

Nature and culture in visual communication: Japanese variations on *Ludus Naturae*

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Abstract

The neurophysiology of vision and cognition shapes the way in which human beings visually “read” the environment. A biological instinct, probably selected as adaptive through evolution, pushes them to recognize coherent shapes in chaotic visual patterns and to impute the creation of these shapes to an anthropomorphic agency. In the west as in the east, in Italy as in Japan, human beings have identified faces, bodies, and landscapes in the bizarre chromatic, eidetic, and topologic configurations of stones, clouds, and other natural elements, as though invisible painters and sculptors had depicted the former in the latter. However, culture-specific visual ideologies immediately and deeply mold such cross-cultural instinct of pattern recognition and agency attribution. Giants and mythical monsters are seen in clouds in the west as in the east; both the Italian seventeenth-century naturalist and the Japanese seventeenth-century painter identify figures of animals and plants in stones. And yet, the ways in which they articulate the semantics of this visual recognition, identify its icons, determine its agency, and categorize it in relation to an ontological framework diverge profoundly, according to such exquisitely paths of differentiation that only the study of culture, together with that of nature, can account for.

Keywords: [semiotics](#); [visual communication](#); [visual signification](#); [pareidolia](#); [Japanese aesthetics](#); [agency](#)

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Keywords: semiotics, visual communication, visual signification, pareidolia, Japanese aesthetics, agency

Quapropter cum has convenientias quas dicis infidelibus quasi quasdam picturas rei gestae obtendimus, quoniam non rem gestam, sed figmentum arbitrantur esse, quod credimus quasi super nubem pingere nos existimant...

(Anselm of Aosta, *Cur Deus Homo*, I, 4)

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1 Introduction: Visual communication between nature and culture

Visual communication can be defined in different ways (Volli 1994). An effective one is through opposition with signification (Volli 2010). Whereas visual signification can be unintentional, there is no communication without intentionality. A sunset *signifies* something, whereas a painting signifies something but also *communicates*, because culture marks it as product of communicative intentionality. However, imputation of intentionality changes across cultures and epochs. Whereas religion may see a sunset as a divine message, secular observers will attach to it an unintentional meaning of nostalgia.

A strong model of communicative intentionality predominates in western visual history: there is visual communication if and only if human intentionality plans to communicate with a spectator through a visual artifact. Yet, this strong model includes exceptions of different kinds: 1) *acheiropoietai* images;¹ 2) natural images; 3) casual images; and 4) pareidolia. In these cases, an image that does not properly result from human intentionality is conceived nonetheless as visual communication. Hence, attribution of intentionality implies the anthropomorphization of various non-human agents, respectively: 1) transcendence; 2) nature; 3) chance; 4) an imaginary and non-identified agent.

Agency in visual communication is a key-theme for art theory, visual anthropology, and visual semiotics. Scholars have long questioned how human beings single out images, how they attribute meaning to them, how they consider them as message from another intentionality, how images signify and communicate beyond their creator's intentionality, and how their perception leads to pragmatic effects in the world.² Neurophysiological and cognitive research suggests that human beings are hardwired to recognize meaningful

1 That is, images that are believed to be the product of a non-human, usually transcendent, agency, like the Mandylion of Edessa.

2 Classics on this domain include David Freedberg's *The Power of Images* (1989), which bears on the pragmatics of images in western art; William J. T. Mitchell's *Picture Theory* (1994), which theorizes on the "visual turn" in contemporary culture; Alfred Gell's *Art and Agency* (1998), which focuses on how images become independent agents; and Hans Belting's *Bild-Anthropologie* (2001), which enquires into the history of images as history of bodies that incorporate and receive them. One of the last published issues of the international semiotic journal *Lexia* was also dedicated to such theme (Leone 2014).

visual patterns in reality, and to believe that they result from intentional agency. The “exceptions” listed above, and especially pareidolia, confirm this view:³ neurophysiology so compels human beings to recognize communicative images that they sometimes identify them although these images do not result from any intentionality.⁴

This biological instinct, however, is shaped and sometimes even repressed by culture. The “power of images” is not a given, but a range that varies through history and cultures. Some visual cultures emphasize the intentionality of artists and image creators; other cultures accentuate that of spectators; and other cultures yet underline the intentionality of visual artworks and artifacts themselves.⁵ Whereas nature pushes human beings to recognize images and their makers in the world, such an adaptive biological attitude is affected by visual cultures: in some contexts, human beings react to an image by looking for its creator; in some other contexts, they disregard the intentionality of the creator and focus on the way they themselves “create” the image in their reception of it; and in some other contexts yet, they concentrate on how the image itself becomes a communicative agent in the world.

2 The cross-cultural physiology of imagination

One of the first western authors to hint at the possibility of non-human made communicative images is Pliny the Elder,⁶ the encyclopedic author of the *Natural History* (*Naturalis Historia*). In book 36 of his monumental work, Pliny expounds on the variety of Greek marbles. He dwells on that which is found in the Isle of Paros and relates an extraordinary event: once a block was split in two halves, and a figure of Silenus made its appearance. Pliny does not disclose

3 Literature on the neurophysiology of pareidolia is growing. On the effects of LSD abuse on the neurophysiology of pareidolia, see Iaria et al. (2010); on gaze cueing in face pareidolia, see Takahashi and Watanabe (2013); on the role of the fusiform face area (Brodmann area 37 in the fusiform gyrus, specializing in the recognition of faces) in religious pareidolia, see Liu et al. (2014); on the cognitive development of pareidolia in children, see Kato and Mugitani (2015). Literature on the relation between (face) visual recognition and (transcendent) agency attribution is abundant. Classics on the topic include Guthrie (1993) and Kelemen (1999, 2004); see also Slingerland (2008: 395).

4 On the adaptive character of face pareidolia, see Brilliant (2000) and especially Brilliant (2007).

5 Umberto Eco has written abundantly on these three kinds of intentionality, calling them in Latin, respectively, *intentio auctoris*, *intentio lectoris*, and *intentio operis* (Eco 1979).

6 Como, 23 – Stabiae, present-day Campania, Italy, 25 August 79.

who the author of this image might have been, but implicitly admits that nature is able to produce complex images, in all similar to those created by human beings.⁷

In book 37 of the *Natural History*, bearing on precious stones, Pliny returns on the subject. He recalls that the king Pyrrhus⁸ possessed an agate, upon which the Nine Muses and Apollo holding a lyre were to be seen. According to Pliny, that was “not a work of art, but the spontaneous produce of Nature, the veins in it being so arranged that each of the Muses had her own peculiar attribute.”⁹ Again, the encyclopedic author suggests that complex visual representations spontaneously emerge in nature, as though nature had the same creative capacity of a sculptor or a painter. Artists are able to imitate nature but, Pliny implies, nature too is able to imitate art in producing natural images of human bodies.

The tradition of recognizing meaningful visual patterns in minerals is long. Most of it bears on divination, that is, the belief that a transcendent agent communicates to human beings through peculiarly shaped stones. The tradition often goes under the name of “talismanic sculpture,” as the French theologian and Christian cabbalist Jacques Gaffarel¹⁰ denominated it in his 1629 treatise in

7 Dipoeni quidem Ambracia, Argos, Cleonae operibus refertae fuere. Omnes autem candido tantum marmore usi sunt e Paro insula, quem lapidem coepere lychniten appellare, quoniam ad lucernas in cuniculis caederetur, ut auctor est Varro, multis postea candidioribus repertis, nuper vero etiam in Lunensium lapicidinibus. sed in Pariorum mirabile proditur, glæba lapidis unius cuneis dividendum soluta, imaginem Sileni intus extitisse (Pliny the Elder, *Naturalis Historia*, 36, iv, 14); [‘Ambracia too, Argos, and Cleonæ, were filled with productions of the sculptor Dipœnus. All these artists, however, used nothing but the white marble of the Isle of Paros, a stone which was known as “lychnites” at first, because, according to Varro, it was cut in the quarries by lamplight. Since their time, many other whiter marbles have been discovered, and very recently that of the quarries of Luna. With reference to the marble of Paros, there is one very marvelous circumstance related; in a single block that was split with wedges, a figure of Silenus made its appearance’] (English translation by John Bostock and Henry T. Riley, 1855).
 8 (Presumably) Epirus (in between current Albania and Greece), 318 BCE – Argos, Peloponnese, Greece, 272 BCE.

9 “Post hunc anulum regis alterius in fama est gemma, Pyrrhi illius, qui adversus Romanos bellum gessit. namque habuisse dicitur achaten, in qua novem Musae et Apollo citharam tenens spectarentur, non arte, sed naturae sponte ita discurrentibus maculis, ut Musis quoque singulis sua redderentur insignia” (Pliny the Elder, *Naturalis Historia*, 37, iii, 5); [‘Next in note after this ring, is the jewel that belonged to another king, Pyrrhus, who was so long at war with the Romans. It is said that there was in his possession an agate, upon which were to be seen the Nine Muses and Apollo holding a lyre; not a work of art, but the spontaneous produce of Nature, the veins in it being so arranged that each of the Muses had her own peculiar attribute’] (English translation by John Bostock and Henry T. Riley, 1855).

10 Mane, France, 1601 – Sigonce, France, 1681.

order to defend it from the “orientalist” accusations of French rationalists (Gaffarel 1629). In Pliny’s case, though, nature is not a message from the gods, but the messenger itself, which creates artistic forms within itself with no other purpose than beauty.¹¹

The latter is a cross-cultural tradition, witnessing to the cognitive mechanisms of visual pattern recognition. Italian decorative stones include the so-called *paesine*, in English, ‘ruin marbles.’ They are extracted almost exclusively in the province of Florence. Their particular morphological and chromatic configuration seems to represent natural or urban landscapes. Figure 1 reproduces a *paesina* found on the Tuscan Apennine mountain, which gives the impression of depicting an arid mountainous landscape, like a US canyon. When human beings see this image, it is virtually impossible for them not to recognize a landscape in it, as if the mountain had produced a self-portrait of itself in one of its stones.



Figure 1: Paesina found in the Tuscan Apennine mountain, near Florence. Source: Entry “Pietra paesina” in *Il magico mondo di minerali & gemme: Guida pratica per scoprirli e collezionarli*. Novara: De Agostini, 1993.

Paesine have been rare collectibles at least since the fifteenth century. The Medici family had a collection of them, as well as the Holy Roman Emperor Rudolph II,¹² Philip II, Duke of Pomerania,¹³ Gustav II Adolf, King of Sweden,¹⁴

¹¹ Two art historians have dealt in-depth with this second tradition: Jurgis Baltrušaitis (Jurbarkas, Lithuania, 7 May 1903 – Paris, 25 January 1988), who devoted one of the four chapters of his book *Aberrations: Quatre essais sur la légende des formes* (1957) to the so-called *pierres imagées* [‘stones with images’]; and Roger Caillois (Reims, 13 March 1913 – Le Kremlin-Bicêtre, France, 21 December 1978), who devoted a book to *L’Écriture des pierres* (1970), “the writing of stones.”

¹² Vienna, Austria, 18 July 1552 – Prague, Bohemia, 20 January 1612.

¹³ Neuenkamp, Germany, 29 July 1573 – 3 February 1618.

¹⁴ Castle Tre Kronor, Sweden, 9 December 1594 – Lützen, Electorate of Saxony, 6 November 1632.

and other early modern aristocrats (Minvielle 2000, 2011). *Paesine* inspired not only collectors, but also artists. The seventeenth-century Dutch painter Mathieu Dubus¹⁵ executed a *View of Sodoma and Gomorra*, currently in a private collection at The Hague, simulating a *paesina* in the background (Figure 2). In this vertiginous *mise en abyme*, the painter imitates nature that imitates a painter that imitates nature.

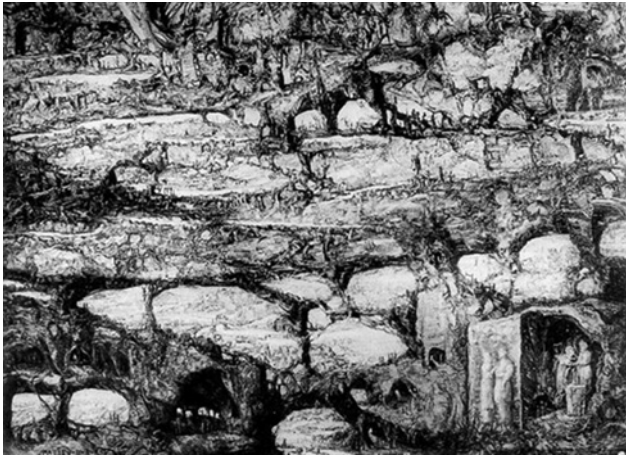


Figure 2: Mathieu Dubus (Flanders c. 1590–1665/1666), *View of Sodoma and Gomorra* (aka Rocky Landscape) 47 × 63 cm. The Hague: Private Collection.

In the twentieth century, surrealist artists such as André Breton¹⁶ or the architect Fernand Pouillon¹⁷ took an interest in these uncanny stones. *Paesine* stones inspired poets as well. Caillois himself devoted verses to them. Chilean Nobel Laureate Pablo Neruda¹⁸ wrote the most famous poem about these peculiar stones upon his 1951 visit to Florence. In *La ciudad*, contained in the collection of poems entitled “Las uvas y el viento” [‘The Grapes and the Wind’] Neruda wrote:

Orange stains... of oxide
green veins on the calcareous peace
that foam mints with its wrenches
or dawn with its rose,

¹⁵ Flanders, 1590–1665/6.

¹⁶ Tinchebray, Orne, France, 9 February 1896 – Paris, 28 September 1966.

¹⁷ Cancon, France, 14 May 1912 – Belcastel (Aveyron), France, 24 July 1986.

¹⁸ Parral, Chile, 12 July 1904 – Santiago del Cile, Chile, 23 September 1973.

thus are these stones:
 nobody knows whether they emerged from the sea or to the sea return,
 something caught them while they were alive,
 they expired in immobility
 and built a dead city.
 A city without cries, without kitchens,
 a solemn enclosure... of purity,
 pure forms fallen
 in a disorder without resurrection,
 in a multitude that lost its gaze
 in a grey monastery
 condemned to the naked truth of its gods. (Neruda 1999: 916–918)

As a consequence of the cognitive instinct that pushes human beings to identify intentional iconic messages in chaotic visual environments, stones encourage fantasy cross-culturally. In no culture this instinct has given rise to more refined reverie than in the Japanese one.

Another Nobel Laureate, Yasunari Kawabata,¹⁹ referred to the Japanese art of landscape stones in “Japan, the Beautiful and Myself,” the speech that he read upon receiving the prize on December 12, 1968. He said:

Nothing is more complicated, varied, attentive to detail, than the Japanese art of landscape gardening. Thus there is the form called the dry landscape, composed entirely of rocks, in which the arrangement of stones gives expression to mountains and rivers that are not present, and even suggests the waves of the great ocean breaking in upon cliffs. Compressed to the ultimate, the Japanese garden becomes the bonsai dwarf garden, or the *bonseki*, its dry version.

Suiseki [水石], an abbreviation of the term *sansui keiseki*, which approximately translates as “landscape view stone” or “landscape scenery stone,” is a cornerstone of traditional Japanese aesthetics. It was adopted from China through Korea. In China, “imaginative stones” are still called *gongshi* or *guai shi* (‘fantastic’ or ‘strange stones’) or also *shang-sek*. In Korea, they are presently known as *useok*, ‘eternal stones.’ In Japan, the tradition of recognizing images in stones was increasingly perfected and articulated, gaining peculiar characteristics. Beginning in the Muromachi period,²⁰ particularly in the *Nanboku-chō* period era (南北朝時代 *Nanboku-chō jidai*; 1336–1392), it flourished under Emperor Go-Daigo (後醍醐天皇 *Go-Daigo-tennō*)²¹ – who was an avid collector

¹⁹ 川端 康成 (Kawabata Yasunari); Osaka, 11 June 1899 – Zushi, 16 April 1972.

²⁰ The Muromachi period (室町時代 *Muromachi jidai*) is a segment of Japanese history running from approximately 1336–1573.

²¹ Heian Kyō, Kyoto, 26 November 1288 – Yoshino no Angū, Nara, 18–19 September 1339.

of imaginative stones – and became popular in the late Edo (1600–1868) and early Meiji (1868–1911) periods. In Japan too, imaginative stones have inspired both poets and painters. The scholar, poet, and painter Rai San'yō (賴山陽)²² must have contemplated at length a stone in his possession, which tradition entitles “Li Po Meditating on a Waterfall” (Figure 3).



Figure 3: Li Po Meditating on a Waterfall, stone, height approx. 23 cm. Source: Covello Vincent T. & Yuji Yoshimura. 2009. *The Japanese Art of Stone Appreciation: Suiseki and its Use with Bonsai*. Tokyo et al.: Tuttle Publishing.

Originally found in China on Mount Lu Shan, in the Fukien province, it was likely brought to Japan in 1654. The black and white reproduction allows one to appreciate the chromatic (color), eidetic (shape), and topological (position) elements encouraging the gaze to recognize, in the stone, a human figure placidly sitting on a rock. The attribution of a verbal title reinforces the visual identification and adds details to it: the petrified man is the great Chinese poet Li Po (李白),²³ engrossed in meditation before a waterfall. The bottom part of the stone represents itself in a sublimated version, as pedestal for spiritual meditation and poetic musing.

It is no wonder that this stone might have appealed to Rai San'yō, who is remembered as one of the finest Kanshi poets of his time.²⁴ In contemplating the

²² Aki Province, 21 January 1780 – Kyoto, 16 October 1832.

²³ Suiye, Tang Empire, 701 – Dangtu, 762.

²⁴ Kanshi (漢詩) in Japanese designates Chinese poetry in general as well as Japanese poetry written in Chinese by Japanese poets.

stone, he must have beheld a sort of petrified, immobile version of his ideal role-model, in a *myse en abime* wherein a poet would ponder the stony effigy of another poet who was in turn meditating while sitting on a rock. The pragmatic effect of the fractal contemplation must have been enhanced by the unfinished quality of the stone, by its infinite and impalpable mutability under light and gaze.²⁵

Digression into a delicate page in the history of *suiseki* should encourage appreciation of cross-cultural and trans-historical sensibility: the *paesine* of Florence inspired the poetry of Pablo Neruda in the twentieth century as a fine specimen of Japanese *suiseki* must have stirred Rai San'yō's imagination in the early nineteenth century. Imaginative stones offer visual clues that human cognition is compelled, almost constrained, to complete through identification of a represented subject and apposition of a name.

3 The culture-specific ideology of imagination

3.1 Differences in visual articulation

Differences in the cultural reception of this common cognitive principle should not be neglected. First, whereas imaginative stones became a proper aesthetic genre in China, Korea, and especially Japan, they were mostly a mere curiosity in the western artistic tradition. That resulted in discrepant levels of specificity in articulation. Today, the Nippon Suiseki Association officially distinguishes between *toyama-ishi* (遠山石), that is, stones representing distant mountains; *shimagata-ishi* (島形石), having island-like forms; *iwagata-ishi* (岩瀉石), resembling seaside cliffs; *tamari-ishi* (溜まり石), or water-pool stones; *taki-ishi* (滝石), representing waterfalls; *doha* (土坡), containing the figure of an open plain; *danseki* (段石), including the figure of a stepped or terraced plain; *kuzuya-ishi* (茅舎石), having the form of old cottages; *sugata-ishi* (姿石), resembling humans, saints, or animals; *monyōseki* (紋様石), with specific surface patterns, subdivided into *baika-seki* (梅花石; literally, shaped like plum-tree blossoms) and *kikka-seki* (菊花石; literally, chrysanthemum-shaped); etc.

For the sake of pursuing the parallel enquiry into the history and aesthetics of imaginative stones in the east and in the west, it should be mentioned that sixteenth-century Italian naturalist Ulisse Aldrovandi²⁶ attempted an analogous

²⁵ An enquiry into the pragmatic value of unpolished stones, including Michelangelo *non-finiti*, would be in order here.

²⁶ Bologna, 11 September 1522 – 4 May 1605.

classification. The founder of Bologna's botanical garden and a pioneer of European natural history according to both Linnaeus and the Comte de Buffon, Aldrovandi was also an encyclopedic collector of curiosities. In 1648, he published the *Musaeum metallicum in libros quattuor*, literally "The metallic museum," a monumental work of 1,000 pages divided into four sections, in which he listed, categorized, and described material and symbolical characteristics of all minerals known at that time (Figure 4).



Figure 4: Frontispiece of *Musaeum metallicum in libros quattuor*, by Ulisse Aldrovandi (1648).

The concept of *Natura ludens* ('playful nature') or *ludus naturae*, ('caprice of nature') recurs in the work.²⁷ Sixteenth- and seventeenth-century European naturalists referred to it when accounting for bizarre forms found in nature. The idea implied not only that nature was endowed with autonomous agency, but that this agency could be playful and, in certain cases, artistically imaginative. In the *Musaeum metallicum*, Aldrovandi articulates all the mineral products of nature's playfulness. Exactly like in Japanese *suiseki*, he attributes names to categories of stones depending on what they resemble. For instance, he denominates *Chrysocolocynthites* stones that are shaped like gourds (Figure 5).²⁸

Aldrovandi also includes as products of *ludus naturae* several "pseudo-imaginative stones" that modern paleontology would classify as mere fossils. Therefore, he singles out and denominates as many species of stones as there are kinds of fossils. For instance, he proposes to call "Harengites" the stone in which "playful nature" has impressed the figure of a herring (Figure 6).

Although some ancient scholars would interpret these images as traces of extinct living beings, variously explaining the phenomenon (Aristotle, Avicenna, Albert of Saxony, etc.), the idea that they were actually resulting from the figurative capriciousness of nature persisted well into modernity. Interestingly, among the first scholars who realized that fossils were not only icons of living beings, but also indexes, that is, imprints of them, many were not only scientists but also artists: Leonardo da Vinci, Girolamo Fracastoro, and Bernard Palissy. On the contrary, at least until the publication of the *Herbarium diluvianum* by Johann Jacob Scheuchzer (1709), and even better, until the publication of the *Histoire des végétaux fossiles* by Adolphe Brongniart (1828–1847), many scholars, including Aldrovandi, believed that nature could paint and sculpt within itself as though endowed with artistic agency. Thus, Aldrovandi devoted a whole section of his treatise to the *lapides cum figuris a Natura factis*, ('stones with figures made by nature'; Figure 7).

Understandably, stones carrying such prodigious effigies would promptly become divination omens. Here the west meets the east again. Aldrovandi quotes a book that had been published in Rome only five years earlier, in 1643, by Álvaro Semedo,²⁹ a Portuguese Jesuit missionary in China: *Relazione della grande monarchia della Cina* ('report on the great monarchy of China').³⁰

27 Incidentally, the present-day Italian language still has an expression that is a literal equivalent of *ludus naturae*: "scherzo della natura."

28 From *Citrullus colocynthis*, the Latin name of this kind of cucumber.

29 Nisa, Portugal, 1585 or 1586 – Guangzhou, China, 18 July 1658.

30 Rome: Sumptibus Hermanni Scheus.

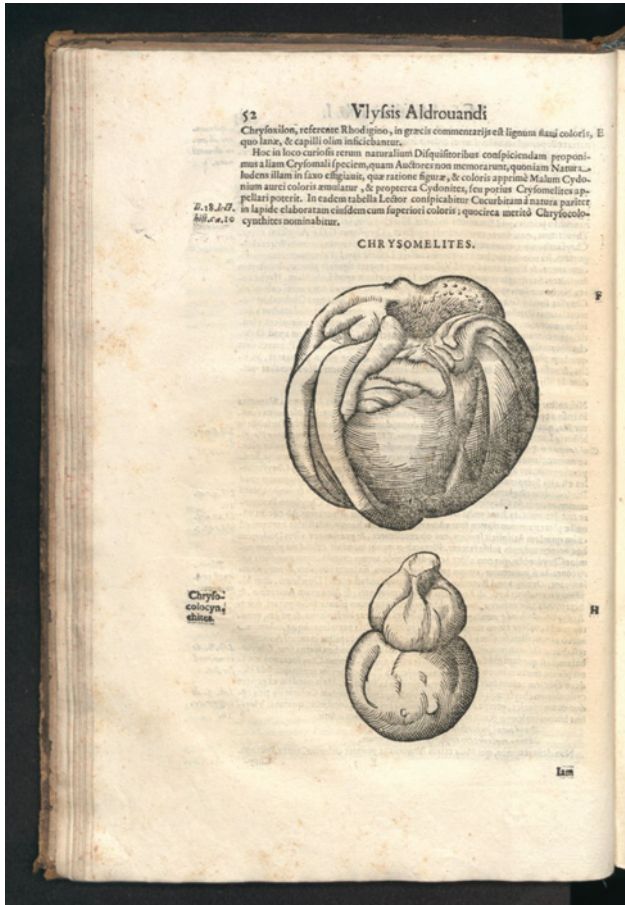


Figure 5: Figure of Chrysocolocynthites in Ulisse Aldrovandi's *Musaeum metallicum* in libros quattuor (1648).

Chapter 18 of the first book is entitled “Delle sette della Cina” (“On the sects of China”).³¹ First, Semedo compares the religiosity of China with that of Japan: “I Cinesi sono universalmente poco inclinati alle Sette, né in gran parte arrivano agli Giapponesi” (“the Chinese are universally little inclined to Sects, and [in this domain] do not usually match the Japanese”). Christianity had been banned from Japan in 1630. That maybe pushed Semedo to such comparison. He then relates the episode quoted by Aldrovandi: Some *Tausi* philosophers, that is, followers of

³¹ At that time, Catholic missionaries would consider as “sects” all non-Christian religions.



Figure 6: Figure of Harengites in Ulisse Aldrovandi's *Musaeum metallicum in libros quattuor* (1648).

Laozi's Taoism, preach in the main square of Beijing in 1622. They promise that their prayers will conjure rain, wished for by all citizens after a long drought. However, at the exact time indicated by the prophecy, what falls from the sky is not rain but strange stones, which devastate the city and the countryside. The anti-Taoist zeal of Álvaro Semedo is an evident bias in the story: the enraged crowd beats the fake prophets, preparing the arrival of the truthful Christian preachers.

Aldrovandi is not immune from this religious bias. That suggests some more general insights about how human beings identify images in nature. On the one

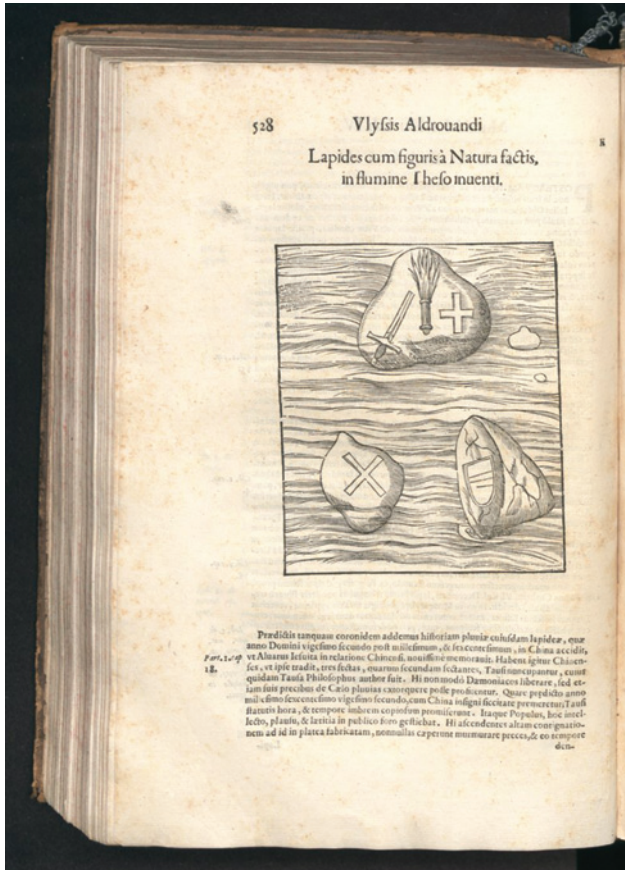


Figure 7: Image of “stones with figures made by nature” in Ulisse Aldrovandi’s *Musaeum metallicum* in libros quattuor (1648).

hand, as it was pointed out earlier, certain cognitive features of this process are probably cross-cultural. Page 756 of Aldrovandi’s *Musaeum metallicum* contains the reproduction of a prodigious marble showing the effigy of a hermit (Figure 8).

The marble that, in mid-seventeenth century, led the Italian naturalist Ulisse Aldrovandi to recognize a hermit therein can be compared with the *sugata-ishi* (娑石) that, in the early nineteenth century, encouraged the Japanese poet Rai San’yō to identify in it the effigy of a meditating poet. Neurophysiological research suggests that human beings are inclined to recognize face-like or body-like visual patterns in nature, probably because such capacity proved adaptive in the past. Thanks to it, aggressors dissimulating their presence in

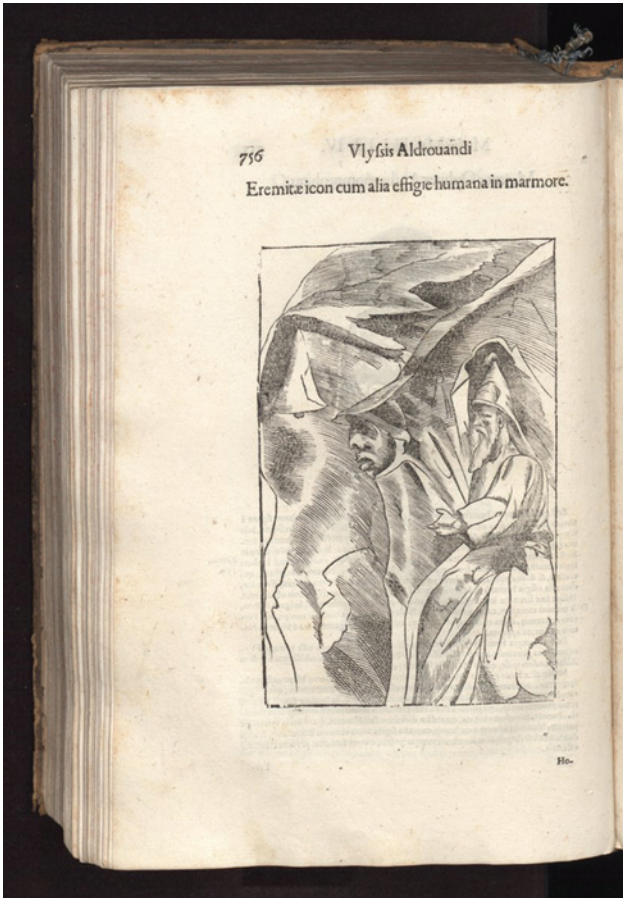


Figure 8: Figure of “marble containing the icon of a hermit” in Ulisse Aldrovandi’s *Musaeum metallicum in libros quattuor* (1648).

the environment through hiding or camouflage could be unmasked.³² Furthermore, the idea of associating the image of a stone with that of the immobile meditation of a hermit must have been appealing both in the east and in the west.

However, three pages later, Aldrovandi reproduces a similar prodigious marble, containing a non-human-made image of crucifixion (Figure 9).

³² A survey of research on face recognition is Calder et al. (2011).

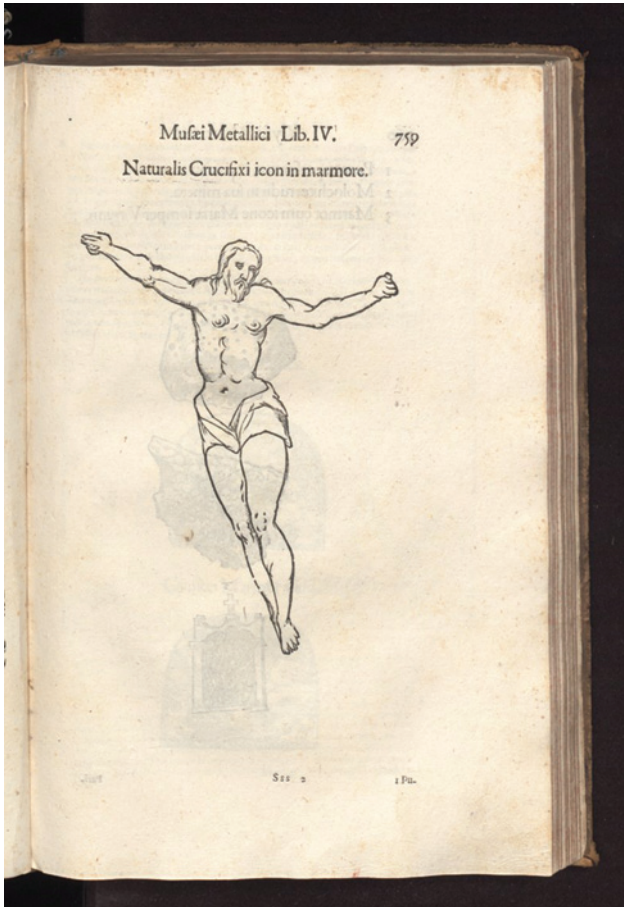


Figure 9: Figure of “marble containing an icon of crucifixion” in Ulisse Aldrovandi’s *Musaeum metallicum in libros quattuor* (1648).

In this case, the marble might well present observers with a curiously cruciform chromatic, eidetic, and topological pattern. However, observers who identify not only a body but the crucified body of Jesus, do so because hold such iconography in their visual cultural memory.³³ A fourteenth-century Japanese observer would have never recognized a crucifixion in this marble.

³³ More specifically, Aldrovandi identifies and reproduces a crucifixion that seems to be modeled after the early seventeenth-century iconography of this subject.

3.2 Differences in agency conceptualization

A second, essential difference between east and west revolves around the concept of agency.

Visual cultures influence the physiological recognition of visual patterns not only at the superficial level of objects and themes, but also at the deeper level of agency conceptualization and attribution. Abstract and yet fundamental differences stand out in comparing the western and the eastern tradition of imaginative stones. For most western sources, the prodigy does not consist merely in the fact that some stones resemble certain aspects of reality, be they human beings, animals, or landscapes. Prodigious stones must also contain icons. They must include unintentional effigies that resemble not reality itself, but intentional representations of it produced by artists. That is why painting, and not sculpture, is the western epitome of art that nature should imitate in its spontaneous playfulness. Western sources usually relate not of stones openly displaying prodigious icons, but of stones that, cut in two halves, reveal prodigious icons in their core, as if these art-like effigies were an immemorial secret kept by nature until it was accidentally discovered. The idea that artistic forms must not be created but rather found in marble is a *topos* in the history of western art, and especially of western sculpture, cherished by Michelangelo and many others. However, in the tradition of imaginative stones, the sculptor's work becomes unnecessary: nature itself discloses the artistic form that lies in its nucleus. A human procedure (cutting the stone) leads to the discovery, but unintentionally. The unintentional dimension of artistic creation is transferred from nature to humans.

Suiseki does not usually imply speculation about what force might have inscribed in stones an image that looks like those produced by human agency. In western sources, on the contrary, the question is central. Identification of prodigious images in nature immediately leads to consider them as signs of a separate dimension, which imprints its creativity on the former.³⁴ Debate among artists and philosophers is particularly controversial as regards the so called "chance" images, that is, images that have not been found in nature, but have been produced through random human procedures.³⁵

One of the first accounts of images of such kind is, again, in Pliny the Elder. Book 35 of the *Natural History* recounts an episode in the life of Protogenes, one

³⁴ On the relation between ideological ontologies ("visions of the world") and forms of representation, see especially Descola (2006) and (2010).

³⁵ Among the several relevant scholarly contributions on chance images, see in particular Ladendorf (1960), Janson (1973), Guthrie (1993), and Elkins (1999).

of the greatest painters in the western artistic tradition, but also one of the most punctilious. In painting what is considered his most accomplished work, a picture of Ialylus, the artist was perfectly satisfied with every aspect of the painting, except for one single element, that is, the foam on the muzzle of a dog represented therein. Its depiction was too perfect to look natural. It seemed artificial. Desperate with painting and repainting the same detail with no avail, Protogenes eventually threw a sponge at the painting, and the irregular stain that the gesture produced painted perfectly spontaneous foam on the muzzle of the dog. The irrational gesture proved so effective, that it subsequently turned into a conventional technique for the production of random images. Later on, as Pliny points it out, Nealces used the same expedient to paint foam on a horse's mouth.³⁶

36 Simul, ut dictum est, et Protogenes floruit. patris ei Caunus, gentis Rhodis subiectae. summa paupertas initio artisque summa intentio et ideo minor fertilitas. quis eum docuerit, non putant constare; quidam et naves pinxisse usque ad quinquagensimum annum... palmam habet tabularum eius Ialysus, qui est Romae dicatus in templo Pacis. cum pingeret eum, traditur madidis lupinis vixisse, quoniam sic simul et famem sustineret et sitim nec sensus nimia dulcedine obstrueret. huic picturae quater colorem induxit ceu tria subsidia iniuriae et vetustatis, ut decedente superiore inferior succederet. est in ea canis mire factus, ut quem pariter et casus pinxerit. non iudicabat se in eo exprimere spumam anhelantis, cum in reliqua parte omni, quod difficillimum erat, sibi ipse satisfecisset. Displicebat autem ars ipsa: nec minuit poterat et videbatur nimia ac longius a veritate discedere, spumaque pingi, non ex ore nasci. anxio animi cruciatu, cum in pictura verum esse, non verisimile vellet, absterserat saepius mutaveratque penicillum, nullo modo sibi adprobans. postremo iratus arti, quod intellegeretur, spongeam inpegit in viso loco tabulae. et illa reposuit ablatos colores qualiter cura optaverat, fecitque in pictura fortuna naturam.

Hoc exemplo eius similis et Nealcen successus spumae equi similiter spongea incompacta secutus dicitur, cum pingeret poppyzonta retinentem eum. ita Protogenes monstravit et fortunam. propter hunc Ialysum, ne cremaret tabulam, Demetrius rex, cum ab ea parte sola posset Rhodum capere, non incendit, parcentemque picturae fugit occasio victoriae. (Pliny the Elder, *Naturalis Historia*, 35, xvi, 101–4); [⁴At the same period flourished Protogenes... Of all his compositions... the palm has been awarded to his Ialysus, now at Rome, consecrated in the Temple of Peace there... There is in this picture the figure of a dog, which was completed in a very remarkable manner, inasmuch as accident had an equal share with design in the execution of it. The painter was of opinion that he had not given the proper expression to the foam at the mouth of the animal, panting for breath, as it was represented; while, with all other parts of the picture, a thing extremely difficult with him, he was perfectly satisfied. The thing that displeased him was, the evident traces of art in the execution of it, touches which did not admit of any diminution, and yet had all the appearance of being too laboured, the effect produced being far removed from his conception of the reality: the foam, in fact, bore the marks of being painted, and not of being the natural secretion of the animal's mouth. Vexed and tormented by this dilemma, it being his wish to depict truth itself, and not something that only bore a semblance of truth, he effaced it again and again, changed his pencil for another, and yet by

The episode is to be categorized as one of the countless “artists’ legends” (Kris and Kurz 1980 [1934]). It nevertheless reveals a key factor of western aesthetics, characterizing its conception of the arts at least since the Greeks. On the one hand, the episode suggests that human creativity is intrinsically limited in imitating nature. Certain aspects of nature, like foam on the muzzle of a dog, are so infinitely complex as to appear chaotic. Any intentional, rational procedure of representation tends to reduce that complexity into a simplified simulacrum of it, thus replacing the idea and the image of chaos with those of order. That is the reason for which the only way in which artists can represent the chaos of nature is to let that chaos represent itself. Artists can imitate the *ludus naturae* – the playfulness of nature – by inviting nature itself to play in their own representation of it. As “imaginative stones,” thus “chance images” result from an “ontological ideology” that constantly tends to single out two separate dimensions in reality: on the one hand, manifestation; on the other hand, an agency that mysteriously works in another dimension but produces effects in the manifested one.

No paintings by Protogenes are extant. It is therefore impossible to know how the foam on the muzzle of Ialysus’s dog might have looked like. Arguably, Protogenes longed for a visual and artistic effect quite similar to that which Japanese aesthetics denominates as *wabi sabi* (侘寂). In order for the pictorial representation of foam to look authentic, it should not possess the characteristics of finitude, perfection, and conclusiveness that Protogenes so skillfully used to achieve in his works. So as to perfectly represent the infinite and unfathomable complexity of nature, imperfection had to be let in the painting. A perfect depiction of nature should have contained imperfection, yet the pictorial skills of Protogenes’s meticulousness were unable to produce it. The random gesture of throwing a sponge at the painting found a natural solution to the impasse, through the intervention of *natura ludens*, playful nature.

The *wabi sabi* visual effect produced by Protogenes’s sponge must have been quite similar to the infinitely multifarious patterns of shapes, colors, and textures that characterize Japanese *raku* pottery (楽焼 *raku-yaki*; Figure 10).

no possibility could satisfy himself. At last, quite out of temper with an art, which, in spite of him, would still obtrude itself, he dashed his sponge against the vexatious spot; when behold: the sponge replaced the colors that it had just removed, exactly in accordance with his utmost wishes, and thus did chance represent Nature in a painting.

Following his example, Nealces, it is said, succeeded in representing the foam at a horse’s mouth; for on one occasion, when engaged in painting a man holding in a pair of horses and soothing them with his voice, he also dashed his sponge against the picture, with the view of producing a like effect’] (English translation by John Bostock and Henry T. Riley, 1855).



Figure 10: Tanaka Chōjirō (長次郎) (1516-?1592). Mid-sixteenth century. Raku teabowl. San Francisco: Asian Art Museum–Chong-Moon Lee Center for Asian Art and Culture.

The production of *raku* pottery too, indeed, stems from an irreducibly complex interplay between the initiative of the potter and nature, represented by one of its most uncontrollable elements, that is, fire. It was exactly this interplay that fascinated western potters when Japanese *anagama* kilns (窖窯) were first introduced in Europe. That happened through labyrinthine paths. One of the western authors that most popularized Japanese aesthetics in Europe between the end of the nineteenth century and the beginning of the twentieth, and particularly after it became extremely fashionable at the 1900 Paris *Exposition Universelle*, was Lafcadio Hearn, also known as Koizumi Yakumo.³⁷ An international author born in Lefkada, one the Greek islands, from an Irish father and a Greek mother, in 1890 Hearn went to Japan as newspaper correspondent, became a teacher in Matsue, and married Koizumi Setsu, the daughter of a local samurai family. He started publishing a series of books that popularized but also exoticized Japan for the western audience.

It was exactly through reading Hearn's books that Bernard Leach,³⁸ currently considered the father of British studio pottery, became interested in Japan, traveled to the country, and, after attending a *raku* pottery party about

³⁷ Yakumo Koizumi (小泉 八雲); Lefkada, United States of the Ionian Islands, 27 June 1850 – Tokyo, Japan, 26 September 1904.

³⁸ Hong Kong, 5 January 1887 – St Ives, Cornwall, UK, 6 May 1979.

1911, undertook studying this art under Urano Shigekichi,³⁹ also known as Kenzan sixth in the tradition of Kyoto potter Ogata Kenzan.⁴⁰ In 1920, Leach went back to Cornwall, Great Britain, together with the influential Japanese potter Shōji Hamada,⁴¹ a major figure in the *mingei* (民芸) folk-art movement; together they founded the Leach pottery in St Ives. In 1922, the Japanese potter Tsuronosuke Matsubayashi, member of a dynasty of potters controlling Asahi pottery since the sixteenth century, was contracted to build the first *anagama* kiln in Europe.

Unlike modern western pottery kilns, *anagama* kilns are fuelled with firewood, which produces not only the heat that is necessary for pottery, but also fly ash and volatile salts. The natural ash glaze that is distinctive of *raku* pottery aesthetics results from the unpredictably complex interplay between flame, ash, and the minerals of the clay body in *anagama* kilns. Since this body will receive a different glaze depending on its position in the kiln and in relation to other clay bodies, loading the *anagama* is one the most difficult tasks in *raku* pottery. Its *wabi sabi* aesthetics stems from the infinite variables of the encounter between human choice and the uncontrollable agency of natural elements.

It was exactly such encounter that saved from despair the Greek painter Protogenes, confronted with the limits of his perfectionism. Uncontrollable interaction between the porous structure of the sponge, colors, and the painted surface, generated a visual pattern that, like the glaze of *raku* pottery, was able to imitate nature by inviting its playful agency to partake in the making of the painting.

Yet, in this case too, differentiation between the east and the west is in order. Protogenes threw his sponge exactly as boxers do it during a match, when the antagonist is too strong to be defeated. The western mythical painter sees his artistic agency as in competition with that of nature, and he invites the imperfection of nature to complete the perfection of the human work only upon a defeat. In *raku* aesthetics, on the contrary, the agency of nature is intrinsically part of the process that leads to the artwork. The potter creates all the conditions to welcome the unpredictability of fire into the making of the work of art. Aware that spontaneous singularity will be achieved only *in cooperation with* nature and not *against* it, the potter does not strive to constrain the *ludus naturae* but includes it in his own artistic play from the beginning.

This further Japanese variation on the playfulness of nature suggests that humans are inherently inclined to attribute a human-like agency to nature, as

³⁹ Shigekichi Urano (浦野繁吉); 1881–1923.

⁴⁰ Kenzan Ogata (尾形 乾山); Kyoto, 1663–1743.

⁴¹ Hamada Shōji (濱田 庄司); Tokyo, 9 December 1894 – Mashiko, Japan, 5 January 1978.

though nature was an artist able to create visual forms through its unfathomable playfulness. Yet, the connotation of the artistic agency of nature varies depending on the predominant aesthetic culture: antagonist that defeats the artist in Protogenes' legend, indispensable companion of creation in *raku* pottery.

A different version of the episode recounted by Pliny reappears in Greek orator and philosopher Dio Chrysostom's⁴² *First Discourse on Fortune* (*ΠΕΡΙ ΤΥΧΗΣ ΠΡΩΤΟΣ ΛΟΓΟΣ*), a work entirely devoted to chance in human life. Protagonist is the Greek painter Apelles. Again, he is in despair at painting bloody froth on the mouth of a horse. He throws his sponge at the painting, and a "perfectly imperfect" froth miraculously completes the image. Dio Chrysostom concludes: "And at the sight Apelles was delighted by what Fortune had accomplished in his moment of despair and finished his painting, not through his art, but through the aid of Fortune."⁴³ The contraposition could not be clearer: Art *versus* Fortune, Skillfulness *versus* Chance. In Dio Chrysostom's conceptualization, the agency of nature is not opposed to that of the artist directly, but through the mediation of a third impersonal agent, that is, chance. Chance is that which humans cannot control. It is the chaotic complexity that escapes even the mastery of the greatest painter. Chance, though, is not invoked so as to harmoniously and unpredictably interact with the artist in order to uniquely achieve the artwork, as it was the case with fire playing with the artist's disposition of clay bodies in *raku* pottery. On the contrary, chance is the antagonist whose agency replaces that of the desperate, impotent artist.

Such dualistic conception gives rise to a dichotomy in western sources that deal with the playfulness of nature. On the one hand, some texts, such as those by Pliny and Dio Chrysostom, extol the power of nature, or that of chance, over the artist's defeat. Artists might be great, and yet nature is even greater, not only because it can imitate artists in creating perfect "artistic" images, but also and especially because it contains images, such as that of the froth on a horse's mouth, that artists cannot properly imitate. Nature, or chance, must intervene in order to assist artists and imitate itself in the depiction of these complex images.

Other authors, instead, are more anthropocentric and rationalistic. They downplay the artistic power of nature and praise that of human artistic agency. The most important of them in western antiquity is Cicero.⁴⁴ In the first book *On Divination* (*De divinatione*), Cicero rhetorically interrogates Carneades on the

⁴² Dion of Prusa or Dio Cocceianus (Δίων Χρυσόστομος; current Bursa, Turkey), c. 40 – c. 115.

⁴³ "Ἀπελλῆς δὲ ἰδὼν ἐχάρη τῷ ἐν ἀπογνώσει τύχης ἔργῳ καὶ ἐτέλεσεν οὐ διὰ τῆς τέχνης, ἀλλὰ διὰ τῆς τύχης τὴν γραφήν" (Dio Chrysostom, ΠΕΡΙ ΤΥΧΗΣ ΠΡΩΤΟΣ ΛΟΓΟΣ, 63, 4–5; English translation by Henry Lamar Crosby).

⁴⁴ Arpino, current Italy, 3 January 106 BCE – Formia, current Italy, 7 December 43 BCE.

extent of the artistic agency of chance. The passage is so central in the history of western aesthetics that it is worthy quoting it in its entirety:

But what? You ask, Carneades, do you, why these things so happen, or by what rules they may be understood? I confess that I do not know, but that they do so fall out I assert that you yourself see. “Mere accidents,” you say. Now, really, is that so? Can anything be an “accident” which bears upon itself every mark of truth? Four dice are cast and a Venus throw results – that is chance; but do you think it would be chance, too, if in one hundred casts you made one hundred Venus throws? It is possible for paints flung at random on a canvas to form the outlines of a face; but do you imagine that an accidental scattering of pigments could produce the beautiful portrait of Venus of Cos? Suppose that a hog should form the letter “A” on the ground with its snout; is that a reason for believing that it would write out Ennius’s poem *The Andromache*? Carneades used to have a story that once in the Chian quarries when a stone was split open there appeared the head of the infant god Pan; I grant that the figure may have borne some resemblance to the god, but assuredly the resemblance was not such that you could ascribe the work to a Scopas. For it is undeniably true that no perfect imitation of a thing was ever made by chance.⁴⁵

Significantly, Cicero compares the agency of natural chance and that of human intentionality in a passage of his book on divination, *De divinatione*, a work predominantly devoted to debunk the preposterous “abductions” of Roman haruspices. Cicero suggests that the playfulness of nature is capable of producing a certain order in reality, and to arrange it in a way that seems to follow a plan. However, he objects that such plan is compared with that of an accomplished artist. Nature can sometimes imitate itself, and yet artists imitate nature better than it itself does it.

How different this diametrical opposition between artists and nature is from the spirit that impregnates one of French painter Cézanne’s⁴⁶ most famous sentences, quoted by Merleau-Ponty⁴⁷ in his essay “Le doute de Cézanne”

45 Quid quaeris, Carneades, cur haec ita fiant aut qua arte perspicui possint? Nescire me fateor, evenire autem ipsum dico videre. “Casu,” inquis. Itane vero? Quicquam potest casu esse factum, quod omnes habet in se numeros veritatis? Quattuor tali iacti casu Venerium efficiunt; num etiam centum Venerios, si quadringentos talos ieceris, casu futuros putas? Adspersa temere pigmenta in tabula oris liniamenta efficere possunt; num etiam Veneris Coae pulchritudinem effici posse adspersione fortuita putas? Sus rostro si humi A litteram impresserit, num propterea suspicari poteris Andromacham Enni ab ea posse describi? Fingebat Carneades in Chiorum lapicidinis saxo diffisso caput exstitisse Panisci; credo, aliquam non dissimilem figuram, sed certe non talem, ut eam factam a Scopas diceret. Sic enim se profecto res habet, ut numquam perfecte veritatem casu imitetur (Cicero, *De Divinatione*, I, 13, 23; English translation by William Armistead Falconer).

46 Paul Cézanne; Aix-en-Provence, France, 19 January 1839 – 22 October 1906.

47 Maurice Merleau-Ponty, Rochefort-sur-Mer, 14 March 1908 – Paris, 3 May 1961.

(‘Cézanne’s doubt’): “The landscape thinks itself in me... and I am its consciousness.”⁴⁸ In Cicero, the artist is not the consciousness of nature, but an external eye that coldly observes, imitates, and depicts nature as nature itself would not be able to do it. Western art history preserves and cherishes this conception of the artist’s mastery over nature at least until the Impressionists, who first revolutionized it. With Cézanne, the artist becomes the conscious agency through which nature itself finds its artistic expression. Probably, in no other work is the French artist’s vocation to become the consciousness of nature as evident as in the over sixty oil paintings in which he obsessively depicted Mont Sainte-Victoire, a limestone mountain ridge in the south of France (Figure 11).



Figure 11: Paul Cézanne. C. 1887. Mont Sainte-Victoire with Large Pine. Oil on canvas. 67×92 cm. London: Courtauld Institute of Art.

This mountain was so deep an element of Cézanne’s existential landscape that he did not want to merely represent it as *a* mountain, as the abstract type of a

48 “Le paysage, disait-il [Cézanne], se pense en moi et je suis sa conscience” (Merleau-Ponty 1949: 34). Merleau-Ponty first referred to this sentence in *La phénoménologie de la perception* [The Phenomenology of Perception]; Paris: Gallimard, 1945: 904). He had read it in Joachim Gasquet’s book *Cézanne* (Paris: Éditions Bernheim-jeune, 1926), where it can be found in its entirety: “Le paysage se reflète, s’humanise... se pense en moi. Je l’objective, le projette, le fixe sur ma toile... je serais la conscience subjective de ce paysage, comme ma toile en serait la conscience objective” (reprinted in Doran 1978: 110); the authenticity of Gasquet’s recordings of his conversation with Cézanne is, however, contested; see Córdova (2012).

mountain. He strived to depict it as *the* mountain, as a living being whose uniqueness consisted in continuously escaping a pictorial definition, in perennially fluctuating as counterpart of the artist's consciousness.

There is controversy, among art historians, about the extent to which Cézanne was influenced, as his contemporary Impressionists Manet, Pissarro, and Van Gogh certainly were, by Japanese art. There is plenty of historical evidence, though, that Cézanne's idea of becoming the pictorial consciousness of the quintessential mountain of his native landscape came to him after admiring Hokusai's⁴⁹ *Thirty-Six Views of Mount Fuji* (Matsumoto 1993; Figure 12).



Figure 12: Katsushika Hokusai. C. 1830–1834. Sundai (Surugadai) in Edo (Tokyo) (東都駿臺). “Thirty Six Views of Mt. Fuji” (series number: 05). Technique: Nishiki-e (錦絵) (Woodblock print with color blocks). Frame: 50.8 × 66 cm; Mat: 48.3 × 63.5 cm. Sheet: 24.6 × 38 cm. Publisher: Nishimuraya Yohachi, Eijudō. Honolulu, HI: Honolulu Museum of Art.

Indeed, well before that the 1900 Paris Universal Exhibition made Japanese aesthetics popular in Europe, the Impressionists were the first representatives of the so-called *Japonisme*. Through visual cross-fertilization with Japanese prints, they were confirmed not only in their novel way of painting, but also and above all in their revolutionary way of seeing nature and interpreting their relation with it. Cézanne's encounter with Hokusai led him to affirm the symbiosis between painter and landscape in the creation of the artwork. Paul

⁴⁹ Katsushika Hokusai (葛飾 北斎), Edo, October or November 1760 – Edo, 10 May 1849.

Gauguin⁵⁰ was one of the first to realize the “oriental conversion” of Cézanne’s eye. In a letter written in 1885, Gauguin wrote:

Look at Cézanne, the misunderstood, the essential mystic nature of the Orient (his face is like the face of an ancient from the Levant), he prefers forms imbued with the mystery and weighty tranquility of a man lying down so as to dream; his colors are grave like the character of an Oriental.⁵¹

Cézanne’s phenomenological mysticism, so aptly described by Merleau-Ponty, did not consist in transcending nature, as it is the case in much Christian mystical tradition,⁵² but in coalescing his artistic agency with that of nature. Cicero’s rationalism could not accept this fusion. In his view, the artist should affirm his inimitable superiority over nature. The ultimate expression of this superiority was already instantiated by Dubus’s pictorial simulation of a *paesina*. Since antiquity, countless images in western art not only imitate nature, but also simulate an imitation of art by nature. That is the case of the leaf-mask from the temple of Bacchus in Baalbek (current Lebanon), dating from the second century (Figure 13), or the upper part of a Greek funerary stele, end of the fourth century B.C.E. (Figure 14).

3.3 Differences in ontological categorization

Another less artistic and more scholarly way to maintain the distinction between the agency of artists and that of nature is to account for the latter through pseudo-scientific explanation. Aldrovandi’s attempt to explain fossils as result of the playfulness of nature is part of a long tradition, dating back at least to Aristotle. In the *Metereology* (*Μετεωρολογικά*), he had sought to rationally explain the formation of identifiable figures in clouds.⁵³ Later on, Pliny himself adopted Aristotle’s theory in the second book of the *Natural History*, claiming that “the clouds are varied in their color and figure according as the fire which

⁵⁰ Paris, 7 June 1848 – Hiva Oa, French Polynesia, 8 May 1903.

⁵¹ Letter of January 14, 1885 to Émile Schuffenecker. English translation in Guérin (1990: 4).

⁵² For a comparison, see Maraini (2006).

⁵³ “ἀναλαβόντες οὖν τὰς ἐξ ἀρχῆς θέσεις καὶ τοὺς εἰρημένους πρότερον διορισμούς, λέγωμεν περὶ τε τῆς τοῦ γάλακτος φαντασίας καὶ περὶ κομητῶν καὶ τῶν ἄλλων ὅσα τυγχάνει τούτοις ὄντα συγγενῆ. φαιμέν δὴ πῦρ καὶ ἀέρα καὶ ὕδωρ καὶ γῆν γίνεσθαι ἐξ ἀλλήλων, καὶ ἕκαστον ἐν ἑκάστῳ...” (Aristotle, *Μετεωρολογικά*, Βιβλίο Α', 339b); [‘Let us then recall our initial assumptions and the problem – what occupies the space between the earth and the farthest stars? – the definitions given earlier, and then proceed to discuss the milky way, comets, and other similar phenomena’] (English translation by Henry D.P. Lee).



Figure 13: Leaf-mask from the temple of Bacchus in Baalbek (current Lebanon), second century.

they contain is in excess or is absorbed by them.”⁵⁴ The most accomplished explanation of how nature – and particularly clouds – spontaneously produce recognizable figures is to be found in the scientific poem per excellence of Roman antiquity, that is, Lucretius’s⁵⁵ *On the Nature of Things* (*De rerum natura*). According to the atomist poet, shapes in clouds are physically created by the external layers of atoms that spread from the surface of objects. These atoms create the visual impression of the objects both in vision and when they imprint themselves in moldable materials, like the air of clouds. In the fourth book of the poem, Lucretius wrote:

Then why not rather know that images
Flit hither and thither, many, in many modes,
Bodiless and invisible?

⁵⁴ “Varietates colorum figurarumque in nubibus cerni, prout admixtus ignis superet aut vincatur” (Pliny the Elder, *Naturalis Historia*, II, xli, 152; English translation by John Bostock and Henry T. Riley, 1855).

⁵⁵ Titus Carus Lucretius, 99 BCE – c. 55 BCE.



Figure 14: Upper part of a Greek funerary stele, end of the fourth century B.C.E. Epigraphic Museum, Athens.

But lest
 Haply thou holdest that those images
 Which come from objects are the sole that flit,
 Others indeed there be of own accord
 Begot, self-formed in earth's aery skies,
 Which, moulded to innumerable shapes,
 Are borne aloft, and, fluid as they are,
 Cease not to change appearance and to turn
 Into new outlines of all sorts of forms;
 As we behold the clouds grow thick on high
 And smirch the serene vision of the world,
 Stroking the air with motions. For oft are seen
 The giants' faces flying far along
 And trailing a spread of shadow; and at times
 The mighty mountains and mountain-sundered rocks
 Going before and crossing on the sun,
 Whereafter a monstrous beast dragging amain

And leading in the other thunderheads.
 Now [hear] how easy and how swift they be
 Engendered, and perpetually flow off
 From things and gliding pass away...⁵⁶

Human beings are “programmed” to see figures in the apparently chaotic shapes of clouds as they see them in the capricious forms of stones. However, this “instinctive” reaction is immediately molded by culture. Lucretius thought that the “giants’ faces flying far along” resulted from a physical phenomenon. Like Cicero, he could not admit that nature was endowed with a creative agency equaling or even outclassing that of artists. Also to the Japanese observer, clouds give often the impression of containing bizarre, human-made figures. And yet, how different are the giant dragons that the seventeenth-century Japanese painter Tawaraya Sōtatsu⁵⁷ depicted on his wonderful panel screens from the giant faces mentioned in Lucretius’s poem (Figures 15 and 16).



Figures 15: Sōtatsu Tawaraya (俵屋 宗達). Early seventeenth century. Dragons and Clouds (left wing, ascending dragon; right wing, descending dragon). Pair of six-panel screens. Ink and pink tint on paper. 171.5 × 374.3 cm. Smithsonian Freer and Sackler Galleries, Washington D.C., Gift of Charles Lang Freer, F1905.229–230.

In this sublime pair of six-panel screens, currently at the Freer Gallery of Art in Washington, Sōtatsu follows the traditional Japanese iconography that

⁵⁶ Sed ne forte putes ea demum sola vagari,/quae cumque ab rebus rerum simulacra recedunt,/sunt etiam quae sponte sua gignuntur et ipsa/constituuntur in hoc caelo, qui dicitur aer,/ quae multis formata modis sublime feruntur,/ut nubes facile inter dum concrecere in alto/cernimus et mundi speciem violare serenam/aëra mulcentes motu; nam saepe Gigantum/ora volare videntur et umbram ducere late,/inter dum magni montes avolsaque saxa/montibus ante ire et solem succedere praeter,/inde alios trahere atque inducere belua nimbos./nec speciem mutare suam liquentia cessant/et cuiusque modi formarum vertere in oras. (Titus Lucretius Carus, *De rerum natura*, Liber IV: 196–215; English translation by William Ellery Leonard).

⁵⁷ Sōtatsu Tawaraya (俵屋 宗達); Kyoto, ca. 1570 – ca. 1643.



Figures 16: Sōtatsu Tawaraya (俵屋 宗達). Early seventeenth century. Dragons and Clouds (left wing, ascending dragon; right wing, descending dragon). Pair of six-panel screens. Ink and pink tint on paper. 171.5 × 374.3 cm. Smithsonian Freer and Sackler Galleries, Washington D.C., Gift of Charles Lang Freer, F1905.229–230.



Figure 17: Andrea Mantegna. 1456–1457. San Sebastiano. Tempera on board. 68 × 30 cm. Vienna: Kunsthistorisches Museum; figure 18: detail.

represents through a pair of dragon glaring at each other – the former ascending, the latter descending – the seasonal cycle of life with its upward and downward movements of water. Here nature does not imitate the shape of a pair of dragons. Here nature is a pair of dragons. Recognizing their silhouette in clouds does not entail endorsing a scientific explanation, like in Lucretius, or the agency of a supernatural force, like in the famous rider in the cloud – probably a reference to the book of Revelations – that one is compelled to recognize in one of Mantegna's⁵⁸ depictions of Saint Sebastian's martyrdom (Figure 17).

In Sōtatsu's *Dragons and Clouds*, instead, the incredibly complex and yet delicate arrangement of grey nuances suggests an interpenetration of the natural element, the clouds, with the mythical agents, the dragons. Observers see the former in the latter, but also the latter in the former. Nature does not receive a form from a scientific, transcendent, or mysterious elsewhere; it is itself form. Atmospheric beings and their mythical counterparts both share its phenomenology.

4 Conclusions

The neurophysiology of vision and cognition shapes the way in which human beings visually “read” the environment. A biological instinct, probably selected as adaptive through evolution, pushes them to recognize coherent shapes in chaotic visual patterns and to impute the creation of these shapes to an anthropomorphic agency. In the west as in the east, in Italy as in Japan, human beings have identified faces, bodies, and landscapes in the bizarre chromatic, eidetic, and topologic configurations of stones, clouds, and other natural elements, as though invisible painters and sculptors had depicted the former in the latter. However, culture-specific visual ideologies immediately and deeply mold such cross-cultural instinct of pattern recognition and agency attribution. Giants and mythical monsters are seen in clouds in the west as in the east; both the Italian seventeenth-century naturalist and the Japanese seventeenth-century painter identify figures of animals and plants in stones. And yet, the ways in which they articulate the semantics of this visual recognition, identify its icons, determine its agency, and categorize it in relation to an ontological framework diverge profoundly, according to such exquisite paths of differentiation that only the study of culture, together with that of nature, can account for.

58 Andrea Mantegna, Mantua, 1431 – 13 September 1506.

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