



On the 28th of January 1696, the Salernitan *letterato* Simone Barra sent out a long overdue letter to his friend Filippo Bulifon in Naples.¹ Apologizing for his failure to comply with the duties of friendship, Barra recounts how he has decided to break the silence with an account of «that which during a small trip from Capriati I have seen in a cave, where flowing water changes into the hardest of stones».² In 1698, Filippo's father Antonio Bulifon published the letter in the fourth volume of his *Lettere memorabili*, a collection of letters that encompasses topics as varied as politics, literature, medicine, geology, and natural history. And even if Barra's contribution fits in well with other letters that discuss the «generation of pearls», «Mount Vesuvius and its fires», and the «phenomena that are seen at the mountain of the sulphur mines near Pozzuoli», it differs from these accounts due to the author's unique literary approach.³ The resulting text is a highly interesting document on material aesthetics and geology, giving an indication of how material associations were shaped between art, science, and poetry. Pamela Smith has argued that in early modern Europe «the things of nature and their verbal and visual representations were constitutive of communities of artists, collectors, and naturalists», and that these communities, in turn, «shaped disciplines and created knowledge».⁴ Barra's letter can be seen as a trace of such processes, shedding light on some of the debates involved.

Around Aurora's Table

About Barra we know little. He is mentioned in passing by Bernardo De Dominici in his *Vite dei pittori, scultori, ed architetti napoletani* of 1742, where the author relates that Barra was in fact well-known among the *letterati* of his time and that he worked until old age as secretary to Duchess D. Aurora Sanseverino di Laurenzano, wife to Nicolò Gaetani dell'Aquila d'Aragona.⁵ Other sources indicate that he would later become a member of the literary academy of the *Caprario*, established in 1728 by Francesco Carafa, prince of Colobrano.⁶ His literary output, however, as far as it has been published, is confined to a handful of poems, one of which appears on the first page of another of Bulifon's volumes of *Lettere memorabili*, and of course the letter to Filippo Bulifon.⁷ Barra's investigative nature is further confirmed by a much later source. In his *Dissertazioni istoriche delle antichità alifane* of 1776, Gianfrancesco Trutta recounts that he had heard from his older brother Marzio, elsewhere described as a collector and lover of antiquities, how he, together with the «celebre letterato Simone Barra of Salerno» and several others had descended into a dark, underground ruin in the city of Alife, lighting their way with torches.⁸

Much more is known about Barra's employer, Aurora Sanseverino. Among the first female members of the Accademia dell'Arcadia, she was deeply involved

with poetry. Moreover, she was a patron of the arts and played an important role in the early developments of the opera.⁹ She promoted some lesser known Neapolitan artists too, including De Dominici, who writes in his *Vite* that he had worked for the Duchess as a landscape painter. Inventories of the dwellings in Naples and Piedimonte indicate that she and her husband brought together important art collections. In fact, De Dominici mentions a number of works, including a *Saint Andrew* by Giuseppe de Ribera, «impastato a meraviglia», and from the hand of Salvator Rosa «two landscapes, not very large, with stones reflecting in the water, tree trunks, and a hermit [*romito*] in both, [painted] with a marvellous touch, as well as two ovals with rocks and figures, only sketched».¹⁰

Worthy of mention is also the elaborate salt cellar described by De Dominici, that, «to inspire wonder and delight», adorned the centre of the large table to which Aurora invited her many guests. Made by the Neapolitan goldsmith Gian Domenico Vinaccia after a design by his compatriot the painter Luca Giordano, it measured more than five *palmi* (1.32 meters) in height and was made up of a large number of figures to create an intricate iconographic program.¹¹ As Vinaccia died in 1695, shortly after his completion of the extraordinary *paleotto* adorning the main altar of the Cappella di San Gennaro, the salt cellar must have been made before this date.¹² Hence, it was right there on the table when Barra wrote his letter. From De Dominici's description, it is difficult to determine whether the figures adorning the show-piece relate in any explicit way to the salt it contained; with figures of the four parts of the world, the times of the day, time itself in the figure of Saturn, and personifications of glory and immortality pointing out the temple of eternity that topped the whole construction, the salt cellar contained almost a microcosm in itself. That salt could be very much seen as a part of such a cosmos, may follow from the work of the German scholar Johann Rudolf Glauber, who, in his *Tractatus de natura salium* of 1658, not only praises the virtues of ordinary table salt, but sees salt as the foundational element of all things, even concluding that it is no less than a symbol of eternity.¹³ In any case, the striking structure cannot but have been brought into connection with the very earthly mineral it contained, and thus art and geology come here together at the centre of the table where both must have been eagerly debated.¹⁴ Through his employer, then, Barra was right in the midst of such debates, a fact which is also borne out by his letter.

Feverish Dreams

When describing his approach to the grotto, Barra sketches an idyllic, indeed almost Arcadian, landscape. His elaborate descriptions of the flow of the river Lete, containing «more trout than waves», and the thick wood of extraordinary cypress trees topping the hill, suggest a profound interest in the world that surrounds him. It is a companion, however, who draws his attention to the cave, carved out of «fine and bright» alabaster. They enter the grotto with lights. Even the grotto itself has nothing of the terrifying character usually associated with natural phenomena of its kind.¹⁵ Rather, Barra is struck by the wonderful patterns and shapes he discovers here.

It is this decorative quality of the material that also fascinated contemporaries. Although a lesser known sculptor such as Antonio Giorgetti might carve the occasional portrait bust from alabaster, the material was more readily incor-

porated in architecture and applied art, where it was praised for decorative qualities that sometimes verged on the figurative.¹⁶ A striking example of such an appreciation can be found in a seventeenth-century description of the Ginetti chapel in the Roman church of Sant'Andrea della Valle:

[the lantern] has in its summit a beautiful tangle of clouds, but without the use of any brush, represented true to life in pure alabaster, contrived thus, that at the same instant it deceives and consoles the sense of sight.¹⁷

The striking patterns in the veined stone, as well as its translucence, made it in itself a spectacle worthy of notice. The painterly qualities of the stone must have played a role also in the practice of using alabaster as a support for painting by artists such as Hans von Aachen around the turn of the previous century. Even if this practice seems to have been popular only for a brief period, paintings of this kind did abound in important art collections.¹⁸ Barra might, for example, have been familiar with the anonymous picture «painted on alabaster, with the Virgin and Child, Saint Joseph and Saint John, in an ebony frame», mentioned together with a painting of the Ship of Saint Peter on agate in the Neapolitan collection of Elisabetta Vandeneynnden and Carlo Carafa.¹⁹ The most popular application of the material, however, seems to have been for vases or urns, of which large numbers are mentioned in contemporary inventories.

Returning to Barra's letter, we get a taste of the whimsical character of the shapes produced in stone:

...the walls of the cave [were] full of those before mentioned outgrowths or lumps that, carved in low relief, exhibited the strangest ramifications and figures, [so strange indeed,] that Michelangelo would not have been able to invent them in his drawing of the Roman grotesques.²⁰

With its wealth of images shaped by nature, the cave was just one example of the figurative powers of stone, a topic that was much debated in the period.²¹ In his *Mundus subterraneus* of 1664 the Jesuit scholar Athanasius Kircher devoted a whole chapter to figures emerging in stone, providing examples ranging from characters to animals to whole biblical scenes. For his compendium, Kircher relied on the collection he had brought together at the Collegio Romano. However, the images reproduced in the book are largely derived from the illustrations in Ulisse Aldrovandi's *Musaeum metallicum*, a taxonomic work on geology published posthumously in 1648 and grounded in his own collection in Bologna.²²

Barra's association of the grotesque with Michelangelo is somewhat puzzling. Even if some sources do suggest such an association, it is more likely that Barra simply combined the name of a well-known artist with a well-known phenomenon.²³ Closer to home, Barra might have been thinking of the rich incrustations that adorn so many seventeenth-century chapels and altars in Neapolitan churches. Characterized by grotesque-like patterns in large varieties of marble and precious stones, often meticulously described in the contracts, they gained their most exuberant expression in the hands of the sculptor and architect Cosimo Fanzago.²⁴ For one author, these incrustations appeared to be «painted rather than sculpted».²⁵

However, as another account of a visit to a cave illustrates—written by Giovanni Battista Francolo and published in Ireneo della Croce's *Historia della città di Trieste*, it came out in the same year as Barra's letter—the shapes found in grottoes could be very much sculptural, or even architectural:

the streams of waters have turned into stone, and with the marvellous artifice of nature itself, have arranged themselves in the guise of well shaped columns, festoons, garlands of flowers and fruits, and other similar artful things, that fill the beholder with marvel and surprise.²⁶

And yet, these wondrous shapes formed by nature were not in themselves what impressed Barra. What seems to have impressed him the most, was the fact that he saw them coming into being right before his eyes. The dripping water, he writes,

...has resulted in transfigurations so new, [...] that in that moment it seemed to me that I saw all of the metamorphoses of Ovid. There Daphne half changed into laurel with the eager Apollo right behind, there the doleful Niobe hardened into cold stone with streams of living tears running from her eyes, and the miserable fate of the youngster Acis one could observe, with the copious water running like sweat from all over his body, showing him to turn subtly into a river. And many, many more were the images produced by this enchanted cave, every single one inimitable by the human imagination.²⁷

With his allusion to Ovid's *Metamorphoses*, Barra conjures up not only this ancient text but also some of the most evocative literary and artistic images of the *Seicento*. The story of the nymph Daphne, for whom the only way to escape her assailant Apollo was to be turned into a laurel tree, has no more iconic image than Gian Lorenzo Bernini's marble sculpture in the Villa Borghese, while the sculpture, in turn, is deeply embedded in contemporary poetry.²⁸ Niobe, who out of grief for her slain children turned to marble though never ceased to weep, was understood as the epitome of sorrow and functioned as such for the Neapolitan poet Giambattista Marino in his *Strage degli innocenti*, a poetic interpretation of the biblical Massacre of the Innocents.²⁹ The Bolognese painter Guido Reni turned to the famous antique sculpture of Niobe in the garden of the Villa Medici for one of the mothers of his *The Massacre of the Innocents*, which itself echoes passages of Marino's poem.³⁰ The story of Acis, completing the range of options between petrification and liquefaction, tells of a Sicilian youth who was changed into a river by his love Galatea to save him from the rock thrown by the jealous Polyphemus. Though not captured in such well-known images, the story was no less popular with contemporary poets.³¹ The Neapolitan public will have been well-acquainted with Luis de Góngora's *La Fábula de Polifemo y Galatea*, published after the author's death in 1627. Coincidentally, Georg Friedrich Händel's cantata *Aci, Galatea e Polifemo*, first performed in Naples in 1708, was commissioned by Aurora Sanseverino.³²

Barra concludes the discussion of his impressions of the grotto by referring to them as «feverish dreams, and tales of vain romances», a phrase borrowed from Francesco Berni's *Orlando innamorato* (published posthumously in the 1540s).³³ His description of these appearances as feverish dreams finds an interesting parallel in a passage of Daniello Bartoli's *Ricreazione del savio* of 1659. Bartoli describes man's dream world as a comedy with actors that are drunk and crazy, clothed in strange clothes and repulsive in their behaviour, while the scenes of this «comedy» change unexpectedly and at random and its story goes nowhere. The result is an exhibition so strange «that Ovid's and Apuleius' *Metamorphoses* and Lucian's *True History*, compared to our dreams, appear as the inventions of a wise man». ³⁴ Bartoli goes on to compare the dream to the painter's grotesques, «a mosaic of irregularities put together». ³⁵ Conversely, Daniele Barbaro, in his

comments upon Vitruvius' treatise on architecture written almost a century earlier, likened the grotesque to the «confused images» of man's dreams.³⁶

Read in its original context, however, Berni's verse may be given a further significance. For it concludes a passage that invites the reader to «not stop at the outer bark, but look deeper within». The dream world conjured up by the author, with its dragons, beasts, giants, and «monsters with the faces of men» should be read as an allegory; a more profound message can be discovered between the lines.³⁷ Likewise, Barra points out that the marvel perceived by the senses immediately arouses the intellect which now takes central stage and attempts to unravel precisely how such phenomena occur.³⁸

The Art of Petrification

One of the few authors who has picked up on Barra's letter has been Giuseppe Antonini, baron of San Biaso, who mentions it briefly in his *La Lucania* of 1745. If only a footnote to his text, it is worth quoting here in full, also because apparently Antonini saw the grotto himself, and thus provides some indication that Barra was describing an actual cave.

In Fossaceca, a place close to Venafro, several times I have had the pleasure of seeing a more than curious grotto under the mountain covered with cypress trees, in which [...] due to the water dripping from above, a very solid kind of alabaster is produced with thousands of jokes [scherzi], that soft at first, little by little grow harder, adding layer upon layer, as has been first observed with many learned considerations by the more than erudite *Signor* Simone Barra of Salerno, our friend...³⁹

The «thousands of jokes» mentioned by Antonini are jokes of nature, *ludi naturae*, the many figures described so eloquently by Barra.⁴⁰ No less interesting, however, is the context in which Antonini mentions the grotto, as it gives us the broader context in which Barra's interest in these phenomena can be understood. In his discussion of the river Sele (called Silaro by the author, from the Latin *Silarus*) Antonini notes how several ancient sources mention that any wood held in the river's water will turn to stone.⁴¹ This brings him to explore other examples of such rivers and lakes mentioned in ancient and modern sources, only to realize that nature today is not so generous with its wonders. Even so, Antonini does not refrain from referring to one, admittedly exotic, contemporary example: Abbé Rousseau's eyewitness account, discussed in his *Secrets et remèdes éprouvez* of 1697, of melons, snakes, mushrooms, and wood, all petrified by having been buried for some time near the Red Sea.⁴²

As has been indicated by Antoine Schnapper, this interest in petrification could also be found in the early modern *Kunstkammer*, where petrified objects, ranging from sticks and plants to animals and whole human beings, often enjoyed pride of place.⁴³ At the same time, artists made casts of real animals and plants in bronze or other materials. We may point out, for example, the «flowers in silver, marvellously cast from life by Giovanni Palermo» that were to be seen in the treasury of the monastery of San Martino.⁴⁴ A scientific interest in processes of petrification can be found in the writings of the Sicilian painter Agostino Scilla, who, with his treatise on fossils published in Naples in 1670, provided an important step in the gradual acceptance of their animal origins.⁴⁵ For his careful analysis and groundbreaking depictions Scilla could rely on his own collection of petrified objects.⁴⁶ A related discussion is that of the origins of so-called *glossope-*

trae, or «tongue-stones»—in effect sharks' teeth. Already in 1616 the Neapolitan botanist and biologist Fabio Colonna would argue in his *De glossopetris dissertatio* that, rather than jokes of nature, these teeth were of animal origin.⁴⁷ Colonna's essay was published again in 1747 as an appendix to the Latin translation of Scilla's book.⁴⁸ About the process of petrification itself Scilla is brief, referring his reader to a small treatise about petrified crabs and snakes, written by the German scholar Johann Daniel Major.⁴⁹ Major, in his turn, draws attention to a petrified crab that was to be found in the Neapolitan collection of Ferrante Imperato, citing the eyewitness account of Johann Heinrich Pflaumern, who mentions it in his *Mercurius Italicus* among several other petrified *naturalia* in this «museum».⁵⁰ Also Fabio Colonna was well acquainted with Imperato's collection and the very same objects may have spurred his interest in the *glossopetrae*.⁵¹

The classic point of reference for such discussions of petrification is Ovid's tale of Perseus and Andromeda, or, more precisely, the tale of the origins of coral. When the hero lays down the snake-covered head of Medusa on a bed of seaweed in order to release Andromeda, the plants, «alive and porous to the core», harden at its touch. The sea-nymphs try this wonder on more plants, and scatter their seeds in the water. «Till this day», concludes Ovid, «the same nature has remained in coral so that it hardens when exposed to air».⁵² A more dramatic account of the story was told by an anonymous ancient author going under the name of Orpheus in the hymn *Peri lithon* (On stones), first published in 1517 in both Greek and Latin.⁵³ Here, it is more explicitly Medusa's blood that is at the origins of coral:

Still warm, still quivering, [he] lays his trophy down
 On the green sea-plants all about him strewn, [...]
 Pressed by the head the weeds around that lie
 Soaked with the gore, grow drunk with sanguine dye,
 The rushing breezes, daughters of the flood,
 Upon their boughs congeal the clotted blood,
 And so congeal, it seems, a real stone
 Nor only seems; to real rock 'tis grown.⁵⁴

In his 1630 treatise on coral, the German physician Johann Ludwig Gans republished the passage on coral from *On stones*, adding no less than three Latin translations and notes to the text. In the main text of his book, Gans not only discusses the medical and magical application of coral, but also talks about its origins. For Gans, coral is a mineral from the very start that—and here, as we will see, we are close to Barra's theory about alabaster—becomes hard as a result of the salts it contains.⁵⁵ A review of the 1669 second edition of the book sums up his ideas as follows: «Coral is form'd out of a glutinous Juyce, which being turn'd into Stone by a salt, abounding in it, riseth up in the form of a Shrub.»⁵⁶ A similar thesis was put forward by Paolo Boccone, botanist to the Grand Duke of Florence and a good friend of Scilla, in his *Recherches et observations naturelles*, published in Amsterdam in 1674.⁵⁷ Opposing the idea of some that coral is in fact a petrified plant, Boccone argues that coral is produced by «*juxta position*, just as most types of stone», giving an important role to the *tartre coralin*, a wax-like substance, he finds at its extremities. For the present discussion, the letter by Mons. Pierre Guisony of Avignon, written in response to Boccone's thesis and published in his book, also is of interest. Referring to a specimen of coral in his *cabinet*, Guisony



1 Bernardo Cavallino, *The Triumph of Galatea*, c. 1650, oil on canvas, 148.3 × 203 cm, National Gallery of Art, Washington DC.

not only agrees with Boccone that coral belongs to the category of stones and is shaped by «a precipitation of various salts», but also adds that «[o]ne can see the same thing happen in some underground caves, where due to a continuous and long flow of drops of water, [...] branches of minerals are formed, and crystalline bodies in all kinds of shapes».⁵⁸

Even if the story of the origins of coral is not depicted very often, it has spilled over into the domain of art too. Poussin's drawing *La tintura del corallo*, described by Giovan Pietro Bellori, is apparently an iconographic anomaly and appears to be based directly on the poetry of, again, Giovan Battista Marino.⁵⁹ A more indirect indication can be found in Bernardo Cavallino's extraordinary *Triumph of Galatea* in Washington, a work that stands out not only for the stunning nude of Galatea herself, but also for the meticulous rendering of the irregular crab shell and the fiery red coral.⁶⁰ (fig. 1) As has often been pointed out, these details are reminiscent of Neapolitan still-life painting.⁶¹ Yet, in the present context, we may ask if particularly the coral should not be given a further significance.⁶² For, in fact, the metamorphosis of coral from clothed blood to real stone described in *On Stones* is an exact reversal of that of Acis, where the blood running from his crushed body gradually turns to crystal clear water and flows back to the sea.⁶³ Thus, the coral may be said to refer to what is not seen in the picture, alluding to the metamorphosis of Acis and his invisible presence among the waves under which the coral is born. And finally, Galatea's pearl earring too would have reminded the beholder of such a process of transformation, a process meticulously described by Felice Stocchetti in his letter «on the generation of pearls», published, like that of Barra, in Bulifon's *Lettere memorabili*.⁶⁴

Among these petrifications and liquefactions, there is one phenomenon that stands out for its absence. For indeed, a very similar metamorphosis took place right before the eyes of the people of Naples: that of the liquefaction of the blood of the city's patron saint San Gennaro. It is hardly imaginable that this miracle did not enter Barra's mind—further indications of this will be touched upon below—but including it in his discussion would have been a dangerous step to take. As the author of an early eighteenth-century biography of the saint writes, some heretical authors had sought to find a scientific explanation, a «natural cause» for the miracle. What these authors had so «foolishly dreamt», however, was easily proven false.⁶⁵

The «Enlivening Aura» of Sulphur

As the letter shows, Barra was interested in natural causes. Although this is not the place to fully explore the author's scientific arguments, some interesting aspects may be highlighted here. First of all, his main thesis suggests a central role for sulphur. As the author himself realizes, his idea is rather daring. This becomes all the more apparent when we read Felice Stocchetti's account of the generation of alabaster in his *Ragionamenti* of 1705. Spurred on by Barra's letter, Stocchetti visited the cave himself, but while he praises Barra's philosophical insights, he makes no mention of the author's central thesis; for Stocchetti, sulphur plays no role at all.⁶⁶

And yet, Barra upholds his thesis, arguing that «an enlivening aura of the purest sulphur» emanates from the earth, changing when it comes into contact with air as it binds with its «seeds», the *semi dell'aria*.⁶⁷ Barra envisions sulphur as a substance with folding branches, thus capable of «embracing» the elements it encounters. Sulphur is accordingly at the origins of many minerals, adopting, «almost as a newborn Proteus», ever new forms as it binds with this or that particle.⁶⁸ Referring to the work of Torquato Tasso, Barra interprets the mythological battle between Typhon and Zeus as the confrontation between sulphur and air and finds here the origins of the «horrible spectacle» of the eruptions of the Etna and Vesuvius.⁶⁹ On a smaller scale, sulphur's capacity to enfold other elements is also at the origins of alabaster. Seeping through the pores [*forellini*] of the stone, sulphur binds the salts that are present in the water to form a soft substance, a *mollume*, that is similar to wet plaster and covers the stone throughout the cave. Here, indeed quite like the *tartre coralin* discussed by Boccone, the *mollume* slowly hardens into alabaster. Sulphur, Barra concludes, is not merely an ingredient of alabaster, «but its very architect».⁷⁰

Barra's interest in sulphur can be explained rather easily, for at Pozzuoli, not too far from Naples, were the famous sulphur mines, the *sofatarà*. That these were indeed avidly discussed at the table of Aurora Sanseverino may follow from the aforementioned letter on the «phenomena that are seen at the mountain of the sulphur mines near Pozzuoli». Written by Gregorio Caloprese and published by Bulifon in the same volume as Barra's letter, it is addressed to and written at the request of Nicolò Gaetani d'Aragona, Aurora's husband. The *sofatarà* attracted the attention of artists too. Prints by or after the designs of Northern artists such as Joris Hoefnagel (1582), Stradanus (1587) and Joachim von Sandrart (1640) give an indication of the place's attraction for early modern tourists, while Anton Eisenhoit's engraving for Michele Marcator's *Metallotheca Vaticana*, an

elaborate text about the collection of stones in the Vatican, points to the place's relevance for the context of natural science and the *Kunstkammer*.⁷¹ Moreover, the *sofatarata* brings us back to the issue of the divine as well, for it was here, according to tradition, that San Gennaro was beheaded. In this context, the *sofatarata* showed up in local paintings as well. Among these, we may single out Aniello Falcone's rendering, which, according to the account of Sandrart, must have been in the famous Neapolitan collection of the Flemish merchant Gaspare Roomer.⁷² De Dominici mentions in his *Vita* that Falcone depicted the location (*al naturale*), thus suggesting that he made drawings on the spot.⁷³

While this interest in the *sofatarata* may have inspired Barra to give a central role to sulphur at all, he backs his thesis with evidence from a series of sources. His remark that not far from the grotto he has experienced «a very unpleasant smell, similar to that which one can experience at the sulphur mines» not only confirms his interest in the sulphur mines, but also indicates a central role for the senses in his approach. More striking is Barra's reference to sulphur's medical use.⁷⁴ Taking from the alabaster some of the *mollume*, a physician not mentioned by name found that the substance was endowed with a strong «corrective and diaphoretic virtue» and thus was very effective against fevers. This can only be explained, argues Barra, by the fact that it contains sulphur, for sulphur interacts with the blood and, due to its similarity to this *balsamo vitale*, cleans it of the corruptive «febrile matter». ⁷⁵ A medical use of minerals was certainly not exceptional. Barra himself mentions the *oglio di sasso* found in Lombardy, now known as petroleum (from *petrae oleum*, «oil of stone»), and the medical use of coral, discussed at length in antique sources, was still central to Gans' treatise on coral mentioned above. Moreover, Pliny already recounts that ointments were thought to be conserved best in vessels of alabaster.⁷⁶ As Barra's argument makes clear, the processes of mineral metamorphosis quite easily extended into the study of the human body.

Barra's description and analysis of the alabaster cave proceeds on two levels: that of the imagination, and that of the intellect. What connects these two levels, is the central role of metamorphosis: on the level of the imagination we find the translucent stone and flowing water, slowly changing into ever so many figures; on that of the intellect we find the sulphur, that by enfolding other substances with its branches takes on ever new forms. By giving such a central role to sulphur, Barra appears to be searching for a natural foundation of a world always in flux, a world, moreover, that seems to have no place for a higher being. At the end of his letter he suggests that sulphur actually might fulfil this role: «maybe [sulphur] is that, which contains in itself the very idea of the seed of things, that is, their shaping virtue». ⁷⁷ By relating to contemporaneous discussions of the *semina rerum*, the seeds of things, Barra takes his experiences in the grotto to a more universal level.⁷⁸ Yet, even this hesitant abstraction is grounded in an image: that of the branched substance that enfolds in order to take on new forms. It is an image that is coral-like, an image that belongs to the *Kunstkammer*. It was the *Kunstkammer* that provoked this interest in material and metamorphosis, but while such collections sometimes took on the shape of artificial grottoes, Barra's grotto was the real thing.⁷⁹ Here, in this Arcadian landscape, a hint of the formative power of the elements has been found, while the intellect is roused by images—Daphne, Niobe, Acis—that challenge the boundaries between art and nature.

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1 Simone Barra, letter to Filippo Bulifon, dated Piedimonte, 28 January 1696, in: *Lettere memorabili*, ed. by Antonio Bulifon, raccolta 4, Napoli 1698, p. 224–243.

2 Bulifon 1698 (as note 1), racc. 4, p. 225.

3 Bulifon 1698 (as note 1), racc. 3, p. 138–168, 176–185; id., racc. 4, p. 177–188.

4 Pamela H. Smith, «Art, Science, and Visual Culture in Early Modern Europe», in: *Isis*, 2006, vol. 97, p. 95. More generally: Horst Bredekamp, *Antikensehnsucht und Maschinenglauben: Die Geschichte der Kunstskammer und die Zukunft der Kunstgeschichte*, Berlin 1993.

5 Bernardo De Dominicis, *Vite de' pittori, scultori ed architetti napoletani*, ed. by Fiorella Sricchia and Andrea Zezza, Napoli 2003–2008, vol. 3. 2, p. 1350.

6 Michele Maylender, *Storia delle accademie d'Italia*, Bologna 1929, vol. 5, p. 141. Barra chose the name Carisio.

7 Bulifon 1698 (as note 1), vol. 1, ed. 4, unnumbered page after the dedication; *Il Caprario: Accademie di alcuni rimatori, che nel medesimo monte si radunano*, Napoli 1729 and Firenze 1732.

8 Gianfrancesco Trutta, *Dissertazioni istoriche delle antichità alifane*, Napoli 1776, p. 152–153. For Marzio Trutta see Francesco Maria Pratilli, *Della via Appia riconosciuta e descritta da Roma a Brindisi*, Napoli 1745, p. 419. Cf. Nicola Mancini, *Allifae*, Piedimonte Matese 1993, p. 39.

9 Valentina Lotoro, *La fortuna della «Gerusalemme liberata» nella pittura napoletana tra Seicento e Settecento*, Roma 2008, p. 79–102; Pietro Andrisani, «Aurora Sanseverino mecenate. Suo contributo allo sviluppo dell'opera in Scuola Napoletana», in: *Fardella 1704–2004: Tracce di storia*, ed. by Antonio Appella and Antonietta Latronico, Fardella 2004, p. 79–98; Ausilia Magaudda and Danilo Costantini, «Aurora Sanseverino (1669–1726) e la sua attività di committente musicale nel regno di Napoli. Con notizie inedite sulla napoletana congregazione dei sette dolori», in: *Giacomo Francesco Milano ed il ruolo dell'aristocrazia nel patrocinio delle attività musicali nel secolo XVIII*, ed. by Gaetano Pitarresi, Reggio Calabria 2001, p. 297–415.

10 De Dominicis 2003–2008 (as note 5), vol. 3.1, p. 26, 454. Cf. Gérard Labrot, *Collections of Paintings in Naples 1600–1780*, München 1992, p. 422–423, 453, n. 21, 26, 152.

11 De Dominicis 2003–2008 (as note 5), vol. 3.1, p. 314. For Vinaccia and Neapolitan sculpture in silver see Elio Catello and Corrado Catello, *Scultura in argento nel Sei e Settecento a Napoli*, Sorrento 2000, p. 27–57, with further references in n. 29.

12 Elio Catello, «Gian Domenico Vinaccia e il paliotto di San Gennaro», in: *Napoli nobilissima*, 1979, vol. 18, 1979, p. 121–132.

13 Johann Rudolf Glauber, *Tractatus de natura salium*, Amsterdam 1658, p. 5–6, 43. Cf. Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution*, Chicago 2004, p. 169; Ferdinando Abbri, «Gli «arcana naturae»: Filosofia, alchimia e «chimica» nel Seicento», in: *Cristina di Svezia: Scienza ed alchimia nella Roma barocca*, ed. by Wilma Di Palma et al., Bari 1990, p. 55–56.

14 A similar point has been made about Benvenuto Cellini's saltcellar now in Vienna; see Marina Belozerskaya, «Cellini's Saliera: The Salt of the Earth at the Table of the King», in: *Benvenuto Cellini: Sculptor, Goldsmith, Writer*, ed. by Margaret Ann Gallucci and Paolo L. Rossi, Cambridge 2004, p. 71–96; Michael Cole, *Cellini and the Principles of Sculpture*, Cambridge 2002, p. 15–42.

15 See e.g., Vittorio Govardi, *Notizia del nuovo teatro degli Arcadi aperto in Roma l'anno 1726*, Roma 1727, p. 33. Cf. Vernon Hyde Minor, *The Death of the Baroque and the Rhetoric of Good Taste*, Cambridge 2006, p. 146 ff. More generally, Helen Langdon, «A Theatre of Marvels. The Poetics of Salvator Rosa», in: *Konsthistorisk Tidskrift*, 2004, vol. 73, p. 179–192.

16 Jennifer Montagu, «Antonio and Giuseppe Giorgetti: Sculptors to Cardinal Francesco Barberini», in: *The Art Bulletin*, 1970, vol. 52, p. 280, n. 19. Cf. e.g., Olga Raggio, «The Farnese Table: A Rediscovered Work by Vignola», in: *The Metropolitan Museum of Art Bulletin*, 1960, vol. 18, p. 213–231.

17 Lavinio Queba e Tuna, *Il fior fenice cioè Marzio redivivo in Gio: Francesco Cardinali Ginetti*, Venetia 1687, p. 381. For the chapel see Patrizia Cavazzini, «The Ginetti Chapel at S. Andrea della Valle», in: *The Burlington Magazine*, 1999, vol. 141, p. 401–413 (quoting Queba e Tuna at n. 25) and Hellmut Hager, «Un riesame di tre cappelle di Carlo Fontana», *Commentari*, 1976, vol. 27, p. 252–289.

18 See for example, *Hans von Aachen (1552–1615). Hofkünstler in Europa*, ed. by Thomas Fussenig, Berlin and München 2010, p. 196–199. I thank Jannis Hadjinicolaou for discussing these works with me.

19 From the inventory of 1707 in: Archivio di Stato, Napoli, scheda 665, protocollo 52, f. 777 recto. The inventory is available through the online Getty Provenance Index Database. Elisabetta Vandeneynnden inherited part of the collection of her father, the Flemish merchant Ferdinand Vandeneynnden. See Renato Ruotolo, *Mercanti-collezionisti Fiamminghi a Napoli: Gaspare Roomer e i Vandeneynnden*, Massa Lubrense 1982.

- 20 Bulifon 1698 (as note 1), racc. 4, p. 229.
- 21 Susanne König-Lein, «Ein Spiel der Natur? Bildersteine und Steinbilder», in: *Spiel, Kunst, Glück. Die Wette als Leitlinie der Entscheidung. Beispiele aus Vergangenheit und Gegenwart in Kunst, Wissenschaft, Wirtschaft*, ed. by Johann Konrad Eberlein, Wien 2011, p. 133–144.
- 22 Athanasius Kircher, *Mundus subterraneus*, Amsterdam 1665, vol. 2, p. 23–45. Ulisse Aldrovandi, *Musaeum metallicum*, Bologna 1648.
- 23 David Summers, «Michelangelo on Architecture», in: *The Art Bulletin*, 1972, 54, p. 146–157. For a more general discussion see: Philippe Morel, *Les grotesques: Les figures de l'imaginaire dans la peinture italienne de la fin de la Renaissance*, Paris 1997.
- 24 For examples of such descriptions, see some of the documents published in *Cosimo Fanzago e il marmo commesso fra Abruzzo e Campania nell'età barocca*, ed. by Vittorio Casale, L'Aquila 1995. Cf. John Nicholas Napoli, «Pianificare o indulgere nel capriccio? Cosimo Fanzago e la causa «ad exuberantiam» alla certosa di San Martino», in: *Napoli nobilissima*, 2003, Bd. 5, p. 209–218; Roberto Pane, «Marmi mischi e aggiunte a Cosimo Fanzago», in: *Seicento napoletano*, Milano 1984, p. 100–138; Annemarie Winther, *Cosimo Fanzago und die Neapler Ornamentik des 17. und 18. Jahrhunderts*, Bremen 1973.
- 25 Carlo De Lellis, *Aggiunta alla Napoli sacra del D'Engenio*, ed. by Francesco Aceto, Napoli 1977, p. 358. For an analysis of the artist's formal repertoire see Winther 1973 (as note 24), chapter 4.
- 26 Giovan Battista Franco in Ireneo della Croce, *Historia antica e moderna, sacra e profana della città di Trieste*, Venetia 1698, p. 29.
- 27 Bulifon 1698 (as note 1), racc. 4, p. 230.
- 28 See Joris van Gastel, «Bernini's Metamorphosis: Sculpture, Poetry, and the Embodied Beholder», *Word & Image*, 2012, vol. 28, p. 193–205 (with further references).
- 29 Giovan Battista Marino, *Dicerie sacre e La strage de gl'innocenti*, ed. by Giovanni Pozzi, Torino 1960, p. 557–558.
- 30 Gabriele Wimböck, *Guido Reni (1575–1642). Funktion und Wirkung des religiösen Bildes*, Regensburg 2002, p. 182–184; Francis Haskell and Nicholas Penny, *Taste and the Antique: The Lure of Classical Sculpture*, New Haven and London 1981, no. 66; Elizabeth Cropper, «Marino's Strage degli innocenti: Poussin, Rubens, and Guido Reni», in: *Studi secenteschi*, 1992, Bd. 33, p. 137–164. For Marino's influence in Naples, among others on Massimo Stanzione's *The Massacre of the Innocents*, see: Sebastian Schütze, «Pittura parlante e poesia taciturna: Il ritorno di Giovan Battista Marino a Napoli, il suo concetto di imitazione e una mirabile interpretazione pittorica», in: *Documentary Culture: Florence and Rome from Grand-Duke Ferdinand I to Pope Alexander VII*, ed. by Elizabeth Cropper, Giovanna Perini and Francesco Solinas, Bologna 1992, p. 209–226.
- 31 Maria Teresa Graziosi, *Polifemo e Galatea: Mito e poesia*, Roma 1984, in particular, p. 85–151. Luca Giordano has painted several versions of the *Triumph of Galatea* where Acis' transformation can be seen; cf. Oreste Ferrari and Giuseppe Scavizzi, *Luca Giordano: l'opera completa*, Napoli 1992, cat.nos. A229, A230, A309. Another version is in the State Hermitage Museum, St. Petersburg.
- 32 Carlo Vitali and Antonello Furnari, «Händels Italienreise – neue Dokumente, Hypothesen und Interpretationen», in: *Göttinger Händel-Beiträge*, 1991, Bd. 4, p. 41–66.
- 33 Bulifon 1698 (as note 1), racc. 4, p. 230; Francesco Berni, *Orlando innamorato* [Venetia 1545], in: *Francesco Berni*, ed. by Raffaele Nigro, Roma 1999, p. 753 (I, xxv.6).
- 34 Daniello Bartoli, *La ricreazione del savio*, ed. by Bice Mortara Garavelli, Parma 1992, p. 343–344.
- 35 *Ibid.*, p. 344.
- 36 Daniele Barbaro, *I Dieci libri dell'architettura di M. Vitruvio*, Venetia 1567, p. 321.
- 37 Berni 1999 (as note 33), p. 753 (I, xxv.6), 752 (I, xxv.2). Cf. Antonio Corsaro, «Fortuna e imitazione nel Cinquecento», in: *I Triumph di Francesco Petrarca*, ed. by Claudia Berra, Bologna 1999, p. 456 ff.; Danilo Romei, «L'Orlando moralizzato dal Berni», in: *Banca dati «Nuovo Rinascimento»*, 1997, www.nuovorinascimento.org (accessed 1 May 2012), p. 13.
- 38 Bulifon 1698 (as note 1), racc. 4, p. 230–231.
- 39 Giuseppe Antonini, *La Lucania*, Napoli 1795, p. 183, n. 1. The town of Fossaceca is now named Fontegreca.
- 40 See *Ludi naturae: Spiele der Natur in Kunst und Wissenschaft*, ed. by Natascha Adamowsky, Hartmut Böhme, and Robert Felfe, Paderborn 2011; Paula Findlen, «Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe», in: *Renaissance Quarterly*, 1990, vol. 43, p. 292–331.
- 41 For this discussion see Antonini 1795 (as note 39), p. 181–185.
- 42 *Ibid.*, p. 183; cf. Abbé Henri de Montbazou Rousseau, *Secrets et remèdes éprouvez*, Paris 1697, p. 186.
- 43 Antoine Schnapper, *Le géant, la licorne et la tulipe: Collections et collectionneurs dans la France du XVII^e siècle*, vol. 1, Paris 1988, p. 17–18. Cf. e.g., Paolo Maria Terzaglio and Pietro F. Scarabelli, *Museo o galleria adunata dal sapere e dallo studio del Sig. canonico Manfredo Settala*, Tortona 1666, p. 75–82.
- 44 Domenico Antonio Parrino, *Napoli città nobilissima, antica e fedelissima, esposta agli*

occhi et alla mente de' curiosi, Napoli 1700, p. 124.

45 Agostino Scilla, *La vana speculazione disingannata dal senso*, ed. by Marco Segala, introduction by Paolo Rossi, Firenze 1996.

46 Sebastiano Di Bella, «Agostino Scilla collezionista: La raccolta di fossili», in: *Wunderkammer siciliana: Alle origini del museo perduto*, ed. by Vincenzo Abbate, Napoli 2001, p. 61–66. Also the collection of the painter Filippo napoletano is interesting in this context; cf. Jennifer Fletcher, «Filippo napoletano's Museum», in: *The Burlington Magazine*, 1979, vol. 121, p. 649–650.

47 Fabio Colonna, *De purpura*, Romae 1616, p. 31–39.

48 Agostino Scilla and Fabio Colonna, *De corporibus marinis lapidescentibus quæ defossa reperiuntur; addita dissertatione F. Columnæ de glossopetris*, Romae 1747.

49 *Ibid.*, p. 57; Johann Daniel Major, *Dissertatio epistolica de cancris et serpentibus petrefactis*, Jenae 1664. Later, Major would edit an edition of Colonna's *De purpura*, including also the *De glossopetris dissertatio*; see Fabio Colonna, *Opusculum de purpura*, ed. by Johann Daniel Major, Kiliae 1675.

50 Major 1675 (as note 49), p. 6; Johann Heinrich von Pflaumern, *Mercurius italicus*, Ulmue 1650, part 2, p. 65. For Imperato see: Enrica Stendardo, *Ferrante Imperato: Collezionismo e studio della natura a Napoli tra Cinque e Seicento*, Napoli 2001.

51 Cf. Colonna 1616 (as note 47), p. 36.

52 Ovid, *Metamorphoses*, translated by Frank Justus Miller, London 1916, vol. 1, p. 231.

53 Mousaiou *Poemation ta kath' Hero kai Leandron. Orpheos Argonautika. Tou autou Hymnoi Orpheus peri lithon. Musæi opusculum de Herone & Leandro. Orphei argonautica. Eiusdem hymni. Orpheus de lapidibus*, Venezia 1517.

54 Translation from Charles William King, *The Natural History, Ancient and Modern, of Precious Stones and Gems, and of the Precious Metals*, London 1865, p. 390.

55 Johann L. Gans, *Corallorum historia*, Francofurti 1630; cf. Schnapper 1988 (as note 43), p. 22.

56 *Philosophical Transactions*, 1670, vol. 5, p. 1200 (=1202).

57 Paolo Boccone, *Recherches et observations naturelles*, Amsterdam 1674, p. 24–42. Boccone recommends Gans' book on p. 43. For his friendship with Scilla see Scilla 1996 (as note 45), p. 35 & 53. For Boccone see Isabella Sermoni Spada, «Boccone, Paolo (in religione frate Silvio)», in: *Dizionario Biografico degli Italiani*, vol. 11, Roma 1969; Bruno Accardi, «Paolo Boccone (1633–1740): A Practically Unknown Excellent Geo-Paleontologist of the 17th Century», in: *Geologica Romana*, 1975, vol. 14, p. 353–359.

58 Boccone 1674 (as note 57), p. 22.

59 Richard E. Spear, «The Literary Source of Poussin's Realm of Flora», in: *The Burlington Magazine*, 1965, vol. 107, p. 566; cf. Giovan Pietro Bellori, *Le vite de' pittori, scultori e architetti moderni*, ed. by Evelina Borea, Torino 1976, p. 458. Poussin's drawing, in turn, inspired Claude Lorrain's painting of the same subject, made for Cardinal Camillo Massimi who also owned Poussin's drawing. Linda Lee Boyer, «The Origin of Coral by Claude Lorrain», in: *The Metropolitan Museum of Art Bulletin*, 1968, vol. 26, p. 370–379.

60 Bernardo Cavallino of Naples, 1616–1656, ed. by Ann Lurie, Bloomington 1984, cat. no. 68. An attribution to Artemisia Gentileschi, first proposed by Józef Grabski, «On Seicento Painting in Naples: Some Observations on Bernardo Cavallino, Artemisia Gentileschi and Others», in: *Artibus et Historiae*, 1985, vol. 6, p. 41–55, has more recently been convincingly rebutted by Christopher R. Marshall, «An Early Inventory Reference and New Technical Information for Bernardo Cavallino's 'Triumph of Galatea'», in: *The Burlington Magazine*, 2005, vol. 147, p. 40–44. Marshall's suggestion that the Washington painting may be the one mentioned in the inventory of Carlo Arcici, however, seems unlikely; cf. Giuseppe De Vito, «A Note on Artemisia Gentileschi and Her Collaborator Onofrio Palumbo», in: *The Burlington Magazine*, 2005, vol. 147, p. 749.

61 For Neapolitan still life painting see *L'œil gourmand: Parcours dans la nature morte napolitaine du XVII^e siècle*, ed. by Véronique Damian, Paris 2007.

62 On the use of coral in Naples see Gina Carla Ascione, *Storia del corallo a Napoli dal XVI al XIX secolo*, Napoli 1991.

63 Ovid 1916 (as note 52), vol. 2, p. 290 (XIII. 885–897). In Góngora the transformation is more abrupt; cf. Luis Góngora y Argote, *The Fable of Polyphemus and Galatea*, translated and analyzed by Miroslav John Hanak, New York 1988, p. 197–201.

64 Bulifon 1698 (as note 1), racc. 3, p. 138–168; Stocchetti also refers to coral here, cf. p. 149.

65 Girolamo Maria, *Istoria della vita, virtù, e miracoli di S. Gennaro vescovo, e martire*, Napoli 1707, p. 135–136.

66 Felice Stocchetti, *Ragionamenti intorno alla pressione dell'aria, a' surgimenti de' liquori e ad altri sollevamenti de' fluidi entro cannonelli di svariata figura*, Venezia 1705, p. 20–21.

67 Bulifon 1698 (as note 1), racc. 4, p. 232.

68 Bulifon 1698 (as note 1), racc. 4, p. 233.

69 Valeria Merola, «La fortuna del mito dell'Etna tra Cinquecento e Seicento», in: *Spazi, geografie, testi*, ed. by Siriana Sgavicchia, Roma 2004, p. 59–71.

70 Bulifon 1698 (as note 1), racc. 4, p. 237.

71 See Lucia Nuti, «The Mapped Views by Georg Hoefnagel: The Merchant's Eye, the Humanist's Eye», in: *Word & Image*, 1988, vol. 4, p. 568; Alessandra Baroni Vannucci, *Jan van der Straet, detto Giovanni Stradano, flandrus pictor et inventor*, Milano 1997, no. 786; Anna Schreurs, *Joachim von Sandrart (1606–1688). Ein europäischer Künstler aus Frankfurt*, Frankfurt a.M. 2006, p. 19–21; *Wunderwerk. Göttliche Ordnung und vermessene Welt. Der Goldschmied und Kupferstecher Antonius Eisenhoit und die Hofkunst um 1600*, ed. by Christoph Stiegemann, Mainz 2003, p. 145, 153.

72 Achille Della Ragione, *Aniello Falcone: Opera completa*, Napoli 2008, p. 44. For Roomer's collection see Ruotolo 1982 (as note 19), and for his interest in Falcone, Annachiara Alabiso, «Aniello Falcone's Frescoes in the Villa of Gaspar Roomer at Barra», in: *The Burlington Magazine*, 1989, vol. 131, p. 31–36.

73 Dominici 2003–2008 (as note 5), vol. 3.1, p. 132. A drawing of the Solfatara by Falcone is in a private collection in Switzerland; cf. *Civiltà del Seicento a Napoli*, ed. by Silvia Cassani, Napoli 1984, p. 86, no. 3.30.

74 Bulifon 1698 (as note 1), racc. 4, p. 235.

75 Bulifon 1698 (as note 1), racc. 4, p. 237. Some ancient sources for the medical use of alabaster are mentioned in Giacinto Gimma, *Della storia naturale delle gemme, delle pietre e di tutti minerali, ovvero della fisica sotterranea*, Napoli 1730, vol. 2, p. 12.

76 Pliny the Elder, *Natural History*, translated by D.E. Eichholz, Cambridge (MA) 1962, vol. 10, 36.12; cf. Gimma 1730 (as note 75), vol. 2, p. 10.

77 Bulifon 1698 (as note 1), racc. 4, p. 242.

78 Hiro Hirai, *Le concept de semence dans les théories de la matière à la Renaissance de Ficin à Gassendi*, Turnhout 2005; Antonio Clericuzio, *Elements, Principles and Corpuscles. A study of Atomism and Chemistry in the Seventeenth Century*, Dordrecht 2000. In relation to art: Robert Felfe, «Geordnetes Weltgebäude oder ›lusus atomorum? Visuelle Dynamiken physikotheologischer Naturzuwendung», in: *Die Welt im Bild. Weltentwürfe in Kunst, Literatur und Wissenschaft seit der Frühen Neuzeit*, ed. by Ulrike Gehring, München 2010, p. 145–176.

79 Stephanie Hanke, «The Splendour of Bankers and Merchants: Genoese Garden Grottoes of the Sixteenth Century», in: *Urban History*, 2010, vol. 37, p. 399–418. More general, Philippe Morel, *Les grottes maniéristes en Italie au XVII^e siècle: Théâtre et alchimie de la nature*, Paris 1998.