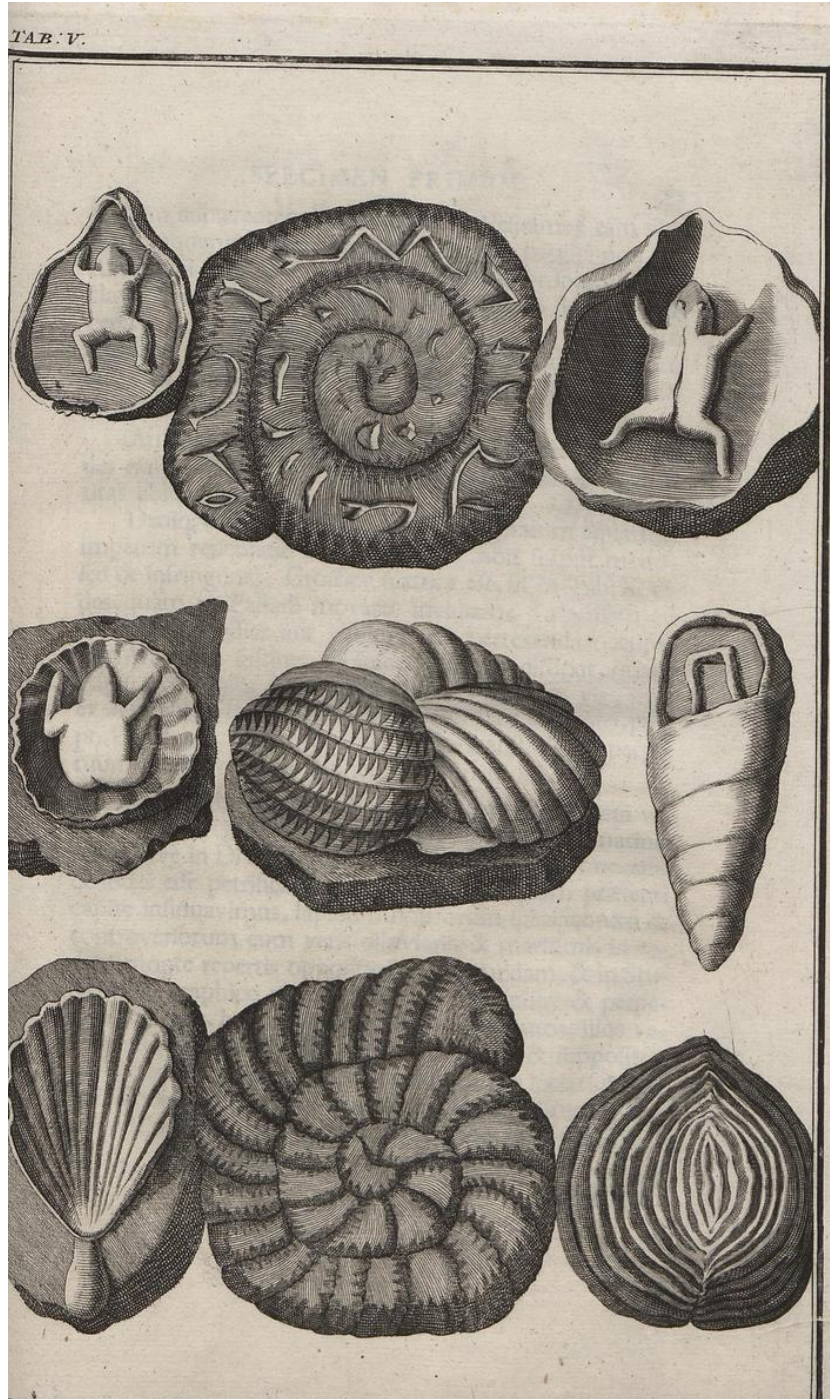


Fig. 1.1.h: *Lügensteine*, table V from *Lithographiae Wirceburgensis*.



Fig. 1.1.i: Phytomorphic *Lügensteine*, table VI from *Lithographiae Wirceburgensis*.

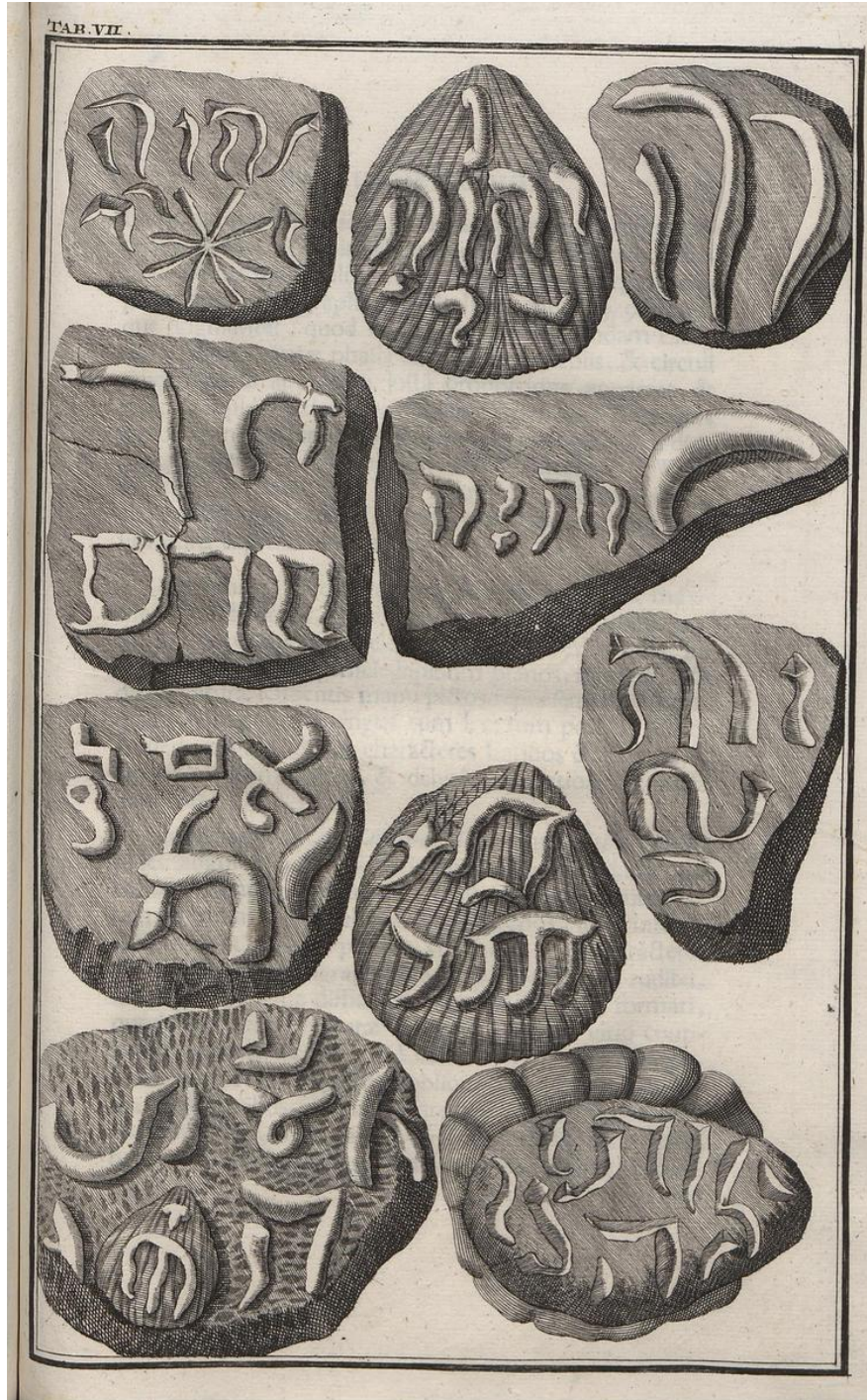


Fig. 1.1.j: Lettered *Lügensteine*, table VII from *Lithographiae Wirceburgensis*.

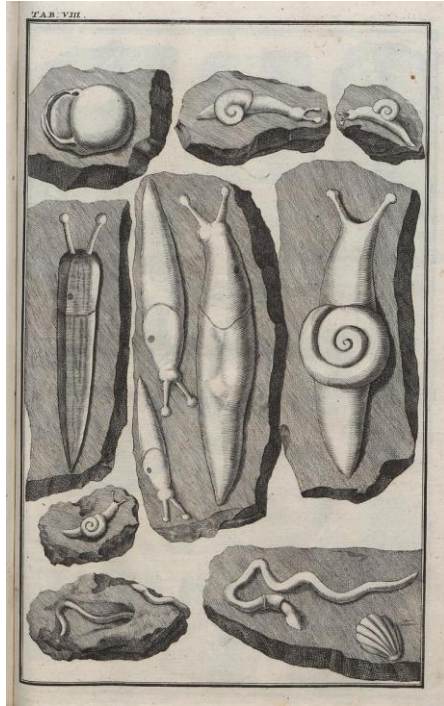
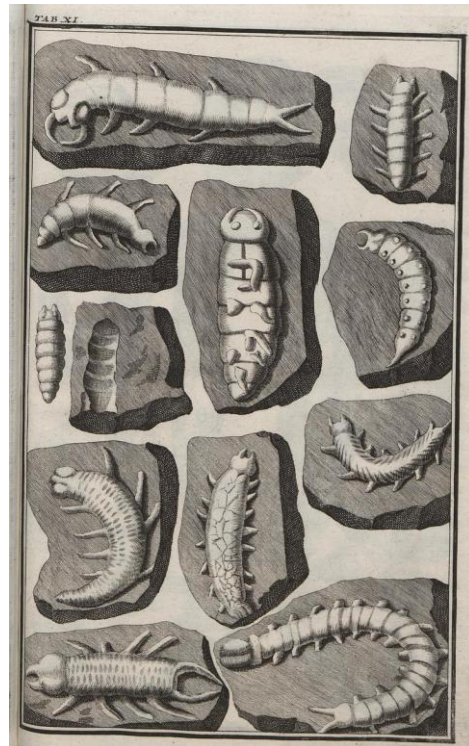


Fig. 1.1.k – 1.1.n: *Lügensteine*, tables VIII – XI from *Lithographiae Wirceburgensis*.



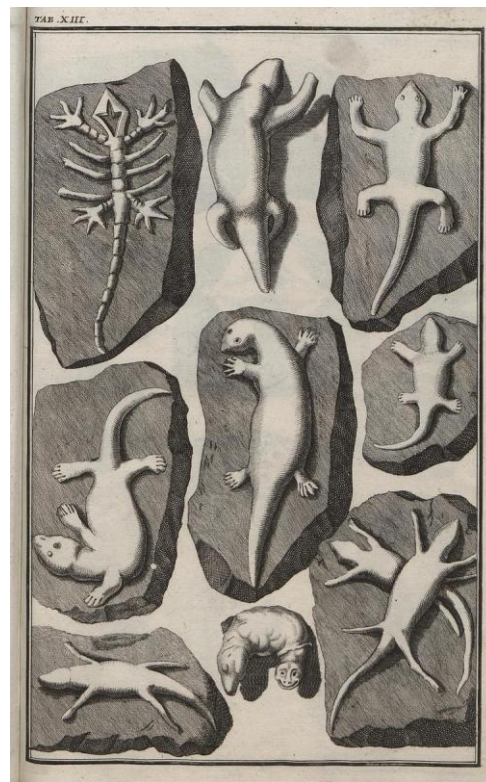


Fig. 1.1.o – 1.1.p: *Lügensteine*, tables XII – XIII from *Lithographiae Wirceburgensis*.

Fig. 1.1.q – 1.1.r: Extant specimens of *Lügensteine* featuring images of frogs and lizards.



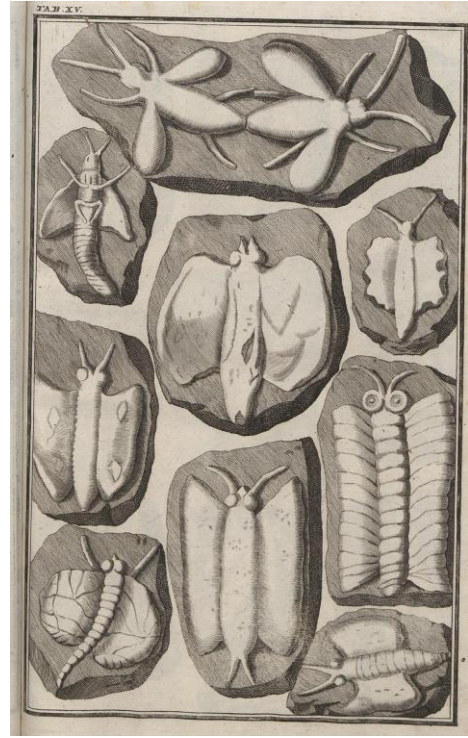
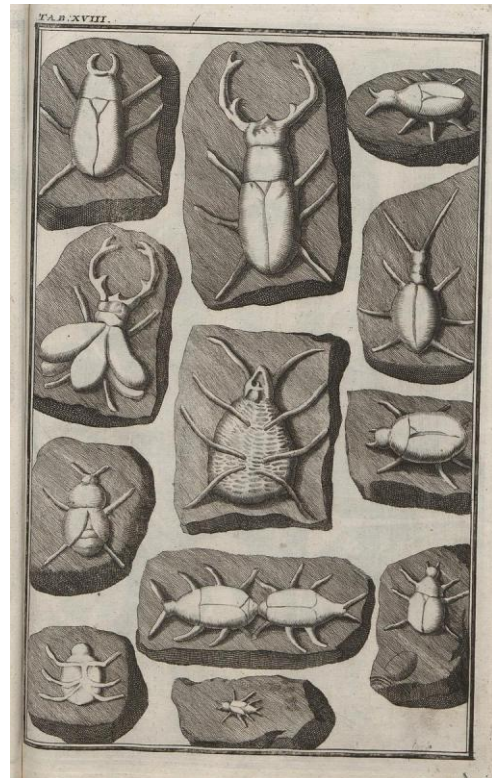
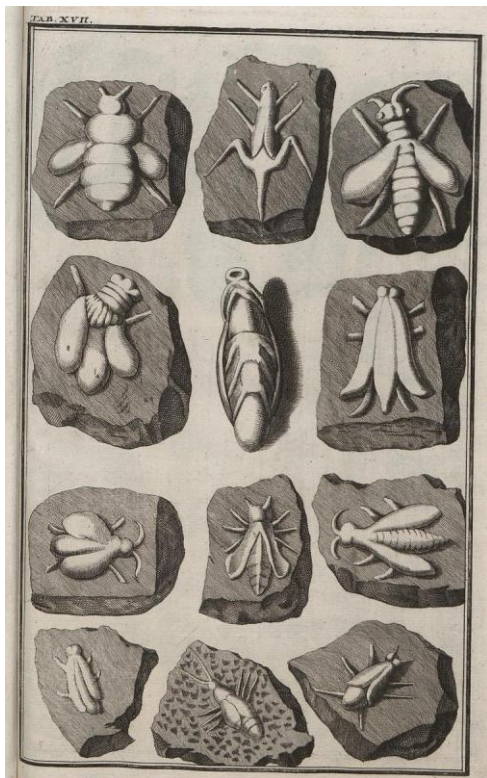


Fig. 1.1.s – 1.1.v: *Lügensteine*, tables XIV - XVII from *Lithographiae Wirceburgensis*.



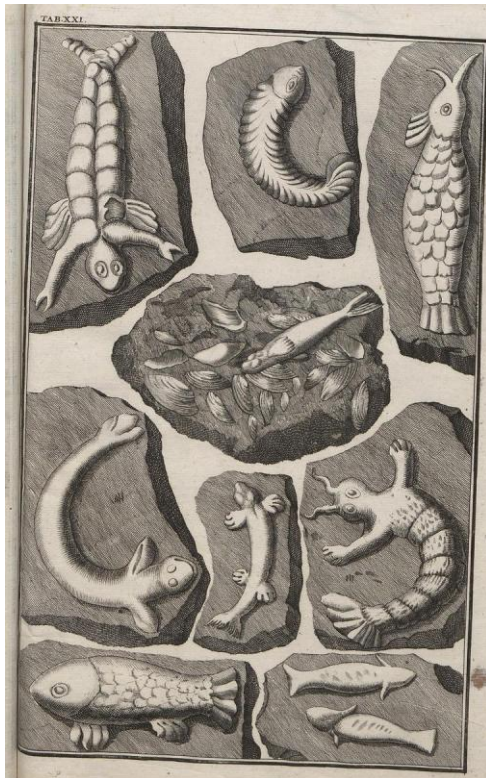
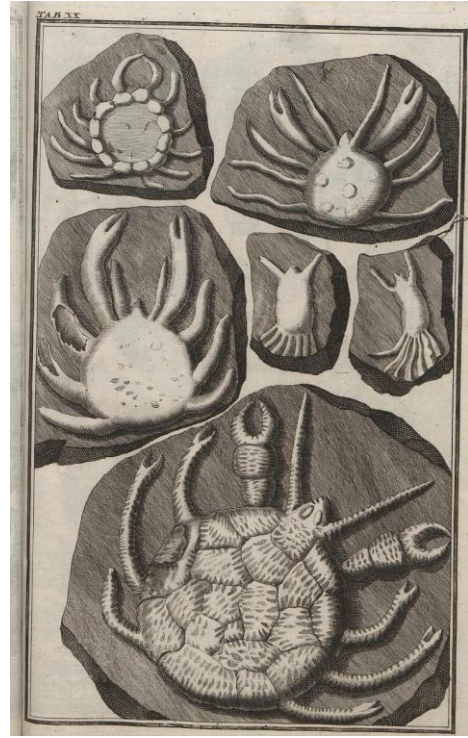


Fig. 1.1.w – 1.1.y: *Lügensteine*,
 tables XIX – XXI from
Lithographiae Wirceburgensis.

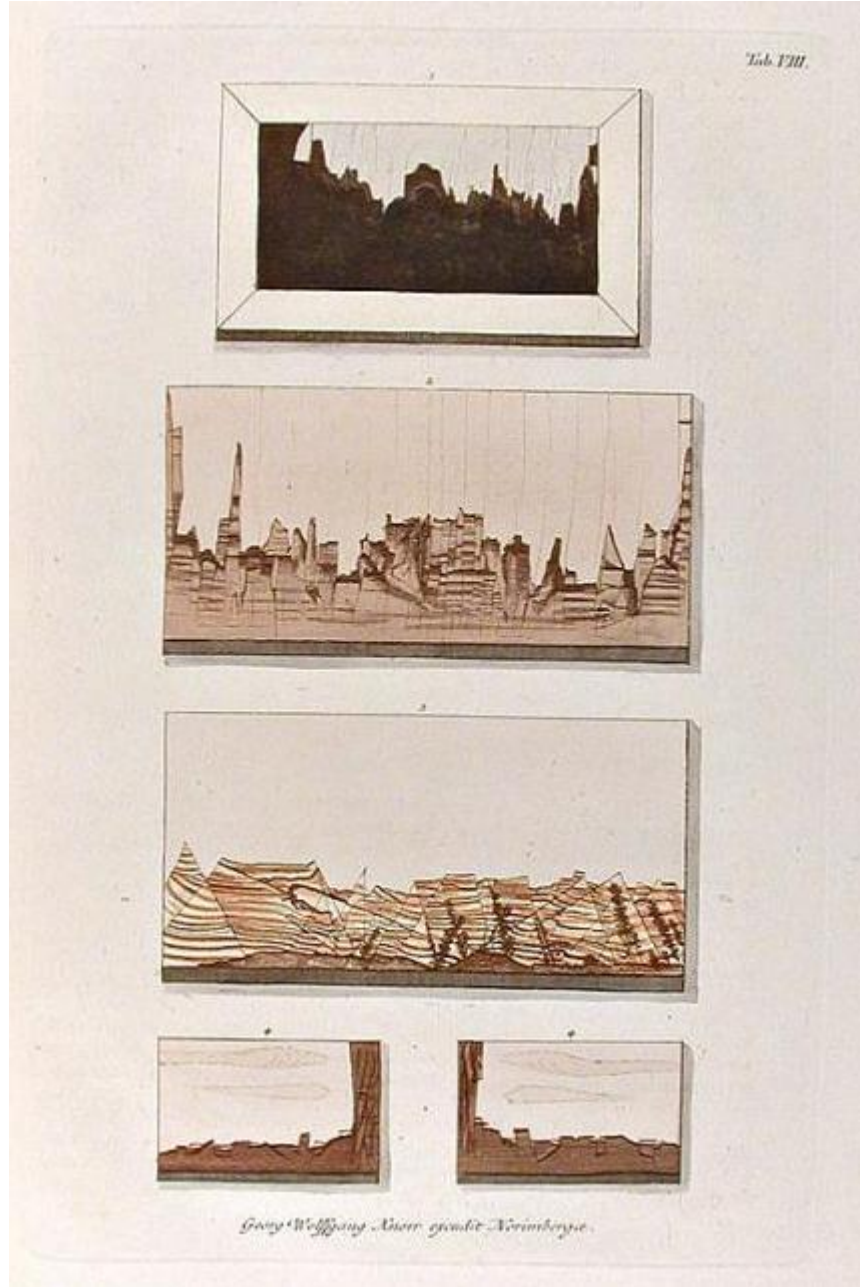


Fig. 1.2.a: Georg Wolfgang Knorr, 'Florentine marbles', table VIII from *Recueil des monumens des catastrophes que le globe terrestre a éssuiées*, 1768–1775.

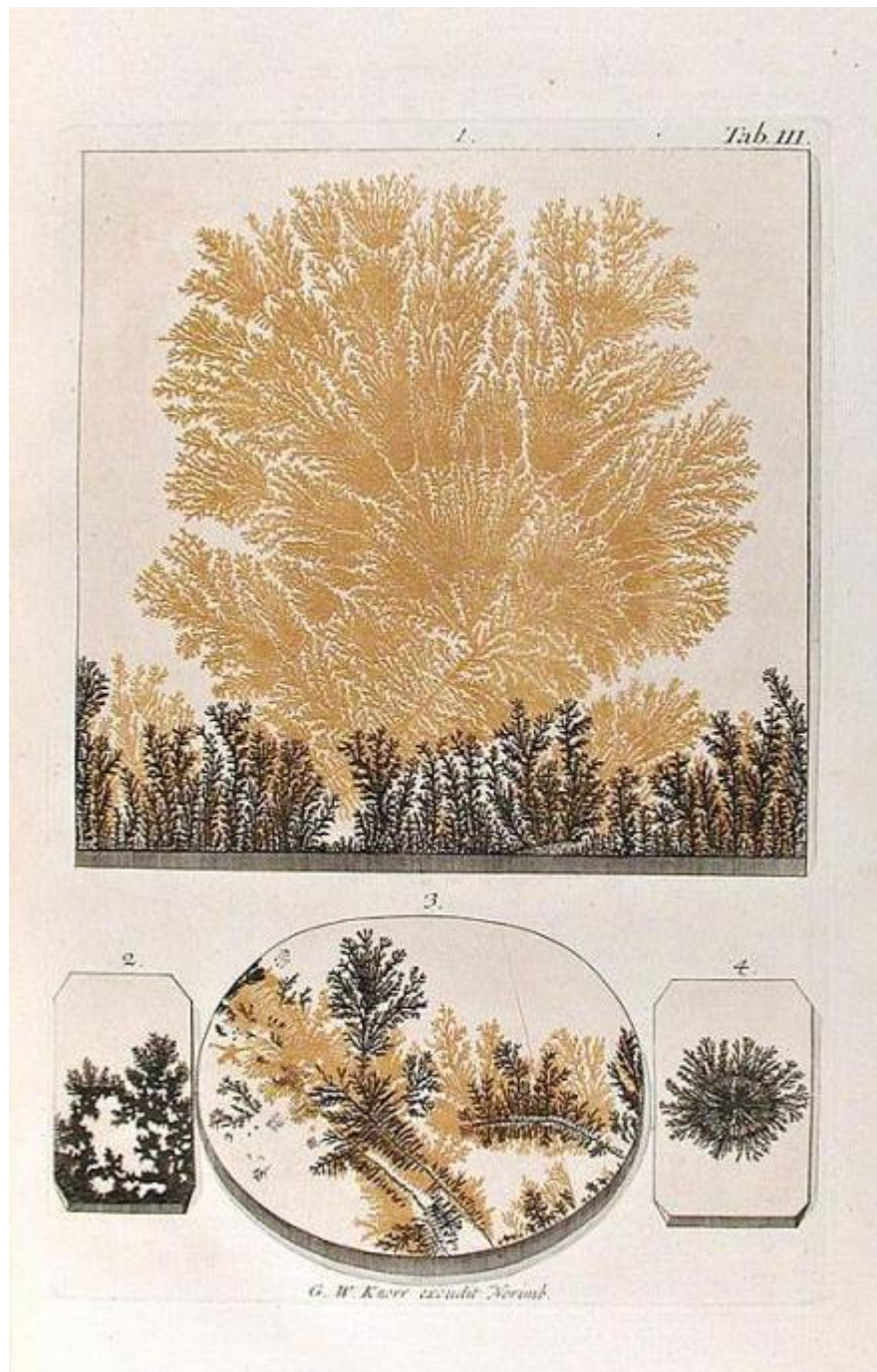


Fig. 1.2.b: Georg Wolfgang Knorr, dendritae, table III from *Recueil des monumens des catastrophes que le globe terrestre a éssuiées*, 1768–1775.



Fig. 1.2.c: Johann König, *The Last Judgment*, first half of the seventeenth century, Museum Gustavianum, Uppsala.



Fig. 1.2.d: Ulisse Aldrovandi, petrified mushroom and stone with the effigy of a dog as two examples of the artistry of nature.

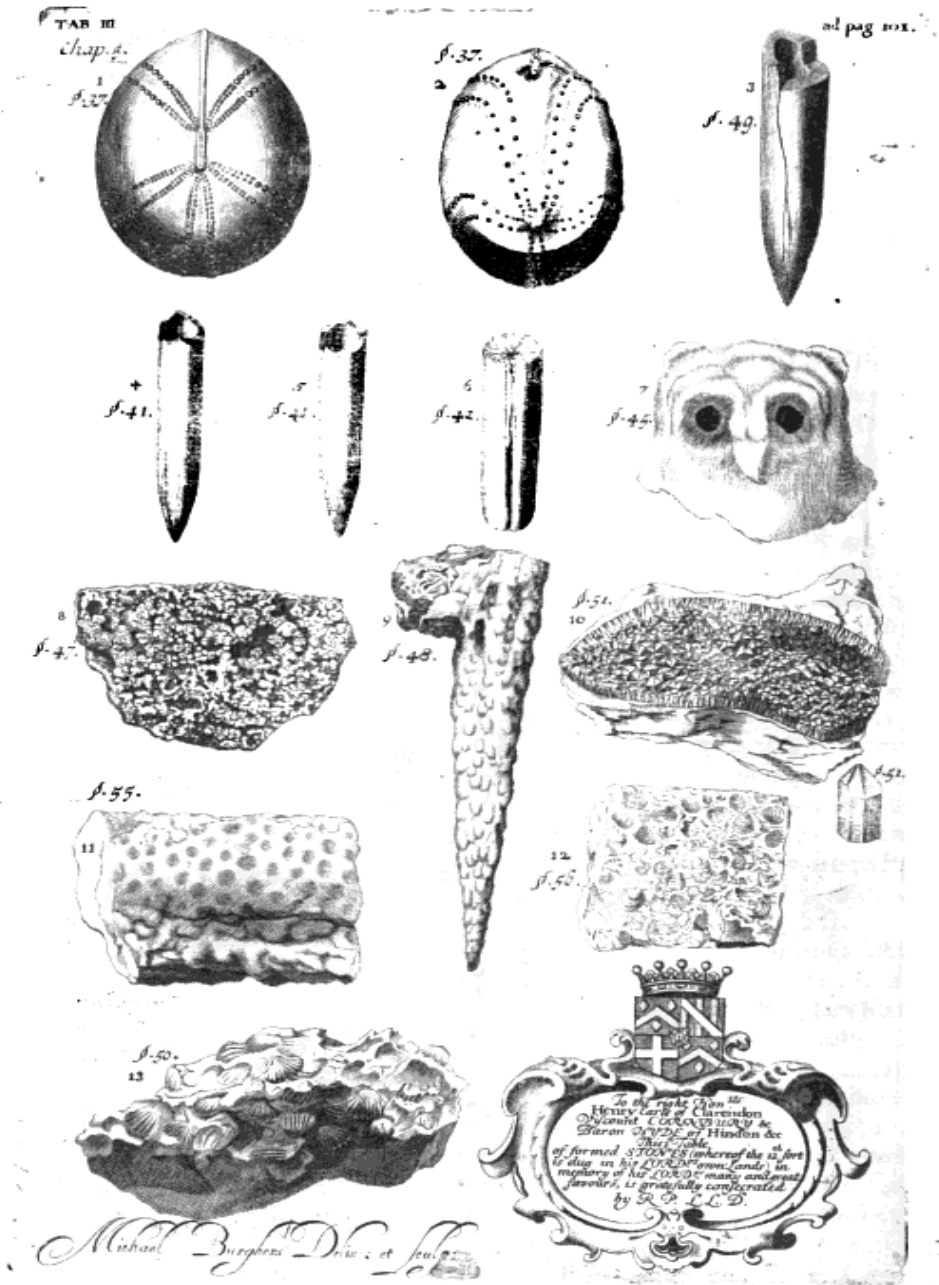


Fig. 1.2.e: Robert Plot, figured stones, various fossils and an owl-shaped stone, table III from *The Natural History of Oxfordshire*, 1705.

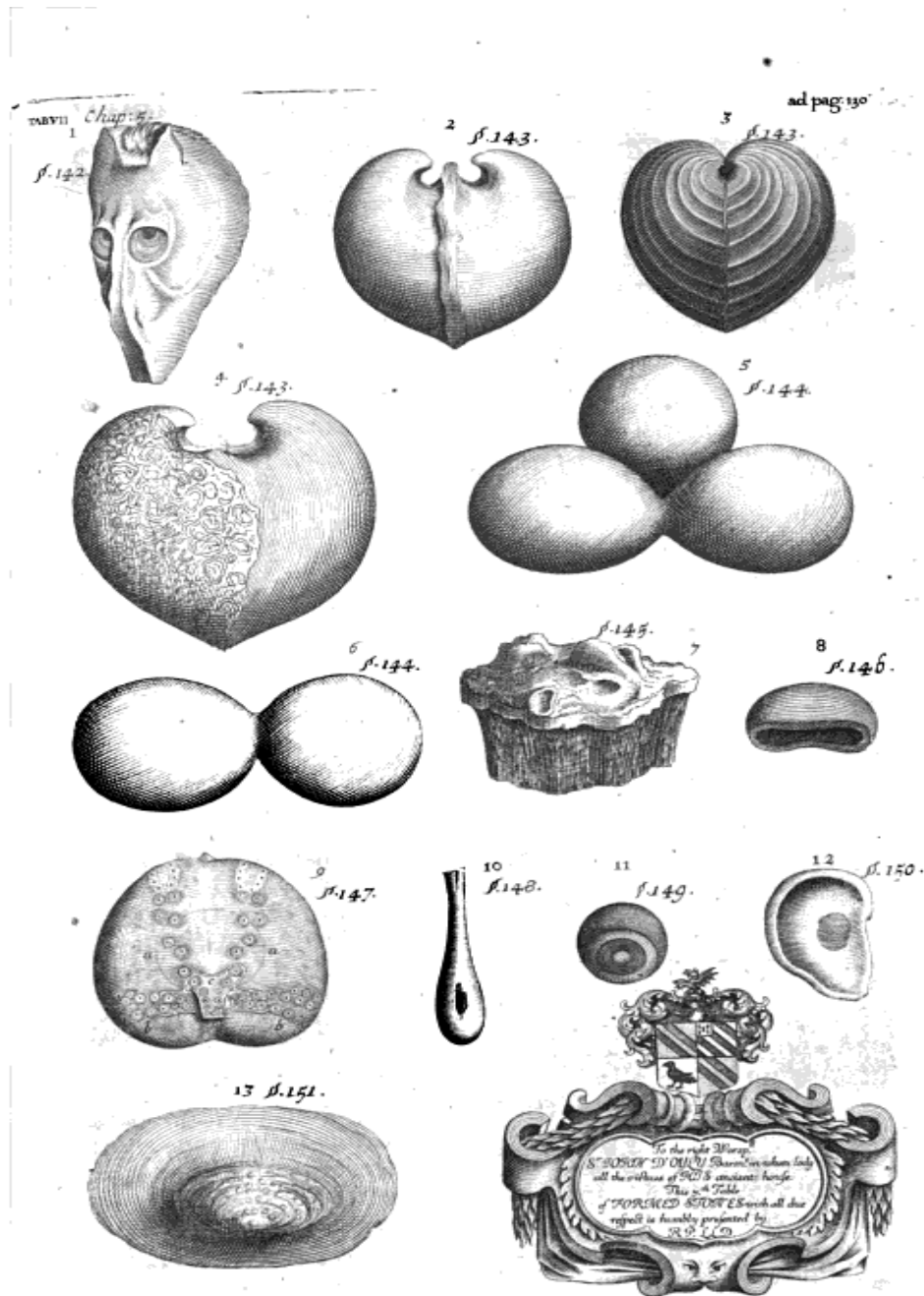


Fig. 1.2.f: Robert Plot, figured stones, various fossils, a horse-shaped and an ear-shaped stone, table VII from *The Natural History of Oxfordshire*, 1705.

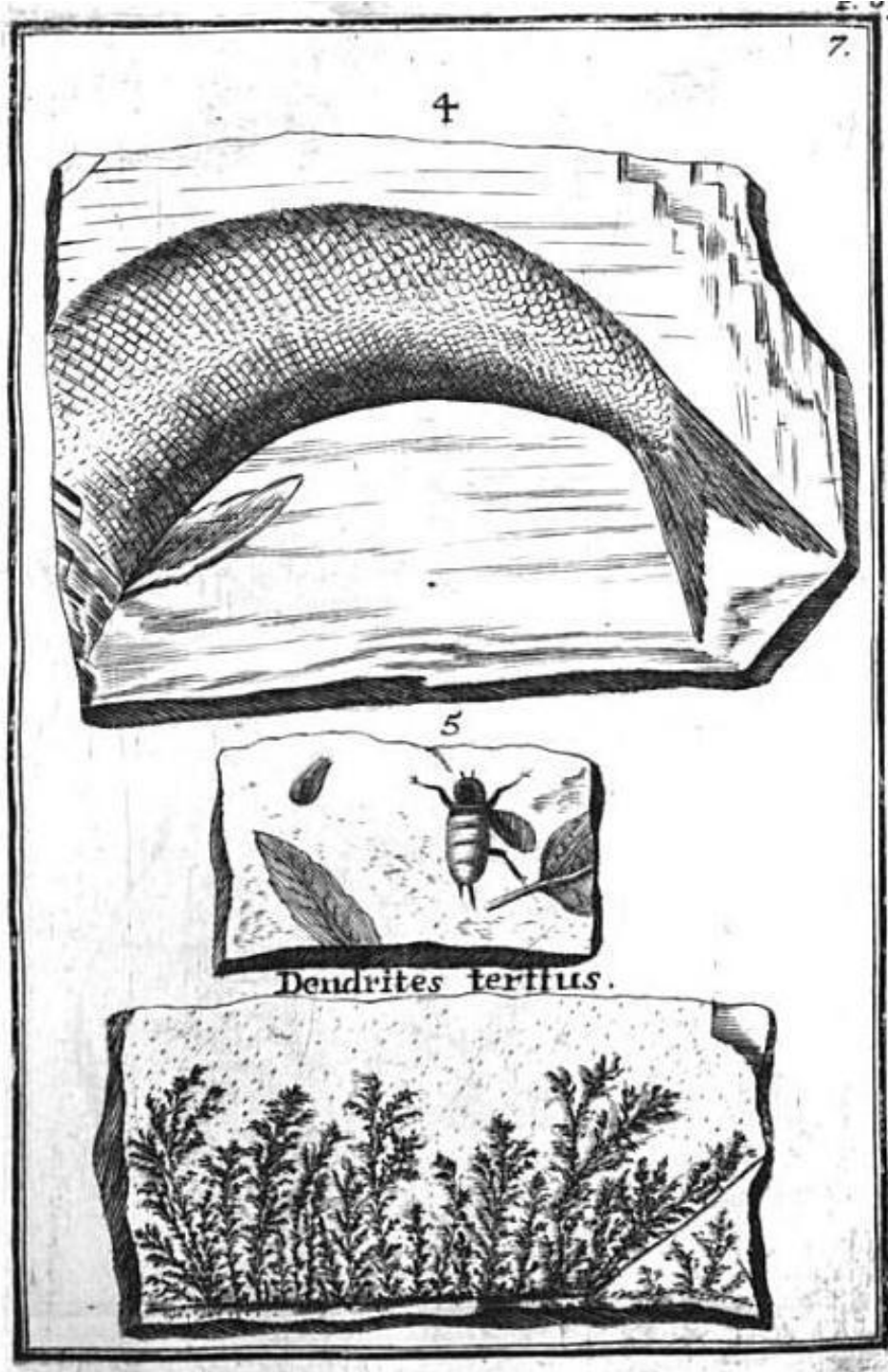


Fig. 1.2.g: Niklas Lang, figured stones: fish fossil, bee and leaves imprint, and dendrites, plate from *Historia lapidum figuratorum Helvetiae*, 1708, p. 38.



Fig. 1.2.h: Athanasius Kircher, a seemingly miraculous apparition of the Virgin with Child on the rocks of a mountainous cavity in Chile, plate from *Mundus subterraneus*, 1678, p. 47.

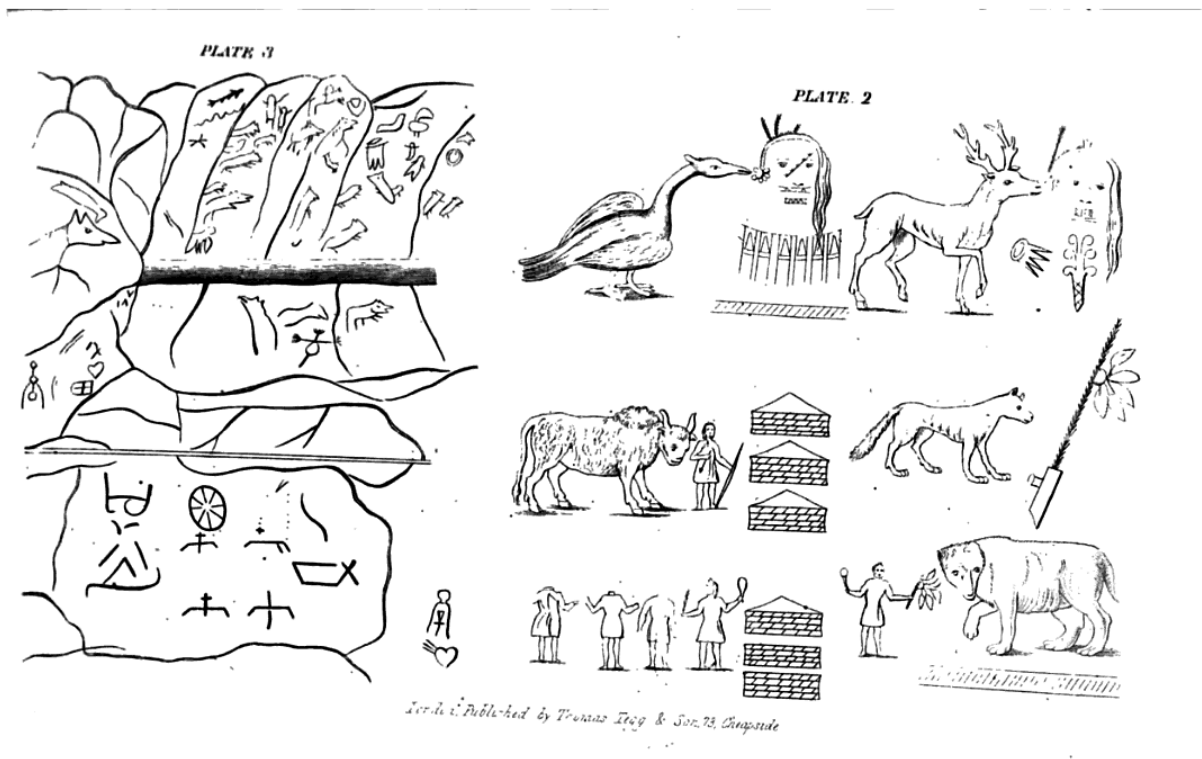
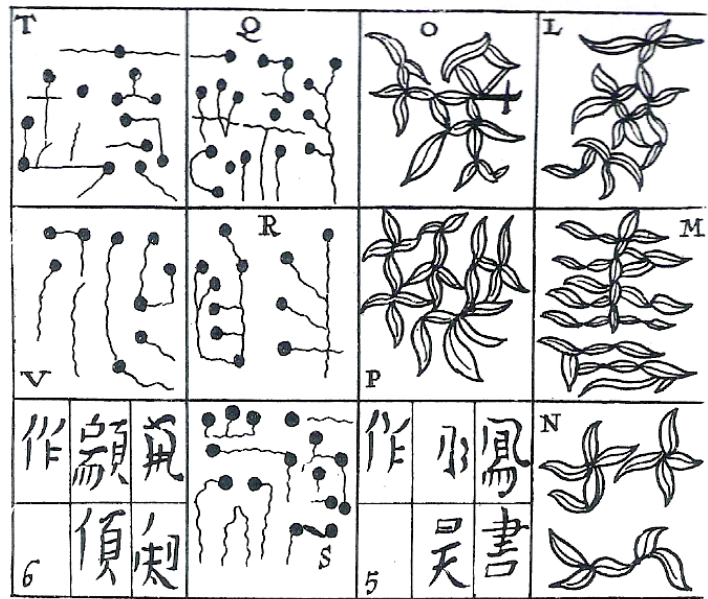
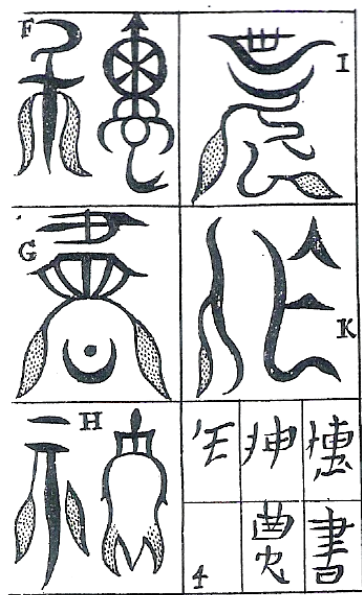


Fig. 2.3.a and 2.3.b: William Warburton, Amerindian and Chinese pictographs, plates 2, 3 and 5 from *The Divine Legation of Moses Demonstrated*, 1765 [1741], pp. 74 and 86.





E...e

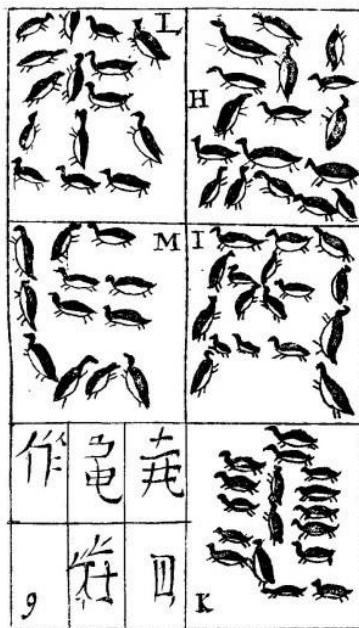


Fig. 2.3.c and 2.3.d: Athanasius Kircher, Chinese proto-'hieroglyphs', representing or having been derived from physical forms (agricultural instruments, worms, leaves, turtles, fish, and grain spikes), plates from *China illustrata*, 1667, p. 229.



Fig. 3.1.1.a: Athanasius Kircher, Egyptian scarab-amulets, illustrations from *Oedipus aegyptiacus*, Vol. III, Roma, 1654, pp. 522, 523, 525, and 527.

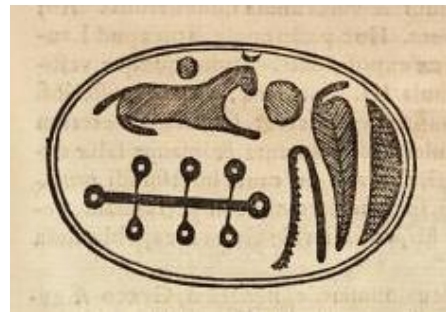




Fig. 3.1.1.b: Athanasius Kircher, 'hieroglyphic amulets' in the shape of human hands (the votive hands of Sabazius), illustration from *Oedipus aegyptiacus*, Vol. III, Roma, 1654, p. 529.



Fig. 3.1.1.c: Bernard de Mountfacon, the votive hands of Sabazius, illustration from *L'Antiquité expliquée et représentée en figures*, Vol. II, Paris, 1722, p. 137.



Fig. 3.1.1.d: The frontispiece of *Lithographia Wirceburgensis*, n.p.

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