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Vesuvius and Naples: Nature and the City, 1500-1700

Sean Fidalgo Cocco

A dissertation submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

University of Washington

2004

Program Authorized to Offer Degree:
History

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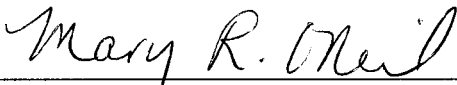
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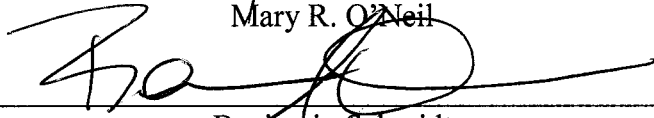


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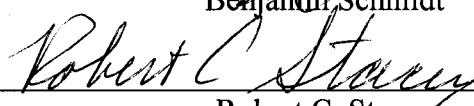
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Abstract

Vesuvius and Naples: Nature and the City, 1500-1700

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How do nature and culture influence one another? This dissertation considers the stature of Vesuvius in the religious and political life of early modern Naples, and also the volcano's place in European humanism and science. Humanists, antiquarians, and natural philosophers began to think about volcanoes and their connection to Campania's ancient history when a minor eruption occurred in the Campi Flegrei east of Naples in 1538. Vesuvius erupted after a long dormancy nearly a century later, in 1631. Describing this event, seventeenth-century observers compared their own autoptic experience with the observations of classical naturalists, evidence of the latter's weight and importance well into the seventeenth century. Religion made the volcano a powerful symbol as well. The myth that developed from the natural disaster emphasized the volcano's role as castigator of the city, but it also celebrated the miraculous aegis of a protecting saint, San Gennaro. The awakening of Vesuvius in the 1600s coincided with Spanish oppression of the subject city, social and political unrest, intense piety, religious anxiety, and surging Neapolitan national sentiment. These things conspired to give the volcano much of its symbolic charge, especially in the 1640s, as the punisher of impiety and political tyranny. While the volcano continued to erupt with regularity, much of its real and imagined ferocity faded on the level of learned culture. Natural philosophers' investigations of subterranean heat explained volcanic activity as a vital part of the Earth's inner economy. For this reason, Vesuvius was by the eighteenth century an object of spectacle and scientific curiosity rather than one of rage and fear. This

dissertation considers the convergence of humanism, religion, and science in the seventeenth century, when the volcano became an object of intense curiosity as well as a powerful symbol of Neapolitan identity. Its primary intent is to understand a two-way interaction: how nature directly shapes human history, and how the attitudes and proclivities of a given culture create landscape in turn.

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ACKNOWLEDGEMENTS

This doctoral dissertation would not have been completed without the support of many people and institutions. Over the years, I have accumulated a measure of debt that this accomplishment can only repay in small measure.

I would first like to thank Mary O'Neil for believing in me from the start, and for sharing my passion for all things Italian. She has been an outstanding teacher, mentor, and friend who has encouraged my strengths, corrected my weaknesses, and tolerated my quirks. Even when I drew her far a field with my obsession for Vesuvius, her support and direction never flagged. Ben Schmidt has been my most challenging critic. From the beginning, he supported this project, saw its promise, and drove me always to clarify and ask more probing questions. His guidance on everything from writing to becoming an accomplished scholar has always been right on the mark. From my first years as a graduate student to the completion of my dissertation, Robert Stacey has been an invaluable mentor and supporter. Our early conversations about the Renaissance sharpened my own understanding and broadened my perspectives in important ways. I have always sought Professor Stacey's advice, and hold him in the highest esteem. I would also like to thank Ray Jonas, who is to me a model of teaching and scholarship. His kindness, optimism, and friendship have been greatly appreciated. Susan Smith has been a stalwart and unfailing supporter who never minced words, and always countered my pessimism with her boundless generosity. Ettore de las Grennelais was my friend and guide in Naples, Dean Bennet shared the best and worst of graduate school with me, and Michael Halvorson and I had many rewarding conversations about early modern Europe. The many students I have had at the University of Washington have been a constant source of inspiration, helping me feel that there was a purpose to my passion.

Much of the research for this dissertation was accomplished thanks to the Fulbright Commission, who funded an extraordinary year in Naples. Adriana Nave, a volcanologist at the Osservatorio Vesuviano, got this project off the ground, all thanks to a fortuitous meeting. The librarians of the Sezione Rari Brancacciani in the Biblioteca Nazionale di Napoli always showed great kindness and patience at my many requests. The University of Washington awarded me a Western Europe Dissertation Travel Grant. The History Department also made much of this possible with the Costigan fellowship and many opportunities to teach. Finally, I was honored by the Simpson Center for the Humanities with membership in the 2003-2004 Society of Scholars.

DEDICATION

To my parents, who first taught me to be curious on the shores of the Mediterranean and in the forests of the Northwest. They have encouraged me to finish what they started in countless ways. To my sister Melissa, who shares my wonder and understands why I did this. To my Nonna, *putésse passà n'atra iurnata appress' a te*. Finally, to my beautiful wife Claire, who has seen this through from beginning to end. This dissertation is for her, with all my love and a promise that she will someday get to the top of Vesuvius.

Introduction

Volcanoes have been imagined as gods of fire and apocalyptic destroyers throughout history, and only modern science has stripped them of their divinity. For all the danger they still pose around the world, geologists today understand volcanoes to be beneficial to life itself, an important link in the carbon cycle that makes this planet a home for living things. Most of all, modern ways of making sense of volcanism stress its interconnectedness to the inner economy of the Earth. Volcano diagrams often include a model of a tectonic subduction zone, showing in section the collision of heavy oceanic plate and the lighter continental mass. Such views express elegantly the very recent theory of plate tectonics. A generic volcano is often drawn right above the diving oceanic plate, as the latter breaks apart in an explosive mixture of molten rock. This magma in turn works its way upward toward the cone.¹

Schemata of this sort reflect current understanding of how inextricably connected volcanoes are to the basic processes that shape the physical structure of the Earth and the movement of the continents. A modern volcano explorer made these observations after he climbed Mount Krakatoa, in the Sunda Strait between Java and Sumatra:

¹ The atmosphere holds large quantities of carbon – some of it consumed by terrestrial plants during respiration – but far larger reservoirs exist in the Earth's soil and the oceans. By far the greatest volumes of carbon are contained in sedimentary rock and limestone. Plate tectonic movement acts as a great conveyor belt that carries carbon deep into the mantle, from where it is then released again into the atmosphere (as CO₂) by volcanoes. Peter Ward and Donald Brownlee, *The Life and Death of Planet Earth* (New York: Holt, 2002), 49-67. The typical geological definition of a volcano runs something like this: "A volcano is both an opening in the earth's crust through which hot rock is thrown out, and the hill or mountain formed by the accumulation of ejected material." See Stephen L. Harris, *Fire and Ice: The Cascade Volcanoes* (Seattle: The Mountaineers, 1976), 25.

The mechanics of the making of the world were all in evidence, just a few feet ahead of where I stood. All this talk of subduction zones, of the collisions between two of the world's immense tectonic plates, of the unfolding of the ring of fire – it all came down to this. Here, in this hot, crystalline, yellow-gray, wheezing, whistling, mud-boiling cauldron, was where the consequences of subduction were being played out.²

The “consequences of subduction,” in this case are well known, suggesting that for all the logic of science there is an enduring sense of wonderment and fear provoked by volcanoes.

Krakatoa is infamous for one of the largest eruptions recorded in human history, a cataclysm of immense proportions that vaporized an island archipelago and killed forty thousand people in August 1883. A new cone rose from the sea decades after old Krakatoa blew itself into inexistence; this is what the explorer above was describing at the end of the twentieth century. One of the truly captivating things about the life cycle of volcanoes is violent obliteration, followed by rebuilding and the return of living things.

Europe has Mount Vesuvius, its own Krakatoa. It is a powerful and highly explosive volcano that broods for centuries, only to suddenly demolish itself and its surroundings with unimaginable force. A number of times in the past, in fits and starts, it has risen again by the accretion of new flows and clasts to form a new mountain. In relatively recent times, Vesuvius broke a long silence by erupting in short intervals between 1631 and 1944. It then went quiet again.³ It is today one of the most closely monitored volcanoes on earth, even though it shows little sign of the forces that lurk ten miles down.

² Simon Winchester, *Krakatoa: The Day the World Exploded* (New York: HarperCollins, 2003), 382

³ M. Rosi, C. Principe, and R. Vecci, “The 1631 Vesuvius Eruption: A reconstruction based on historical and stratigraphical data,” *Journal of Volcanology and Geothermal Research* 58 (1993): 151-182. Vesuvius is the most spectacular kind of volcano, a *stratovolcano*, built up by successive layers of lava flows and erupted pyroclastic material. The great volcanoes in North America's Cascade Range – Rainier, St. Helens, and Baker – are all stratovolcanoes as well.

People forget the destruction, and over the last sixty years Naples' suburbs have begun to creep up its flanks. Lava flows half a century old are slowly breaking down, eventually to become the soil of new orchards and vineyards. Nearly a million people live within minutes of incandescent base surges of ash that move at hundreds of miles an hour.⁴ A pattern that is thousands of years old will eventually repeat itself. It occurred most notably in the first century AD, when the famous eruption of the classical period destroyed the Roman towns of Pompeii and Herculaneum.⁵ It also happened in the seventeenth century, an occurrence well known to volcanologists but little considered by historians.

This dissertation analyzes the effect Vesuvius' 1631 eruption had on the cultural, religious, and political life of early modern Naples, demonstrating how a distinct vision of volcanoes developed over the course of the 1600s. In this period, Vesuvius was intensely scrutinized by humanists and naturalists as a historical and natural landscape, but it was also a unique Neapolitan symbol of castigation, vengeance, and patriotic pride. Because of the range of topics explored in the following chapters, what follows is a cultural history, partly an environmental history, and in the last chapter a history of scientific explanations of volcanic activity. It is important to remember, however, that these were not categories imagined by early modern observers. Different sentiments and concerns converged on the volcano, in ways that are difficult for the historian to untangle. This included humanist and historical tropes about idealized natural landscapes and the

⁴ Paul L. Hancock and Brian J. Skinner, eds., *The Oxford Companion to the Earth* (Oxford: Oxford University Press, 2000).

⁵ Haraldur Sigurdsson, S. Cashdollar, and R.S.J. Sparks, "The Eruption of Vesuvius in A.D. 79: Reconstruction from Historical and Volcanological Evidence," *American Journal of Archaeology* 86 (1982): 39-51.

city, curiosity about natural processes in the subterranean world, but also religious anxieties and the aspiration of Neapolitan rebels to be free of Spanish domination.

Early modern approaches to Vesuvius shared universally a backward glance to antiquity – a dominant reflex in European intellectual life during this period.⁶ The volcano had figured in some of the earliest surviving observations made by Mediterranean peoples of volcanic activity, and so the weight of the past resulted in the constant comparison between classical textual authority and newly gathered observations, even when the latter were overwhelming. The historicity of the volcano was felt more broadly in other ways as well. For one thing, there was the classical ideal of the natural world promoted by humanists, “man’s nature,” cultivated and ordered. This contrasted with the devastating and uncontrollable forces of an unexpected eruption that transformed the landscape physically and figuratively into something much scarier.

The reader should be especially attentive to the frequent syncretism between historical and naturalist perspectives in the 1500s and 1600s. The boundaries between disciplines – what are today volcanology, archaeology, and history – were then either nonexistent or little observed. Vesuvius can thus be a lens through which we might view a very different intellectual world, where the division between humanists and scientists was not keenly felt at all.⁷

⁶ As this topic recurs throughout, I will let chapter footnotes speak to its more specific aspects. Important to read as introduction are: Anthony Grafton, *Defenders of the Text: The Traditions of Scholarship in an Age of Science, 1450-1800* (Cambridge: Harvard University Press, 1991); also, Charles G. Nauert, *Humanism and the Culture of Renaissance Europe* (Cambridge: Cambridge University Press, 1995); and, Anthony and A. MacKay Goodman, eds., *The Impact of Humanism on Western Europe* (London: 1990).

⁷ Grafton, *Defenders of the Text*, 179-184.

Attitudes toward Vesuvius in the 1600s were distinct from what preceded and followed. The primary reason for this was the abrupt transition from volcanic dormancy to activity. The most erudite observers saw this as a striking parallel to the Roman experience with a catastrophic eruption in the first century AD, but the historical context in which they came to this realization is of equally great importance. An end to dormancy coincided with a period of perceived and often very real Spanish oppression, social unrest, intense piety, religious anxiety and surging national sentiment. These things conspired to give the volcano much of its symbolic charge, for a number of decades, as the castigator of impiety and political tyranny, and ultimately a preview to the Apocalypse itself. This anxiety was relatively short lived, however, at least on the level of learned culture. As Vesuvius continued to erupt every few decades or so, never again with a violence similar to 1631, a good deal of its real and imagined ferocity faded. Primarily because of changing sensibilities, it was by the eighteenth century more an object of spectacle and scientific curiosity than one of rage and fear.⁸

The gradual tempering of Vesuvius began in the turbulent seventeenth century, after the first initial shock, as new cultural attitudes developed out of a matrix of older ideas. Many contemporary observers privileged the moral, religious, and even political

⁸ This shift reflected a number of things. It was partly symptomatic of changing ideas toward volcanoes as European science moved toward a distinct science of geology. Even more than in the preceding century, Vesuvius in the eighteenth century played a pivotal role in the development of volcanology. The most notable example was Sir William Hamilton's (1730-1803) *Campi Phlegraei: Observations on the Volcanoes of the Two Sicilies as They Have Been Communicated to the Royal Society of London* (Naples, 1776). Hamilton's more specific observations on Vesuvius were recorded in Sir William Hamilton, *Supplement to the Campi Phlegraei: Being an Account of the Great Eruption of Mount Vesuvius in the Month of August 1779* (Naples, 1779). For volcanology during the Enlightenment see: Haraldur Sigurdsson, *Melting the Earth: The History of Ideas on Volcanic Eruptions* (Oxford: Oxford University Press, 1999), 124-139; M.C.W. Sleep, "The Geological Work of Sir William Hamilton," *Proceedings of the Geologists' Association* 80 (1969): 353-63; Roy Porter, *The Making of Geology* (Cambridge: Cambridge University Press, 1977).

meanings of the volcano's "fires," but volcanic activity was increasingly explained also in naturalistic terms. Natural philosophers focused especially on the ignition and combustion of sulfur and other minerals, imagining Vesuvius as being somewhat akin to a giant furnace. Their theories were often not entirely novel since they borrowed heavily from ancient natural history.

The relative merits of ancient authority and explanations derived from a new empiricism were still a pressing question in the 1630s. The opportunity to observe volcanic activity up close and *al vivo* coincided with a continuing debate between "ancients" and "moderns" in the broader spectrum of European culture. Volcanic phenomena – eruptive clouds, pyroclastic flows, lava, *lahar* – were observed at great length and with unprecedented detail after 1631, begging whole sets of new questions that often had no good explanation in the classical canon. Natural philosophers still tried to confirm classical theories, sticking with the familiar, but they were open to alternate sources of understanding where their observations offered new insights.⁹ By the later 1600s, for all its other meanings, the volcano even had something of the mechanical – it

⁹ Minerals, rocks, fossils, plants, and animals were the central interests of late Renaissance natural history. Rocks that seemed to have been produced by subterranean "fire" provoked questions about volcanic phenomena even before Vesuvius erupted, as was the case with the naturalist Ferrante Imperato at the beginning of the 1600s. Imperato is discussed in detail in Chapter Five. Historians have recently sought to explain how the practices of observation, collection, and categorization of natural things – often in the locus of the collector and naturalist's museum – influenced the development of later scientific disciplines. In a seminal study on the topic, Paula Findlen describes how sciences like botany and zoology benefited from the "wider matrix of collecting." She writes: "Building upon Pliny's encyclopedic definition of nature as everything in the world worthy of memory and the narrower view of such writers as Dioscorides and Galen, who defined natural history as the study of objects useful in medicine, collectors brought ordinary and exotic nature into their museums. The alleged remains of legendary creatures – giants, unicorns, satyrs, basilisks – took their place next to real but puzzling phenomena such as fossils, loadstones, and zoophytes ... from the imaginary to the exotic, to the ordinary, the museum was designed to represent nature as a continuum." See: Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994), 3.

resembled a cannon or firework to some. Most important, the view that volcanoes are both *sui generis* and globally distributed natural things was just beginning to take shape. Volcanism was increasingly understood to be a key to explaining the inner composition of the earth. Thanks to these perspectives, Vesuvius very slowly began to assume a certain terrestrial regularity. By the eighteenth century, this was a firmly entrenched notion.¹⁰

A century and a half earlier, nothing much suggested to Europeans that volcanoes were anything but horrible, infrequent aberrations. The continent's most dangerous and most historic volcano – the latter quality rivaled only by Etna in Sicily – was placid and inert. Attitudes toward Vesuvius passed from little consideration to glimmers of interest in the 1530s, finally entering a period of very intense awareness and concern exactly a century later. I draw a very approximate line before 1700 because at this point the volcano was passing into a new and distinct phase in the European imagination, for the reasons suggested above.

Chapter One serves as background. It explains what influence classical and Christian perceptions of nature had on the two different faces of Vesuvius imagined alternately in its dormant and active periods. It begins with the Jesuit scholar and scientist Athanasius Kircher's climb to an active crater in the spring of 1638, an episode that later led him to contemplate the world's fiery destruction. Kircher's utterances on Vesuvius, I suggest, reflected some of the most basic and enduring Western narratives of nature since antiquity, but also the anxiety the volcano provoked in the seventeenth

¹⁰ This is discussed in the conclusion.

century. I follow in particular the origin of two visions – pastoral/agricultural and wild/apocalyptic – closely associated with the volcano. The writings of Cicero, Lucretius, as well as Pliny the Elder and Younger are a significant focus of the chapter.

Chapter Two shifts attention to another volcanic area in the Bay of Naples: the Campi Flegrei. This is an active caldera west of the city, inhabited since the Greeks first began to settle southern Italy in the eighth century B.C. The chapter explores antiquarianism and natural history in the region west of Naples, suggesting that volcanic activity in the first half of the 1500s had an important effect on how Neapolitan authors described their city and its surroundings. Attention to volcanism in this instance also established important precedents for the later description of Vesuvius. The sources that support the arguments of this chapter were part of a genre that emerged in the mid sixteenth century: antiquarian guides to the Campi Flegrei.

These works were principally explorations of the ancient sites in the caldera, but their authors were also deeply interested by volcanic marvels, what they called *meraviglie*. Campi Flegrei guides stressed that a combination of marvels and ancient ruins endowed Naples with the most glorious landscape in Europe. This was a bias reflecting a political context that was often tense and uncertain. Antiquarianism and natural history in fact contributed to a unique patriotic rhetoric that legitimized and idealized a difficult alliance between the local Neapolitan establishment and foreign viceroys governing in the name of the Habsburgs. The latter favored the suggestion,

promoted by scholars with connections to the viceroy's court, that Naples in the orbit of Spain could recover and emulate the accomplishments of antiquity.¹¹

Chapter Three returns to Vesuvius. It describes the eruption of 1631, as it was recounted in the chronicles of the city elite, weighing mostly the immediate effects the disaster had on the cultural and religious life of Naples. I argue that the resulting myth of the eruption highlighted notions crucial to the city's political and religious elites' sense of identity and power. One side was the city's sinful state, but the other was San Gennaro's miraculous intercession. The pivotal role of the Spanish viceroy, the nobility, and the archbishop – secular and spiritual leadership – in orchestrating the pious and repentant response to the cataclysm was another central feature of the myth. Finally, there was the suggestion that the city's highest and lowest orders had drawn the same moral and religious lesson from Vesuvius.

Chapter Four shows that the meanings and implications of Vesuvius' volcanism were contested, despite the pretension that Neapolitans would behave because they now had a smoldering volcano nearby, ready to bring fiery ruin upon them. This belief had significant repercussions, primarily because social and political tensions mounted over the first half of the 1600s. The sources of conflict were two, broadly defined. An uneasy alliance between the Spanish viceroys and the Neapolitan baronage was a principal cause of tension, since one of its products was the disenfranchisement of the city's *popolo civile* – the increasingly discontented upper segment of the popular orders. On another level,

¹¹ I use the term patriotic without hesitation. The late sixteenth century and the seventeenth century in particular saw the Neapolitan notion of *patria*, or a “fatherland,” intensify greatly. My argument is developed – along with the appropriate historiography – in the fourth chapter.

there were worsening pressures on the Neapolitan mob, which responded badly to food shortages and heavier taxes levied in the grim period of the Thirty Years' War. These combined factors resulted in a ferocious rebellion in 1647.

By the time the rising occurred, the volcano's reactivity to the state of affairs had become a commonplace in Neapolitan culture. There was no consensus, however, on how to distribute blame for the city's volcanic scourge. The fourth chapter presents the vengeful Vesuvius that existed in the imagination of a very active patriot and rebel, Camillo Tutini, right after the 1647 revolt against Spain failed. Tutini commented on the rising as an exile in 1649, victim of a fierce repression carried out by the new Spanish viceroy in the preceding months. As he hid in Rome, helpless to aid his compatriots, Vesuvius also erupted again. There was only one possible explanation for this, according to Tutini. The new eruption was the portent of a second, successful, rising against the "barbarian" oppressor. The key point in Chapter Four is that the rebel rhetoric on Vesuvius came out of the broader discourse of Neapolitan nationalism at a moment of historic – if failed – rupture with Spain. Vesuvius was to rebel patriots the avenging symbol of a *patria* suffering the outrages of a foreign oppressor. The chapter recounts how the Neapolitan notion of a "fatherland," or "homeland" took shape in the early seventeenth century, as scholars and political reformers sought to recover, and often invent, Naples' history of autonomy and self-governance. For a long time, these ideas existed in agreement with the notion of Neapolitan loyalty to Spain. They took a radical turn, however, during the Masaniello revolt of 1647, to the point of resulting in an

outright declaration of independence. Tutini's rhetoric on Vesuvius was an example of this extreme political stance in the late 1640s.

Chapter Five shifts away from overtly political themes. This is necessary because the scientific discourse on Vesuvius deserves a measure of distinct consideration. My central contention is that historians have completely underestimated the significance of the 1631 eruption, not just on the religious and political life of Naples, but also with respect to early modern theories of volcanism and the structure of the earth. I argue that the natural philosophers tried to explain the eruption – and volcanism more generally – by being conversant with both the canon of classical learning and by relying on the empiricism of seventeenth-century science. When it came to understanding the earth, much of the latter sort of knowledge came from artisan practices related to mining, pyrotechnics, alchemy, and early chemistry. The resulting model of “chemical ignition” of volcanoes, which I argue was already articulated in the 1630s, would persevere into the eighteenth and nineteenth centuries. This was ultimately part of the changing identity of Vesuvius.

I should finally explain my motivations for undertaking this study, which brings together so many apparently disparate strands. This history reflects, admittedly, a personal attachment to a place I have come to know intimately. I have scrambled around the full perimeter of Vesuvius' crater, feeling its imposing stillness to be deceptive and troubling. I have also glanced at it every day from Naples, only a few miles distant, from where the volcano appears in countless perspectives. Some are sweeping views, others just glimpses from the dense hive of the city. It is an inescapable presence even to

modern Neapolitans, inciting their reflection and comment. It has defined human civilization at its base for centuries, but never more so, perhaps, than in the 1600s.

This anecdote suggests my personal inspiration, but it also points to some of the big questions that the cultural geographer and historian Clarence Glacken addressed admirably in his survey of Western ideas of nature, *Traces on the Rhodian Shore*. Glacken's travels – far greater and more distant than my own – led him to reflect on how natural environments shaped human cultures over the course of history, and in particular to consider how this exchange between nature and culture had been understood in the Western intellectual tradition since antiquity. Glacken described, among other things, the long evolution of Western environmental theories, which have from their Greek origins sought to explain the effect of “airs, waters, places” on the physical and cultural characteristics of human civilization.¹²

Glacken narrated in the opening passages of *Traces on the Rhodian Shore* how he developed a common sense intuition and deeper sensibility for the ways nature and culture speak to each other. He wrote:

In 1937, I spent eleven months traveling in many parts of the world. The yellow dust clouds high over Peking, the dredging of pond mud along the Yangtze, the monkeys swinging from tree to tree at Angkor Vat, a primitive water-lifting apparatus near Cairo, the Mediterranean promenade, the goat curd and the carob of Cyprus, the site of Athens and the dryness of Greece, the shrubs, the coves, the hamlets, and the deforestation of the

¹² “Airs, Waters, Places,” were terms that Glacken derived from the Hippocratic corpus – a vast body of writings from the fifth century BC ascribed, at times vaguely, to the figure of Hippocrates. Environmental theories in the Greek tradition were closely connected to medicine and humor theories related to the human body. The humor of the human body – blood, phlegm, yellow and black bile – in combination with the influences of physical environments – airs, waters, places – explained not only the physical health of individuals but also the physical and cultural characteristics of cultures. Clarence Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley and Los Angeles: University of California Press, 1967), 80-88. See also: Hippocrates, *Works of Hippocrates*, W.H.S. Jones trans., vol. 1, Loeb Classical Library (Cambridge, Mass.: Harvard University Press, 1948), x-xiv.

Eastern Mediterranean, the shepherds of the Caucasus, the swinging swords of Central Asians in the markets of Ordzhonikidze, the quiet farms of Swedish Skåne – these and many other observations made me realize as part of my being the commonplace truth that there is a great diversity both of human cultures and of the physical environments in which they live. It is the difference between knowing about the midnight sun and spending a summer night on the Arctic circle. One is continually asking questions about the circumstances which stimulate human creativity, about the effect of religious belief, about the custom and tradition men have soaked into their soils. And although I have used abstract words like “man” and “nature” as a convenience, it is really human culture, natural history, and relief of the land that I mean. Phrases like “man and nature” are useful as titles, as a shorthand to express far more complex sets of ideas.¹³

This dissertation narrates for Vesuvius and Naples what the Glacken described in this passage as the “custom and tradition men have soaked into their soil.” I have borrowed some of the terms he outlined – human culture, natural history, and relief of the land – and assigned specific meanings to them. They refer here to early modern Naples, an unusually powerful eruption, and Vesuvius itself.

The notion that physical place, which one might alternately call environment or nature, influences human history is one I have borrowed from another source. The influential French historian Fernand Braudel began two of his masterpieces, *The Mediterranean and the Mediterranean World in the Age of Philip II* (1949) and the posthumously published *Memory and the Mediterranean* (2001) with an account of the geological formation of the Mediterranean basin. He meant to suggest the way Mediterranean civilization in its full breadth and long expanse of time, which he called the *longue durée*, had been shaped by topography, climate, and millennia of human interaction with the environment. The sea and the mountains – created by the forces that

¹³ Glacken, *Traces on the Rhodian Shore*, x-xi.

drive the movement of the Eurasian, African and Anatolian plates – were to him very real factors in shaping the course of Mediterranean history.¹⁴

Braudel wrote in *Memory and the Mediterranean*:

All this suggests a tortured geology, a process of orogenesis not yet stable even today. It accounts for the frequent and often catastrophic earthquakes, for the hot springs which the Etruscans had already discovered in Tuscany, and for the broad volcanic zones, with their strings of volcanoes, extinct, active, or potentially active. Mount Etna was the fabled home of the Cyclops, blacksmiths and makers of thunderbolts, wielding their mighty bullhide bellows; here, much later, the philosopher Empedocles is supposed to have cast himself into the crater, from which a lone sandal was recovered. “How often we have seen boiling Etna spill forth balls of fire and molten rock!” remarked Virgil. Vesuvius really did destroy Pompeii and Herculaneum in AD 79. And in the years before 1943 [sic] its plume of smoke could be seen hanging over Naples. Every night in the Lipari archipelago, between Sicily and Italy, Stromboli still lights up the sea with its incandescent lava displays. Earthquakes and eruptions have continually punctuated the past and still threaten the present in Mediterranean countries.¹⁵

Braudel recognized that from the mythical Cyclops, Empedocles, the Etruscans, and Virgil, to his own observation of Stromboli glowing in the night, there was a continuous influence exercised by the forces of nature on civilization. Nature in the Mediterranean, he believed, “patiently recreates for us scenes of the past, breathing new life into them, locating them under a sky and landscape that we can see with our own eyes, a landscape and sky like those of long ago.”¹⁶ This is a sensibility that Vesuvius observers in the seventeenth century would have appreciated, especially on the awful dawn of its first eruption in five hundred years, when a cataclysm that had previously seemed to belong to ancient Roman history came crashing down on them.

¹⁴ Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, Siân Reynolds trans. (Berkeley and Los Angeles: 1972; 1995); *ibid*, *Memory and the Mediterranean*, Siân Reynolds trans. (New York: Alfred A. Knopf, 2001).

¹⁵ Braudel, *Memory and the Mediterranean*, 4-5.

¹⁶ *Ibid.*, 3.

The risks of Braudel's *longue durée* lie in minimizing the distinctions of place and time, as well as burying human culture under the weight of environmental determinism. Braudel was directly challenged in the 1960s by a new historiography called the "history of mentalities," which argued that interpreting history should move toward understanding it as a construct of human impressions, and not just the product of factual certainties like economy, society, and geography.¹⁷ Another corrective around the same time was Michel Foucault's critique of history. For the French philosopher, ways of constructing the past served to control knowledge. He theorized that writing history was not an innocent activity, but should be seen rather as an exercise complicit in legitimating and establishing mechanisms of social power – which identified, categorized, and marginalized groups such as women, native peoples, homosexuals and the mad. This critique went beyond the "history of mentalities" notion that history should be derived from human impressions as much as from raw facts. It was a challenge to the *longue durée* because it argued that it was not the long perspective that mattered in a history dominated by ideas, discontinuities, random changes, rather than by enduring structures and the physical world – Braudel's constant "rhythms of life."¹⁸

Despite these important suggestions, there is no reason to deny that Vesuvius and Naples fit Braudel's basic intuition, which was in the end similar to Glacken's. The

¹⁷ Introduction by Oswyn Murray, in *ibid.*, xvii. It was in large degree the static, plodding and long-term focus of Braudel's history that the "mentalities" historians challenged. The most notable example was Emmanuel LeRoy Ladurie's, *Montaillou: The Promised Land of Error*, Barbara Bray trans. (New York: Random House, 1979). LeRoy Ladurie's study of the lives and beliefs of a fourteenth-century village in a Cathar region of France rejected, among other things, the notion that peasant society was static and immobile. He wrote, for example, that the historian, "must go beyond these descriptions of economic and professional links and try to decipher ... the mental outlook of a migrant shepherd in Montaillou in the early decades of the fourteenth century." *Ibid.*, 120.

¹⁸ Introduction by Oswyn Murray, in Braudel, *Memory and the Mediterranean*, xvii. Cf. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1970).

importance of long-term relationships between nature and culture, as well as the effect of physical environment on human civilization, merit a place in the consideration of history. The relationship between the volcano and the city was, even in the particular period that is the focus here, undoubtedly part of a far more ancient conversation in the Mediterranean world. I take from Braudel the idea that natural places and physical environments possess a real place as forces in history, and should be thought of as something more than constructs fashioned by the observer for his immediate purposes. I recognize, however, that they are partly that.

Much of this history seeks to understand how Europeans imagined Vesuvius between the 1630s and 1660s, when Neapolitans in particular described volcanism in ways that satisfied their sense of history and curiosity about nature, addressed their religious fears, and explained their political ideologies. Most of all, this dissertation teases out the particularities and differences in human cultures' relationship to the natural environment created by time and place. Braudel was ultimately seeking the unity of the Mediterranean, partly by explaining how nature, geography, and climate shape civilization. I weigh equally the other side, and consider what two historians have called the "pronounced local irregularity" of the region, with its "minutely subdivided terrain" that created its natural, cultural, and historical diversity.¹⁹ People and volcanoes are an

¹⁹ A recent, and very impressive, study of Mediterranean history is very much a commentary on Braudel: Peregrine Horden and Nicholas Purcell, *The Corrupting Sea: A study of Mediterranean history* (Oxford: Blackwell, 2000). Horden and Purcell stress the diversity and particularity of the Mediterranean, whereas Braudel sought its unity. See: *The Corrupting Sea*, 9-49. As Braudel, as well as Horden and Purcell would recognize, however, these are questions of perspective and choices of emphasis, not absolutes. Another work that is a compelling exploration of unity and diversity over the geography and history of the Mediterranean is Pedrag Matvejevic, *Mediterranean: A Cultural Landscape*, Michael Henry Heim trans. (Berkeley: University of California Press, 1999).

old narrative told and retold around the basin and the wider world – from Thera, to Krakatoa, and even to St. Helens – but Vesuvius and Naples four hundred years ago tell their own story.²⁰

²⁰ The colossal eruption of Thera, in the Aegean north of Crete, occurred in the seventeenth century BC, contributing to the decline of Bronze Age Minoan civilization. See: D.A. Hardy, ed., *Thera and the Aegean World*, 3 vols. (London: The Thera Foundation, 1990).

Chapter 1

Approaches to Vesuvius

The Jesuit natural philosopher Athanasius Kircher climbed Vesuvius in the spring of 1638, after his galley made port in Naples, the terminus of a sea voyage he had undertaken returning from Malta to Rome. A series of volcanic events attracted Kircher's attention during his maritime passage to Italy, which took him across the central Mediterranean. The Baroque polymath sailed past Vulcano and Stromboli, volcanic islands in the Aeolian archipelago. He had only just previously climbed Etna. The volcano on Sicily was in a cooling phase, following an eruptive period between 1634 and the spring of 1638. Kircher observed the ebbing lava flows as Etna grew temporarily dormant. Sailing north from Sicily to the coast of Calabria, he landed at Tropea on March 27, just in time to feel the effects of a powerful earthquake. The tremors affected his understanding of the earth, convincing him that changes on its surface were rooted in processes buried deep within the core. Brooding on these things, he finally reached Vesuvius. The volcano was still smoldering after a fierce eruption. Volcanism here suggested a troubling thought to him: the world would eventually end in a catastrophe of fire.¹

¹ Prefatio, Athanasius Kircher, *Mundus subterraneus in XII Libros digestus* (Amsterdam: Johan Jansson, 1678). See also Stephen Jay Gould, "Lyell's Pillars of Wisdom," in *The Lying Stones of Marrakech* (New York: Three Rivers Press, 2000), 151. On the geological theories of Kircher see Nicoletta Morello, "Nel corpo della terra: il geocosmo di Athanasius Kircher," in Eugenio Lo Sardo, ed. *Athanasius Kircher: Il museo del mondo* (Rome: Edizioni De Luca, 2001), 179-196. On Lyell see Dennis R. Dean, "Graham Island, Charles Lyell, and the Craters of Elevation Controversy," *Isis* 71 (December, 1980, 1980): 571-588.

Kircher was hardly the first to conjure up apocalyptic images when confronted with an erupting volcano. Mediterranean volcanoes had inspired visions of the world's end since antiquity. Describing Etna sometime between the second half of the first century BC and the first century AD, an anonymous Roman author expressed a sentiment very similar to Kircher's. He wrote: "So cities tremble and are liable to fall. There can be no surer sign of the truth, if truth it is, that the world is destined to return to its primeval state."²

Kircher recognized that Vesuvius had once terrified the ancient world. In 79 AD, the volcano destroyed Herculaneum, Pompeii and other Roman settlements on the Bay of Naples, in what would become one of the most renowned eruptions in human history. Writing to the historian Tacitus, the Roman author Pliny the Younger painted a vivid image of this cataclysm. He described a world plunged into a terrifying darkness, filled with the shudders of the mountain and the wailing of the dying.³ Recording his own reflections of having stood on the rim of the same crater fifteen hundred years later, Kircher reflected on the ancient eruption. This was a habitual reflex for seventeenth-century naturalists. Their eyewitness accounts very often recalled the narratives of the younger Pliny, his famous naturalist uncle Pliny the Elder, and other important classical writers. The apocalyptic images that haunted Kircher were only partly derived from Pliny's description. On a more basic level, they originated from Christian narratives. For the Jesuit natural philosopher, the eruptions of Vesuvius evoked classical history, but also

² *Aetna* (Lines 172-174), quoted and translated in Andrew Dalby, *Empire of Pleasures: Luxury and Indulgence in the Roman World* (London: Routledge, 2000), 23.

³ Pliny the Younger, *Epistulae*, VI, 16 in Francesco Trisoglio, *Opere di Plinio Cecilio Secondo* (Turin: Unione Tipografico-Editrice Torinese, 1973). On Pliny's account see: Francis A. Sullivan, "Pliny Epistulae 6.16 and 20 and Modern Volcanology," *Classical Philology* 63 (July, 1968, 1968): 196-200.

gestured forward to the end times of Biblical eschatology. In a related fashion, volcanic fires were also disturbingly reminiscent of Hell, at least figuratively.

Vesuvius had also another face, however. It was a benign view stemming from classical ideals of fertility and cultivation, which were especially appropriate to the volcano's appearance in the sixteenth century. For late Renaissance humanists, the mountain resembled Arcadia, the pastoral and agricultural landscape of the sort idealized by the Greek lyric poet Theocritus, and later by the Roman poet Virgil.⁴ Such a vision of the volcano was not at all devoid of substance, since it was a richly forested and cultivated place before 1631. Like the reverse apocalyptic image, Arcadian Vesuvius was a cultural projection onto a landscape capable of extraordinary transformation.

Forests and human cultivation had repopulated the mountain all the way to the crater during the five centuries of dormancy that began in the twelfth century, . Many portions of the volcano's slopes had been planted with orchards and vineyards, giving it the sort of cultivated appearance that could very easily make it seem a kind of Arcadia. Renaissance humanists saw the mountain as exemplary of what the Roman philosopher Cicero had described as a "second nature" (*alteram naturam*), in which the riches of the natural world – fertile volcanic soil in this instance – were transformed for human use by man's labor on the soil.

The fact that the volcano was intensely cultivated had important implications. One was the idea that Vesuvius was nature's gift to Naples – a theme proudly repeated by

⁴ I use the term Arcadia much as Simon Schama does in *Landscape and Memory* (New York: Vintage, 1995), 526-538. As Schama notes, there was no single vision of Arcadia in the ancient world. Theocritus' idylls celebrated the pastoral world, one step removed from the utterly primitive. Virgil's *Georgics* and *Eclogues*, on the other hand, presented a more "cultivated" vision of Arcadian nature, where the agrarian bounty is also the product of intense human labor. This is discussed below.

local humanists. After the eruption of 1631, however, it became obvious that such a natural endowment did not come without a darker side. The angry side of the volcano only resurfaced in the seventeenth century, complicating its imagined “second nature.” With a richness that is at times remarkable, baffling, and strikingly different from our modern ways of seeing nature, Vesuvius during the seventeenth century became a symbol of Naples itself. It was repelling in its horrors, commanding in its apparent vengeance, but also comforting in how it nurtured a landscape of unusual richness. All of these things ultimately reflected the state of the city.

It is important to understand that seventeenth-century observers like Kircher were the first since the twelfth century to see the volcano erupt in earnest. Because the mountain had been quiet for so long, but also because of powerful trends in early modern learned culture – those related to natural history, empiricism, and collecting, in particular – they explored and described the mountain with an intensity that surpassed even that of classical naturalists. The 1600s witnessed an important readjustment in the image of Vesuvius. For one thing, the volcano recovered the full ferocity it had possessed for the Romans after the first century AD. In the process, it acquired a complete array of disturbing contrasts in contemporary culture. It would never again be mistaken for just any mountain, as it often was before the 1600s, its inner fires forgotten.

It is unfair, nonetheless, to say that European learned culture failed completely to recognize Vesuvius for what it was before 1631 – it’s just that very little was known about it, or at least recorded. In the 1500s, there were a few texts and images of the volcano in circulation, all notably free of the fierce and eruptive imagery of a century

later. One representation of the volcano in particular, among the most exquisite of the sixteenth century, illustrates very well how it might have looked before 1631. The image appeared in a book that circulated widely in the late sixteenth century (**Figure 1.1**).

Volcanism seemed to belong solely to distant memory at this point of time.

Georg Braun and Franz Hogenberg's atlas of urban and natural cityscapes, the *Civitates Orbis Terrarum* (Cologne, 1572-1618), depicted Vesuvius and Naples in a way that hinted at the long and inseparable bond between city and volcano.⁵ The association was undoubtedly strengthened in the early modern period, for reasons that will become apparent over the course of this study. A very noticeable feature of the atlas' illustration was the obvious dormancy of the volcano, with its green and fertile slopes in the distance reinforcing the Arcadian setting of the foreground.

This engraving was the work of Joris Hoefnagel, a regular contributor to the *Civitates Orbis Terrarum*. Among the most talented engravers of his day, Hoefnagel was also known for a series of floral and faunal illustrations he drew in the late 1590s under the patronage of Rudolf II, duke of Bavaria. His motto of *Natura sola magistra*, or "nature is the sole teacher," was reflected in the remarkable detail and realism of his images, widely considered among the finest examples of sixteenth-century nature illumination.⁶ When applied to city views, these talents could result in stunning

⁵ Georg Braun and Franz Hogenberg *Civitates Orbis Terrarum* (Cologne, 1581). See John Oliver Hand, et al., *The Age of Bruegel: Netherlandish Drawings in the Sixteenth Century* (Cambridge: Cambridge University Press, 1986), 201.

⁶ Hand, *The Age of Bruegel*, 198-202. The Getty Museum has produced a beautiful facsimile of the work Hoefnagel illustrated: Lee Hendrix and Thea Vignau-Wilberg *Mira Calligraphiae Monument: A Sixteenth-century calligraphic manuscript inscribed by Georg Bockskay and Illuminated by Joris Hoefnagel* (Malibu: The J. Paul Getty Museum, 1992).



Figure 1.1 Joris Hoefnagel (1578)

depictions of cities and their natural setting. His 1578 portrait of Naples is a perfect example.

Hoefnagel depicted the city from a viewpoint on Cape Posillipo, a perspective that would become the absolute standard for representing the volcano and the city together. To date, modern postcards still replicate a nearly identical perspective. Very deliberately, the Dutch artist framed this image so that Naples was tucked into the curve of the bay, almost to the point of disappearing, while Vesuvius formed the backdrop and the central

feature of an obviously splendid countryside.⁷ In the foreground, the Arcadian themes were picked up by a shepherd playing his bagpipes as sheep grazed at his feet, with tilled plots visible in the vicinity and distance. Broken tree trunks showing new shoots symbolized alternately sin or death and redemption.⁸

Georg Braun, chief editor of the atlas, is thought to have written most of the descriptive texts printed on the versos of the illustrations that appeared in the *Civitates*' six eventual volumes. These captions were particularly important when the illustrations were sold separately, as was often the case.⁹ Part of the Latin text for this particular illustration read:

Naples, royal maritime city, capital of all Campania, and its metropolitan kingdom, shaped as a triangle of unequal sides ... curving in the way of a half moon. Her proximity to the sea, the amplitude of the port, the salubrious nature of the air, the fertility of the soil, the abundance of springs, the amenable orchards and in short all things that human life requires, yielding to none in abundance.¹⁰

When it came to the volcano itself, Braun asserted, "Mount Vesuvius looms over this place, famous in the commemorations of many authors."

Both image and text conspired to privilege the only aspects of the volcano that appeared evident in the late fifteenth century. Braun went on to note that the geographer Strabo, who visited Vesuvius over a decade before the eruption of 79 AD, had remarked

⁷ For city views of Spanish cities by other prominent sixteenth-century Dutch engravers see Richard Kagan, *Spanish Cities in the Golden Age: The Views of Anton van den Wyngaerde* (Berkeley: University of California Press, 1989).

⁸ Lucia Impelluso, *La natura e i suoi simboli. Piante, fiori, e animali* (Milan: Electa, 2003), 16-19.

⁹ Georg and Frans Hogenberg Braun, "Civitates Orbis Terrarum," in *Braun and Hogenberg's The City Maps of Europe: a Selection of Sixteenth-Century Town Plans*, ed. John Goss (London: Studio Editions, 1991, 1615), 1-3.

¹⁰ Joris Hoefnagel, "Elegantissimus ad mare Tyrrhenum ex monte Pausillipo NEAPOLIS Montisque Vesuvii Prospectus," (Naples, 1578). Biblioteca della Società Napoletana di Storia Patria III C21*.

on the impressive vineyards, orchards and forests present on the very highest parts of the mountain. Only the very tip had hinted to him that there had once been what he called “ancient fires.” The author of the sixteenth-century atlas suggested that the ancient geographer’s description was a spitting image of the mountain in his day.¹¹

After 1631, an image like Hoefnagel’s was no longer possible. From the 1630s onward, Vesuvius was at the center of debates about the natural causes of volcanism. No less importantly, it also became a symbol of how God visited his anger upon Naples by threatening it with fire and ash. These competing discourses of religion, politics, and science complicated the volcano’s landscape considerably.

Vesuvius had always possessed two faces, but the apocalyptic become particularly relevant again in the seventeenth century. The origin and significance of both merit exploration. Ultimately, there emerged a fundamental tension between idealizing the dormant volcanic landscape for its fertility, and fearing its infernal flames when the great cone awakened. As Georg Braun suggested in his atlas, Vesuvius loomed over Naples, a celebrated vestige of antiquity. Kircher, on the other hand, remarked that it portended a fiery Apocalypse.

¹¹Ibid. The appearance of Vesuvius in this period is carefully reconstructed in Antonio Nazzaro, *Il Vesuvio. Storia eruttiva e teorie vulcanologiche* (Naples: 1997), 18-32. According to Nazzaro, the morphology of the volcano before 1631 was characterized by two pronounced peaks, Somma (the crater rim from the eruption of 79 AD) and the crater of Vesuvius. The latter would collapse some 450 meters in the eruption of 1631, and would gradually rebuild in the eruptive cycles of the seventeenth and eighteenth centuries. This is a process Kircher observed (see below).

Classical Attitudes toward Nature

Ecologists talk about landscape as an objective reality: mountains, valleys, gorges, terraces, cultivation, hedges, and so on, all developed and originating from a series of natural or human processes.¹² A historian might also consider another perspective, suggesting that landscapes are also a human imagining of those material and natural things. What features are privileged and valued? What part of nature is considered to be beneficial, have a purpose, and what is abhorred? The question of whether the natural world had a design and purpose was one of the paramount inheritances early modern depictions of the volcano derived from classical narratives. The great debate about nature's design dominated Roman natural history, having been tackled by Cicero, Lucretius, Virgil, and Pliny the Elder, among others. The long-considered question of how nature was shaped, and what function it served – the latter always implying a reference to man – forms the basic backdrop for situating early modern attitudes toward Vesuvius.

Cicero's reputation throughout the Middle Ages and the Renaissance was probably unrivalled among Roman authors, and his sway was deeply felt over ways of seeing nature. The Stoics' regard for the natural world, with Cicero squarely in their tradition, must be distinguished at its core from the Epicurean philosophy of Lucretius, also discussed below. The latter completely rejected the role of the gods in the governance of the world, thus greatly minimizing the sense in which nature had a teleology built upon

¹² A.T. Grove and Oliver Rackham, *The Nature of Mediterranean Europe: An Ecological History* (New Haven: Yale University Press, 2001), 12.

order and design.¹³ Cicero on the other hand, developed a sense that was at once highly aesthetic and utilitarian, suggesting that the design of the natural world reflected a sort of divine plan that made man the caretaker of nature. He was meant to work the soil and make it productive.

The *De natura deorum* was one of the most influential ancient texts in the development of Western theories of nature. It was widely read and cited by humanists in the late 1400s and 1500s.¹⁴ In the *De Natura*, the Roman philosopher likened nature to a craftsman (*artifex*) that enclosed all things in an embrace of perfect design and function. Since it was far beyond the capacities of human artifice to emulate completely, for Cicero nature could only be marveled at and mimicked. Its scrutiny revealed the path and method that all things followed in the providential order of existence. This notion rested

¹³ Clarence Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967), 51-79.

¹⁴ Glacken, *Traces on the Rhodian Shore*, 55. By the late fifteenth and early sixteenth century multiple incunabula versions of the *De natura deorum* were in circulation in Italy and elsewhere in Europe. Printing in general was quite precocious in Italy, with most of the production centered in the north and the center of the peninsula, although the south was not excluded from the growing market of printed texts. Venetian production alone accounted for around 38% of Italian editions of Cicero printed at the turn of the sixteenth century. Rome, Milan, Florence, Bologna, Brescia, and Naples all had printing industries, but only Rome, with some 16% of production, came close to half the Venetian run. Naples, with a mere 3%, compared roughly to Bologna and Brescia, but there were no other significant centers of production in the Italian south. Still, it does not seem unreasonable to speculate that new printed editions of Cicero's writings on natural philosophy were available in Naples, since they could be imported from Rome. A search of the collections of the Biblioteca Nazionale in Naples has revealed at least one edition that predates 1500. See: *M. Tul. Ciceronis in dialogu. de natura deorum ad Brutum* (Rome: 1471). Similar early incunabula from Italy include: *De natura deorum* (Venice: C. Pensis and P. Pincius, 1494), *De natura deorum* (Venice: Simone Bevilaqua, 1496). Naples was not a backwater when it came to interest in new editions of classical texts. In 1463, the secretary of Ferdinand I paid the Florentine bookseller and humanist Vespasiano da Bisticci 60 florins for a copy of Pliny's *Naturalis Historia*. See: Leonardas Vytaitis, *Printing and Publishing in Fifteenth-Century Venice* (Chicago: American Library Association, 1976), 63-65; Brian Richardson, *Printing, Writers and Readers in Renaissance Italy* (Cambridge: Cambridge University Press, 1999), 113. For an introduction to Naples in the Renaissance, see: Jerry H. Bentley *Politics and Culture in Renaissance Naples* (Princeton: Princeton University Press, 1987).

on an understanding of the universe as governed by the will of the gods. It suggested that the world had been endowed with all those things necessary for its survival and permanence, but also with those things that embellished it and gave it supreme beauty.¹⁵

The resulting view of nature on earth was basically a celebration of its diversity. The globe was situated in the middle of the universe (*in media sede mundi*), and was a place resplendent in the immense variety of life it contained. Flowers, trees, and vegetation of indescribable variety covered a landscape as varied as the life it contained. There were cool rivers, pleasant lakes, shady forests, and vertiginous mountains. The earth itself, with its caverns and precious metals, was of immeasurable worth to man.¹⁶

Cicero reserved a special place for the animals, lauding both tame and wild for their grace on air, land, and sea. Each environment represented a proliferation of forms and life in its own way. He wrote:

And truly how great is the beauty of the sea! How universal its appearance! How great the number and variety of islands! How delightful the coasts and shores! How different the species of marine animals, some in the depths, some floating and swimming, some adhering to rocks in their natural shells!¹⁷

For Cicero, animals and plants were the most obvious examples of design and purpose in nature, since each had unique adaptations to environment.

The Roman philosopher described how some creatures had hides to protect themselves, others fleece, scales, or spines. Animals knew what was required for subsistence and survival, and nature had, in general, provided in abundance. Sensation

¹⁵ Cicero, *De Natura Deorum* (London: Loeb, 1938), Book II, 22.

¹⁶ Ibid., II, 39.

¹⁷ "At vero quanta maris est pulchritudo! quae species universi! quae multitudo et varietas insularum! quae amoenitates orarum ac litorum! quot genera quamque disparia partim submersarum, partim fluitantium et innantium belvarum, partim ad saxa natives testis inhaerentium!" Ibid., II, 39.

and desire was something all animals shared in their search for nourishment. Physical adaptations, like the trunk of the elephant that so resembled a hand, the lion's claw, or the swan's long neck, made survival possible. Swiftiness, strength and cleverness, as in the case of the spider and his web, gave some animals a necessary edge over others.¹⁸

Cicero's vision of life on earth never seems to have been dominated by a stark struggle for survival. Though he reveled in how each creature adapted to its environment, he saw in nature a sort of ordered abundance that ensured the perpetuation of all species. The continuation of life, after all, was inextricably related to the providential quality of the world. The gods made sure that plants and animals had all things necessary for their existence. Cicero noted that plants bore seeds, each containing the promise of regeneration, and that animals were male and female, something, "most apt for procreation and conception." Animals' bodies were designed, he argued, to make the act of procreation particularly enjoyable.¹⁹

Man assumed, of course, a very special place in the order of this creation. The function he served in the natural world was that of tending the earth and rendering it productive, but he was also the central reference point by which the different valences of nature were determined. To the question of why nature's gifts were so vast, Cicero responded that they had been provided for the benefit of man, so that he might sow the wild places and make them fertile.²⁰ Inherent in this assertion was a fundamental abhorrence of wilderness, which could only be the useless abandonment of nature to

¹⁸Ibid., II, 47.

¹⁹Ibid., II, 51.

²⁰ Ibid., II, 53.

itself. For antiquity, and for the entire Western tradition until two centuries ago, the term wilderness bore negative connotations, being synonymous with barrenness, desolation, and waste.²¹ In this very contrast lay the roots of the two opposing visions of Vesuvius, since the volcano could be alternately a barren and ash-strewn wilderness, or a fertile landscape of the sown.

In contrast to Cicero, Lucretius' *De Rerum Natura* did not portray a universe created by kind gods with human welfare in mind. For Lucretius, the world's faults were far too significant to warrant any such assumption; far too much of it was wilderness.²² He argued that at least two-thirds of the world contained mountains, wild forests, swamps, volcanoes and miserable expanses that harbored all sorts of terrible beasts. Even cultivated terrain would be lost to brambles and desolation, were it not for constant human toil. Without the plow and man's hand to guide it, Lucretius continued, no soil would give fruit.²³ This assertion, with its perspectives on wilderness and cultivated nature, was centered on the assumption that the world did not arise from design, but rather from the chance congress of atoms.²⁴ Nature for Lucretius was not a benign reflection of a divine good will toward humanity, as it was for Cicero, but rather a largely

²¹ William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W.W. Norton, 1996), 70-71. Cronon argues that nineteenth-century America witnessed a radical reconfiguration, thanks in particular to John Muir, of the meaning of wilderness from wasteland – the antithesis of order and good – to a place of wild beauty reminiscent of Eden.

²² Lucretius, *De Rerum Natura* (London: Loeb, 1975), 5.199. Venetian editions of Lucretius were common in the late sixteenth century also as far south as Naples. These were often commentaries on Epicurean philosophy and its relation of Aristotelianism. See: Anonymous, *Breve spositione di tutta l'opera di Lucretio. Nella quale si disamina la dottrina di Epicuro et si mostra in che sia conforme col vero, con gl'insegnamento d'Aristotile, et in che differente. Con alcuni discorsi sopra l'invocatione di detta opera.* (Venice: Pietro Paganini, 1589).

²³ Ibid., 5.200-217.

²⁴ Ibid., 5.416.

hostile place. Why else, he asked, did nature feed and increase the horrible packs of beasts that were the enemy of humanity? Why did certain seasons bring disease? Why was untimely death always around the corner?²⁵

As the setting of man's early existence, wild nature was a place of danger, starvation, and disorder. The human race that existed in such a "state of nature" had been hardier but also in constant danger of being devoured by wild beasts. Humanity in this stage of its existence knew no agriculture and subsisted entirely on what bounty nature provided.²⁶ Nature, Lucretius suggested, was more plentiful in this earlier age. It wearied over time and was able to produce only a small fraction of its former wealth.²⁷ If the natural world had aged, human reason and inventiveness and the creation of civilization with all it entailed – laws, cities, the taming of animals, and agriculture – enabled man to improve his lot. The world's fertility had lessened, but so had the beasts and the horrors of wilderness that had dominated the early human condition.²⁸

For the later Augustan poet Virgil (70-19 BC), man's place in nature involved a progression that took him from wild nature to civilized existence: wilderness, a pastoral phase of grazing sheep and shepherds, followed by an agricultural phase of farming and planting, and ultimately maturity in urban civilization. Importantly, this passage was not painless. It was marked by a sense of loss, and consequent longing. In the opening passage of the *Georgics*, composed largely with the Bay of Naples and Vesuvius as inspiration, Virgil sang of tilling, animal husbandry, apiculture, and the tender care of the

²⁵ Ibid., 5. 218-222.

²⁶ Ibid., 5.925-1008.

²⁷ Ibid., 5.826; also 2.1150-1174.

²⁸ Ibid., 5.1440-1158.

vine.²⁹ A central theme in the *Georgics* was the harsh necessity of human labor, a function of the god's desire that men not be idle, but also the result of nature's transformation from its original state.

In its earliest form nature was not worked by man, but gave its bounty freely and without difficulty. Jupiter added serpents, wolves, tempests and travails of all sorts so that necessity would drive man to the arts of reason – cultivation among them.³⁰ This idealization of an earlier pastoral nature that preceded a more advanced agricultural phase was central also to Virgil's *Eclogues*. Eclogue IV portrayed the return of a Golden Age, where:

Springtime valerian, and trailing ivy
 Egyptian beans, and smiling acanthus, all
 Poured out profusely from the untilled earth.
 The goats will come back home all by themselves
 Without being called, their udders full of milk;
 The browsing herds will have no fear of lions.³¹

The failings of men, however, meant that nature would lose the blush of abundance manifested in the Golden Age. "But here will be vestiges of sin," Virgil wrote, "and therefore men will still be forced to try/ The sea in ships, build walls around their towns/ And labor in their fields to plow their soil."³² In Virgil's day, Vesuvius would have still had the many farms and vineyards that were devastated decades later, but the unusual fertility of its soil always evoked that richer and more simple nature of the pastoral age.

²⁹ Virgil, *Georgiche* (Milan: Mondatory, 1980), I, 1-5. "Quid faciat laetas segetes, quo sidere terram/ vertere Maecenas ulmisque adiungere vitis/ conveniat quae cura boum qui cultus habendo/ sit pecori apibus quanta experiential parcis/ hinc canere incipiam."

³⁰ Ibid., I, 119-135.

³¹ Virgil, *Eclogues*, trans. by David Ferry (New York: Farrar, Straus and Giroux, 1999), Eclogue VI.

³² Ibid., Eclogue IV.

The first century AD Roman naturalist Pliny the Elder celebrated the diversity of nature even more than Cicero, Lucretius and Virgil. He was, ultimately, the classical author who had the most to say about Vesuvius and Campania's landscapes. The collection of volumes that made up the *Naturalis Historia* (77 AD) was a vast encyclopedia of astronomy, meteorology, geography, mineralogy, botany, and zoology. The entirety of the Romans' understanding of nature was basically gathered in it. It was replete with descriptions of giant sea creatures, volcanoes, exotic plants, and precious metals. Since he was a supreme authority on natural history well into the early modern period, the elder Pliny was frequently consulted in the early modern period for his elaborate descriptions of Campania.

For Pliny, southern Italy was a privileged place on a superior continent. In his understanding, Europe nourished the most industrious and civilized people of the world, something that was reflected in the continent's nature.³³ When it came to southern Italy and Campania in particular, Pliny did not spare praise. Most of all, the natural qualities of the Campanian landscape afforded extraordinary amenities to its inhabitants.

"Surely," he exclaimed:

there is there total vitality and perennial salubrity, the skies of such moderate temperature, so many fertile fields, such sunny hills, such innocuous forests, such shady groves, so many types of generous woods, such quantity of breezy mountains, so much fertility of grain, vine, and oil, such noble wool on the sheep, so many sturdy-necked bulls, such quantity of lakes, such quantity of seas, harbors, and embracing shelters open to terrestrial commerce from all directions and, as if to benefit mortals, eagerly extending to the sea.³⁴

³³ Pliny, *Naturalis Historiae libri xxxvii* (Stuttgart: Teubner, 1967), III, 1.

³⁴ Pliny, *Naturalis Historia*, III, 5, 41. "Iam vero tota ea vitalis ac perennis salubritas, talis caeli temperies, tam fertiles campi, tam aprici colles, tam innoxii saltus, tam opaca nemora, tam munifica silvarum genera, tot montium adflatus, tanta frugum vitiumque et olearum fertilitas, tam nobilia pecudum vellera, tam opima tauris colla, toto lacus, tot amnium fontiumque ubertas totam eam perfundens, tot maria,

“Happy Campania,” as Pliny imagined it, was thus a terrain of pastures, orchards, livestock, and, importantly, human commerce.

Nature was best as the unthreatening bosom of civilization – when it provided, sheltered, and even delighted. For its part, Vesuvius did not appear to diminish in any way the sense of pleasure derived from the natural setting of ancient Neapolis. Pliny noted, speaking in relation to Roman city, that the mountain was “not at all far off and much admired.” He seemed to have had little consideration for the volcano’s eruptive potential.³⁵ The *Naturalis historia* fashioned early modern visions of the volcano more than any other Latin works of philosophy and natural history. In a related vein, Pliny’s favorable depiction was perfectly in tune with claims long made in the West about the superiority of European nature.³⁶

These were powerful ideas still in the sixteenth century. In 1550, a Basel professor, Sebastian Münster, published a folio volume entitled the *Cosmographia*. The work was an immense compendium of geography, natural science, and ethnography that attempted to contain the entire world in its thousand pages. Despite its size, it was a popular book

portus, gremiumque terrarum commercio patens undique et tamquam iuvandos ad mortales ipsa avide in maria procurrens.”

³⁵ Pliny, *Naturalis Historia*, III, 5, 64. Eruptions in general were, however, well known to many classical authors, including Pliny, who would eventually die in one. Volcanoes with more regular (and also less explosive) activity like Etna in Sicily and Stromboli in the Lipari archipelago were recognized as active. Lucretius, for example, went into some length in describing Etna, urging his readers to remember that though the eruptions of the Sicilian volcano appeared vast, they paled in comparison with the immensity of the universe (*nil sint ad summam summai totius omnem*). See Lucretius, *De rerum natura*, 6, 639- 711.

³⁶ For the dispute on the relative merits of European nature versus that of other continents see: Antonello Gerbi, *La Natura delle Indie Nove. Da Cristoforo Colombo a Gonzalo Fernandez de Oviedo* (Milan and Naples: Riccardo Ricciardi Editore, 1975).

translated into many European vernaculars.³⁷ In many ways Münster's work was an impressive effort to contain the stream of information reaching European scholars and readers in the centuries that followed the encounter with the New World. As historians have noted, however, the *Cosmographia* was as much about the old as it was about the new, and Münster had no difficulty in echoing themes that were at least as old as Pliny and Lucretius.³⁸

The *Cosmographia* expressed a deep abhorrence and disgust for wild nature. Münster told his readers that Europe was obviously superior to the other continents of the world in terms of nature and geography. His argument presented numerous examples of how Europe was more amenable, temperate, and suited for civilization: "I assert that there are not in Europe wastelands so great, and sterile, instead of cultivatable land, and a disproportionate heat that scorches all things as in Africa. There is no place in Europe, nor region that is so rejected by men that they have not made it their abode, where one might not comfortably procure the necessities of life."³⁹ Obviously, Münster could not yet imagine the horrors of Vesuvius, but neither had Pliny the Elder when he was writing the *Naturalis Historia*. This was the volcano's great irony, both in antiquity and the early modern period. Unimaginable ferocity lurked beneath the vineyards, orchards, patrician *villae rusticae*, the shepherd's flocks, and all the other things of Arcadian Vesuvius.

³⁷ Consulted here is an Italian edition, published in 1558, cataloged at the Biblioteca Nazionale of Naples as BNN Rari Brancacciani F19. Sebastian Münster, *Sei libri della cosmografia universale, ne quali secondo che n'hanno parlato i piu veraci scrittori son disegnati i siti de tutte le parti del mondo habitabile e le proprie doti ...* (Basel: Heinrich Peter, 1558).

³⁸ Anthony Grafton, *New Worlds, Ancient Texts: The Power of Tradition and the Shock of Discovery* (Cambridge: Belknap Press, 1992), 97-111.

³⁹ Münster, *Sei libri della cosmografia universale*, 45.

Sources of Memory

Over five centuries of almost complete tranquility spanning the twelfth to the seventeenth century, Vesuvius came to be overgrown by its diverse natural flora and the cultivation of vines, orchards, and olive groves. As oaks, pines, and various cultivars grew, memories of a darker sort faded. Vesuvius had experienced lesser eruptions between the tenth and twelfth centuries, but after 1139 the volcano was essentially dormant. Only a very minor event in 1500, basically a release of steam, disturbed the mountain's slumber, and it passed largely unnoticed. It is not surprising that sixteenth-century authors, observing its dormancy, derived a uniformly optimistic view of the mountain.

The best and earliest example of sixteenth-century tropes emphasizing the natural fertility of Vesuvius was a work widely referenced by contemporary Italian humanists writing on the Bay of Naples. Ambrogio Leone's *De Nola* (1500) was fundamentally similar to countless other humanist laudatory descriptions of cities, natural sites, and landscapes. It was of some significance, however, in that Leone paid singular attention to Vesuvius, as he was the first author to do so in a printed text. In his day the mountain was home to both cultivation and large forests of oak, maple, and pine. It was, he suggested, an ideal complement to the wonderfully situated town of Nola.⁴⁰

Leone's description of an unimportant Campanian town together with Vesuvius was characteristic of early sixteenth-century works that located the volcano as the fertile core

⁴⁰ Ambrogio Leone, *Ambrosii Leonis. In. Libellos. De Nola. Patria. Ad Enricum. Ursinum. Principem. Iustissimum* (Naples, 1500).

of a region known for unusual agricultural richness. Furthermore, the *De Nola* was widely cited by other humanists. Authors mentioned it obligatorily as the first contemporary source on the volcano well into the seventeenth century.⁴¹ Even a few decades after the work was published, however, Vesuvius began to appear more frequently in the works of Italian humanists elsewhere.

Leandro Alberti's *Descrittione di tutt'Italia* (1568) is the most notable example of attitudes toward Vesuvius at the close of the 1500s. The book, printed in Venice, was a survey of the Italian peninsula focused on geography, cities, natural sites and ancient ruins. The *Descrittione* noted that Vesuvius was currently called *monte di Somma*, the latter being also a town on the mountain's slopes – a medieval name having replaced the volcano's appellation in antiquity.⁴² Citing various ancient authors that included Pliny the Elder, Strabo, Suetonius, and Virgil, as well as Leone's *De Nola*, Alberti suspected that some were right in calling the volcano Vesuvius, though the question was still in dispute. Considering a range of options that appeared in ancient sources – *Vesbio*, *Lesbio*, *Besbio*, *Vesevo* – he inclined toward the notion that the classical name derived from *vesuvia*, an ancient term, he claimed, for cinder.⁴³ Alberti approached Vesuvius as an object of humanistic inquiry, and it was only reasonable that his discussion begin *ad fontes*, at the source. Tracing the etymology of the name, and citing ancient authorities,

⁴¹ "De Vesuvio Monte Anonymus," BNN Ms. Branc. VI A11; "De Vesuvio Monte Auctore Fabio Jordano," BNN Ms. Branc. IIIC12. Both manuscripts make reference to Leone as the standard modern source. Early printing runs were, of course very small, and there is no reason to believe that *De Nola* was printed in any more than 200 to 300 copies. On the Italian printing industry in the fifteenth and sixteenth centuries see: Richardson, *Printing, Writers, and Readers in Renaissance Italy*, cited above. Leonardas Vytautas Gerulaitis provides some precise figures on Venetian incunabula in *Printing and Publishing in Fifteenth-Century Venice*, also cited above.

⁴² *Somma* can probably be best translated as "peak."

⁴³ Alberti, *Descrittione di tutta Italia*, 191.

assumed very much that Vesuvius was a historical artifact. For Alberti, it was less an object of natural history than a monument of *storia civile* or human history.

Alberti explicitly linked Vesuvius to his description of other classical antiquities in the region. These included the *grotta di Posillipo*, a tunnel excavated in the Roman period to connect Neapolis with the resort towns of Pozzuoli, Baia, and Cuma to the west. In a related detail from the same period, Joris Hoefnagel also chose to depict the entrance to the passage in his engraving of Vesuvius and Naples. “Had this tunnel,” Alberti mused, “not been dug, it being the way through the bowels of this mount, for those wanting to reach Naples it would be necessary to make a long passage walking around the mountain, or choosing to scale it with difficulty, it being very steep.”⁴⁴ Stressing both ancient authority and his own observations, Alberti noted that the tunnel appeared in Strabo’s geography of the region, but also that he had visited the site himself, making measurements of its length and width.

He was very impressed by the straightness of the passage, a reflection, he felt of the remarkable ingenuity of Roman engineers. Still, it was a dark and somewhat foreboding place: “It was no less tenebrous in the days of Seneca than in our times, as he demonstrates in epistle fifty-seven.”⁴⁵ The view above ground was far more pleasant, and reminiscent of Vesuvius in the distance, across the bay. “This mount,” he explained referring to Cape Posillipo, “is entirely cultivated, and dotted with houses and villas. It is well tilled and ornate with fruit trees, and is a true delight to see.”⁴⁶

⁴⁴ Ibid., 181.

⁴⁵ Ibid., 182.

⁴⁶ Ibid., 181.

Alberti was tantalized by the possibility of spotting Virgil's sepulcher somewhere among the vines and foliage. "There are different opinions," he stated, "about where Virgil was buried, either before the entrance of this cave, coming from Pozzuoli, where there is a small church, or at its exit, where one sees a monastery containing canons regular."⁴⁷ He was thrilled that the greatest of Latin poets rested in some grove possibly near the entrances of the tunnel.

Another treasure trove of antiquities lay west of Naples, in the Campi Flegrei. Alberti described Cicero's villa, the Flavian amphitheater at Pozzuoli, and the sites of Baia and Cuma set among the volcanic marvels of the Solfatara crater and Monte Nuovo (Europe's most recent volcano). Alberti felt that his readers should know the following:

Walking toward Pozzuoli along the seashore ... there appear so many ruins of sumptuous edifices, and the same is true on the hills above, that it is a thing to spark marvel for one who stops to reflect. Now it will seem to the curious mind that all the Lords of the world would be hard pressed to raise so many buildings.⁴⁸

The Campi Flegrei region was quickly becoming the central focus of Neapolitan antiquarianism, as the second chapter discusses.

Returning to Vesuvius, Alberti argued that the volcano deserved even more praise and attention than Posillipo. Near its base, for example, there were the still buried sites of Herculaneum and Pompeii, which humanists and antiquarians were still trying to locate. Alberti's rhetoric was predictably benign. He described how "fertile fields" and

⁴⁷ Ibid., 182.

⁴⁸ Ibid., 177.

“fruit bearing trees covered most of the volcano. Only its furthest peak appeared desolate and once consumed by fire, just as it had for Strabo in the first century.”⁴⁹

Alberti speculated about the origin of all this fertility. He concluded that the ancient fires of Vesuvius were the answer. “Some say that the ash expelled from the cavern where the fire burned was the source of the surrounding area’s fertility,” he stated, “as is said of the ash that is transported out of the great mouth of Etna in the proximity of Catania, this being the reason for the fertility of vines in those regions.”⁵⁰ The ash and cinders deposited by volcanoes gave the soil a certain *grassezza*, or “fatness,” that, combined with the moisture provided by rain greatly stimulated the growth of trees and vines.

Alberti, however, also seemed to know something of the volcano’s eruptive history. “In the time of Titus” he wrote, “there suddenly appeared on Mount Vesuvius a great fire.” The eruption, he concluded, must have come from a crater – which he likened to an amphitheater – which in his day had returned to being covered in vines and shrubs. Alberti concluded that “Pliny, wanting in his curiosity to see this thing more than he should have, and wanting to investigate the effects I have described ... was suffocated.”⁵¹

The death of Pliny the Elder was a well-known story, and undoubtedly one of the most important sources of memory on Vesuvius. It was an ironic twist of fortune that when the mountain he had lovingly described in the *Naturalis historia* erupted in August 79 AD, Pliny was in charge of the Roman fleet anchored off Cape Misenum, across the

⁴⁹ Alberti, *Descrittione di tutta Italia*, 191.

⁵⁰ *Ibid.*, 192.

⁵¹ *Ibid.*, 191.

bay from the volcano. A naturalist to the end, but also faithful to his duty as a Roman admiral, he hurried to Stabia in the mountain's proximity. He consoled and aided the population in its evacuation, but also tried to observe the eruption and record its effects. Exhausted, and eventually suffocated by ash, he died while he was resting.

The naturalist's nephew Pliny the Younger recorded the entire experience from the safety of Misenum. This Roman's vision could not have been more different from his uncle's pleasant references to the volcano in the *Naturalis historia*. The younger Pliny's Vesuvius was nothing short of apocalyptic. As day turned to night, torrents of fire poured from the mountain's slopes. In an effect of particular marvel, the sea withdrew from the coast, stranding innumerable sea creatures. Nothing, however, terrified so much as the plight of those fleeing the mountain:

You should have heard the wailing of the women, the invocations of the children, and the shouts of the men. Some tried to call out to their parents, others their children, others their spouses, recognizing voices. Some lamented their misfortune, some that of their loved ones; for fear of death, they begged for death, many raised their hands to the gods, but in the majority there developed the conviction that the gods no longer existed and that this was the last eternal night of the world.⁵²

The ancient Roman's narrative is of central importance, because it was paralleled in the realignment of attitudes toward the volcano in the second two-thirds of the seventeenth century. This would be the passage from Alberti's vision to Kircher's.

The pastoral and cultivated nature tropes found in the writings of Cicero, Lucretius, Virgil, and Pliny the Elder dominated the sixteenth century, but Pliny the Younger's

⁵² Pliny the Younger recorded the eruption in two letters to Tacitus. Pliny the Younger, *Epistularum*, VI, 16; and VI, 20. "Audires ululatus feminarum, infantum quiritatus, clamores virorum: alii parentes, alii liberos, alii coniuges vocibus requierebant, vocibus noscitabant, hi suum casum, illi suorum miserabantur; errant, qui metu mortis mortem precarentur; multi ad deos manus tollere, plures nusquam iam deos ullos aeternamque illam et novissimam noctem mundo interpretabantur."

vision was better suited to describing Vesuvius after 1631. The famous letters he wrote to Tacitus were the most relevant classical source once the volcano became active again. Many eyewitnesses to Vesuvius's seventeenth-century eruption commented on Pliny's description, quite deliberately.

Chapter three considers the full array of responses on this occasion. One notable example is instructive at this point, Giovanni Battista Manso. The Marquis of Villa was a powerful patron of artists and scholars and a very influential figure in Baroque Naples. He was, among other things, Caravaggio's patron during the painter's brief stay in the city, and a supporter of Galileo Galilei's advances in astronomy, a fact made evident in numerous letters to the Florentine scientist.⁵³ On the morning of December 16 1631, Manso awoke to the sight of Vesuvius erupting. Without hesitation, he equated the spectacle before him with the one the Romans had witnessed more than fifteen centuries earlier.

Manso wrote a letter to his brother in Rome a few days after the worst had passed. His narrative of the cataclysm reflected a number of things. On one hand, he saw the eruption as manifestation of divine ire. Naples was not destroyed because it was protected by its patron saint San Gennaro – a miracle discussed in the third chapter. This moral and religious interpretation of volcanism was a sentiment shared by the overwhelming majority of Neapolitans. On the other hand, Manso was also a man of letters and science who regularly sought news of Galileo's discoveries, even venturing

⁵³ "Giovanni Battista Manso to Galileo Galilei; Naples, March 18, 1610," Biblioteca Nazionale di Firenze, Mss. Gal., P.VI, T.VI, cc. 41. "Giovanni Battista Manso to Paolo Beni; Naples, March, 1610," Biblioteca Nazionale di Firenze, Mss. Gal., P.VI, T.XIV, cc. 84-87.

his own opinions on astronomical questions. His interest in natural history was apparent in his observations of Vesuvius.

At an extremely significant juncture in his first letter after the eruption, Manso noted that he wished to cease providing a historical and religious narrative, that is to say the interventions of Naples' secular and ecclesiastical elites and San Gennaro's actions on the behalf of the terrified city. He announced that he instead wished to express some spontaneous thoughts on the eruption's significance to natural history – without the risk of being taken too seriously. His careful choice of words may have been motivated by the fact that Manso's heroic figure in science, Galileo, was heading toward an irreparable break with the Church in these very same years. As someone who had followed the Tuscan astronomer's career closely, he knew the risks of speaking unwisely when questions of divine and natural causation were on the line.

There was one lens, however, that Manso found most appropriate to filtering the experience of an erupting volcano, and little likely to cause controversy. Very deliberately, he transformed himself into a classical observer. Some other chroniclers cited Pliny verbatim, but Manso seemed to internalize the younger Pliny's narrative:

On the morning of Tuesday, that which had appeared to be a fiery smoke seemed in new light to be a cloud rising from the earth straight up into the seventh region of the air, and here expanded in such a way that, as the part raised straight up resembled the large trunk of an extremely tall pine, so the other part ... seemed a giant pine cone and more vast than the huge mountain.⁵⁴

⁵⁴ “Il mattino del Martedì quell che di notte tempo era paruto un fumo infocato apparve con la nuova luce a guisa di nube sorgente da terra diritto in alto fina alla 7a region dell'aria, e quivi s'allargava per si fatto modo che, come la parte sollevata a dirittura in su rassomigliava un grosso tronco d'un altissimo pino, così l'altra parte superiore dilatata al d'intorno sembrava una smisurata pigna e più vasta d'una grandissima montagna.” See: “Lettera del Signor Giov. Battista Manzo, Marchese di Villa, in materia del Vesuvio,” *ASPN* Anno XIV, Fascicolo III e IV, 503-504.

The two naturalists shared a basic image, though sixteen centuries apart. For Pliny, the eruptive cloud had resembled “nothing so much as a giant pine tree.”⁵⁵ This was not by accident.

Manso clearly had many things running through his head that morning as he watched the volcano burn. The rhetoric and vocabulary of antiquity was surely a way to render the extraordinary, the unusual, and disturbing at least in some way familiar. It was, after all, an understandable response for a seventeenth-century *erudito* to assume the gestures of an ancient naturalist. This helped Manso frame the eruption in Roman terms – even the very act of recording his impressions in the form of a letter became an emulation of Pliny. Manso sought to convey that his observation of Vesuvius on the morning of December 16th was the recapitulation of a classical moment, and a rediscovery of the volcano as an artifact and living experience of antiquity.

Manso’s reflections had the same immediacy to the cataclysm as Pliny the Younger’s a millennium and a half earlier. They contained, however, the matrix of historical reflection, scientific observation, and religious sentiment that would characterize the image of Vesuvius for a good many decades to come. It is time to return to Athanasius Kircher, a figure who captures much of the seventeenth-century ambiguity about the volcano.

⁵⁵ The excerpt from the first letter to Tacitus reads: “Nubes (incertum procul intuentibus ex quo monte, Vesuvium fuisse postea cognitum est) oriebatur, cuius similitudinem et formam non alia magis arbor quam pinus expresserit. Nam velut trunco elata in altum quibusdam ramis diffundebatur, crede, quia recenti spiritu evecta, dein senescente eo destitute aut candida interdum, interdum sordida et maculosa, prout terram cineremque sustulerat.” *Epistularum* VI, 16.

Infernal Visions

After Manso, seventeenth-century Europeans became increasingly fascinated with Vesuvius. It is not difficult to imagine some of the reasons why. What better place, for example, to get a sense of the catastrophic end of all time than to visit a raging volcano? It is time to turn to its apocalyptic and infernal side again, after having considered how sixteenth-century humanist authors idealized the pastoral aspects of the mountain. Like Manso's, the story of Athanasius Kircher and Vesuvius in 1638 is instructive. Kircher had undoubtedly read Pliny's account, possibly right after he learned of the eruption that initiated the volcano's new active cycle.⁵⁶ Considering his recent experiences with Etna in Sicily, Kircher's first encounter with Vesuvius must have been charged with the anticipation of seeing yet another volcano, but one that was recognizably more dangerous. Approaching Vesuvius from the west, he left Naples through the Capua gate and then made his way along the littoral road that ran east and away from the city.

When Kircher arrived at Portici, a few miles away, Vesuvius still bore the scars of 1631. Debris and the charred hulks of houses, noble villas and churches lay strewn in the path of the *lahar* flows. The local baronage had long favored the lower slopes of the volcano as the setting of suburban villas – aristocratic retreats from the bustle of Naples. They offered, like ancient Roman *villae rusticae*, the pleasures of *otium* in a rural setting. Now, however, the charred hulks of noble estates destroyed in 1631 evoked a chilling comparison between the ancient and contemporary cataclysms. The destruction caused

⁵⁶ Kircher also relied on a network of correspondents to keep him informed of such things as volcanic eruptions. See, for example, a letter he received regarding a minor eruption of Vesuvius in 1669: Biblioteca Nazionale di Napoli, III Ms Rari Brancacciani IV B13.

by the volcano had been severe enough to prompt the Spanish viceroy and the city's governing council to take the extraordinary step of granting five and even ten-year fiscal exemptions to many of the affected towns. These exemptions included relief from all forms of taxation and the housing of Spanish and local militia troops.⁵⁷ The prospect before Kircher was simply one of devastation.

Athanasius Kircher prepared himself to explore the newly active crater with some anxiety. Drawing parallels between his adventure and Petrarch's ascent of Mount Ventoux in the fourteenth century, Kircher wrote about the difficulty he had in finding a worthy companion for his climb. Eventually he hired a local peasant, who he announced was "trustworthy and knowledgeable," on the surest route to the top. The hiring of local guides who could take a climber at least part way up was already becoming an established practice, allusions to Petrarch aside. Natural philosopher and peasant guide made their ascent before dawn, winding their way along a steep and arduous path until they reached the crater.⁵⁸

Kircher published his masterpiece on the subterranean world entitled *Mundus Subterraneus* in the late seventeenth century. Here he recalled his encounter with the flames of Vesuvius decades earlier vividly enough to describe the adventure in considerable detail. He wrote, "I reached its crater, which, horrible to say, I saw before me aflame with burning pitch and enveloped by noxious sulfur fumes."⁵⁹ Kircher

⁵⁷ Archivio di Stato di Napoli, *Notamenti della Collaterale* "Die 29 Martii 1632."

⁵⁸ Athanasius Kircher, *Mundus subterraneus in XII Libros digestus* (Amsterdam: Johan Jansson, 1678), Praefatio.

⁵⁹ "Porticum concessi, ad radices montis situm oppidum; hinc fideli et viarum gnaro comite rustico, opima sane mercede conducto, media nocte montem per difficiles, salebrosas arduasque vies conscendi,

continued, “stunned in the face of this extraordinary spectacle, I thought I was staring into the domicile of Hell, in which nothing was missing but the ghosts of horrible demons.”⁶⁰ He prayed fervently as he tried to record observations in his naturalists’ notebook.

Kircher recalled that “feeling the horrible moans and shudders of the mountain, the unbelievable stench, and seeing black smoke mixed with globules of fire erupting continuously from eleven different places, both in the base of the crater and the flanks of the mountain, compelled me to erupt in the same fashion: Oh the immensity of divine power and God’s wisdom, how incomprehensible are thy ways!”⁶¹ The horrid spectacle drove Kircher to a pose another question, and he feared he knew the answer. Standing on the rim of the crater, surrounded by fire, he glanced upwards and asked, “if, in your power, you display such formidable portents of nature against the duplicity and maliciousness of men, how shall it be in that extreme day when the earth, plunged under by your fury, is dissolved by heat into the elements?”⁶²

Dawn lessened Kircher’s horror somewhat, and allowed him to take better stock of his surroundings. With the terror of the night subsiding, he began to observe the crater’s composition in better detail. His courage renewed, he cautiously lowered himself over the rim and tried to gauge its dimensions. He estimated its entire circumference to be

cujus craterem cum jam obtinuisssem, horrendum dictu, totum igne illuminatum vidi cum intolerabili sulphuris et bituminis ardentis mephiti.” Ibid.

⁶⁰ Ibid.

⁶¹ “Horrendi percipiebantur montis mugitus et fremitus, putor inexplicabilis, fumi subfuscis ignium globis mixti, quos ex undecim diversis licis, tum fundus, tum latera montis continuo eructabant, identidem me illud eructare cogeant: O Altitudo divitiarum sapientiae et scientiae Dei, quam incomprehensibiles sunt viae tuae!” Kircher, *Mundus subterraneus in XII Libros digestus*.

⁶² “Si potentiam tuam tam formidabilis Naturae portendis contra preavaricantis humanis generis malitiam ostendis, quid erit in illo novissimo die, quo Terra ira furoris tui submersa, elementa calore solvetur?” Ibid.

something less than three hundred thousand paces, and its depth to be around eight hundred. The Jesuit further reasoned that in the bottom of the vertiginous chasm, and deep below the river of fire that spewed from the earth's interior, was a place not dissimilar to Hell itself. Whatever method Kircher and his peasant companion contrived to lower themselves for a better view, they must have been exposed to considerable risk.

Around them loose portions of the crater - jumbled pyroclastic material, ash and pumice – shook loose in the frequent tremors and tumbled into the fiery chasm. In spite of the dangers, Kircher's observations did not lack a measure of precision. His intuition about the natural events unfolding before him was also sound. He grasped, for example, the process by which a new cone had formed in the few years of continuous eruptions following 1631, where extruded material had built an ever growing and rising ring around the newly active crater.

In the thirty plus years between his first encounter with Vesuvius and the completion of his tome on the earth's interior, the volcano had been very active. It had two significant eruptions in 1649 and 1660. This hindsight perspective allowed Kircher to conclude that the process of accretion whereby a new cone was created could be reversed in the case of a large eruption like the one of 1631.⁶³ Kircher had thus begun to evolve the notion of ongoing dynamism in geology. This led to the argument that geological

⁶³ The eruption of 1631 sparked a period of activity that ran until 1944, after which Vesuvius began to cool and entered the dormant period it is in today. The volcanic activity Kircher observed in 1638 is referred to as strombolian or effusive by modern geologists. The first term is derived from the volcano Stromboli, which experiences minor eruptions on a daily basis, most of which involve the extrusion of ash, pumice and a little magma at low pressure. These frequent, low-energy eruptions result in the formation of a new cone, much like Kircher observed. In the case of Vesuvius, occasional and more powerful explosive eruptions, like the ones of 1660 and 1696-98, could result in the partial collapse of this buildup and dangerous flows of lava. This is reconstructed in Nazzaro, *Il Vesuvio*, 20-32.; see also Nazzaro, "Elenco delle principali eruzioni del Vesuvio," in Nicola di Fusco and Ettore di Caterina, *Il Vesuvio* (Naples: Electa, 1998), 146-151.

change, that is to say the transformation of the earth's surface was driven by spasmodic cataclysms that either lifted or collapsed.⁶⁴

Kircher had cataclysms on his mind as he made his way down Vesuvius, so he might be forgiven for not mentioning another remarkable natural process in act not in the subterranean world, but on the volcano's shattered slopes: life's return. Close observation would have revealed to Kircher that living things had begun to cling anew to the lava of 1631. Kircher could not have known it, but the first visible life to appear on cooled lava was a lichen endemic to Vesuvius, *Stereocaulon vesuvianum*. *Stereocaulon* usually appears seven to ten years after an area has been covered in lava, in this case coinciding neatly with the Jesuit's exploration of the mountain. It coats the rock and begins to break it down, giving the surface a gray hue.⁶⁵ About four years after the first emergence of *Stereocaulon*, flowering plants like red valerian make their appearance in depressions and cracks broken down by the lichen, especially where soil has had an opportunity to gather. This first colonization is followed by a very gradual increase in floral variety. Broom, with its distinct yellow flowering, is one of the first shrub plants to emerge. One might well imagine that by the publication of Kircher's *Mundus* those parts

⁶⁴ In his clever essay on the great English geologist Charles Lyell (1797-1875) and the development of a 'uniformitarian' theory of geology, Stephen Jay Gould notes the irony that the stunning examples of volcanism in the Bay of Naples, which had long suggested, from Pliny to Kircher, the image of catastrophic and sudden geological change, ultimately became the basis of scientific views that led in a different direction: toward a theory that observable processes, operating at characteristically gradual rates, explain geological change without the need to invoke episodic global paroxysms that operate in an early period of planetary history, and are then superseded by mature global stability.

⁶⁵ Portions of the lava flows from Vesuvius' last eruption in 1944 are still heavily covered by *Stereocaulon Vesuviano* and are gray in appearance.

of Vesuvius not affected continuing volcanic activity would have already flowered red and yellow in spring.⁶⁶

In our day, botanists have recorded the presence of six hundred plants in the Vesuvian environment. Eighteen are completely endemic species only found on the volcano. Due to the relentless human encroachment that followed the Second World War and the volcano's silence after 1944, many species that would have been present in Kircher's day have since been lost, by some estimates as many as three hundred.⁶⁷

Kircher never said whether he thought about the mountain's re-vegetation as he walked down. Certainly, the contrast between the volcano's fiery outbursts and its botanical richness in periods of quiescence had been a central feature in the classical period, and it was about to become so in the 1600s as well. Strabo, for example, described how the slopes of the volcano were thickly forested and cultivated with vines, even though he saw barren regions in the crater that made him assume that Vesuvius was a volcano.⁶⁸

With his mind full of thoughts about the demise of the world, Kircher probably gave little heed to these things, though he must have guessed that the ravaged landscape would recover some of its life even in a few decades, and someday come to resemble its appearance before 1631. Ultimately, he had to surmise that the volcano's fertile soil would work to restore a natural landscape pleasurable and suitable to man, because the

⁶⁶Fusco and di Caterina, *Il Vesuvio* (Naples: Electa, 1998), 11-12. See also: Sandro Pignatti, *Flora d'Italia*, 3 vols. (Bologna: Edagricole, 1982). For a survey of scientific literature on Vesuvius, see: Lucia Civette, et al., "Storia eruttiva del Somma-Vesuvio," in Pietro Giovanni Guzzo and Renato Peroni, ed., *Archeologia e Vulcanologia in Campania* (Napoli: Arte Tipografica, 1998), 9-16.

⁶⁷Fusco, *Vesuvio*, 12.

⁶⁸Strabo, *Geographica*, VI, 4; in Nicola Biffi, *L'Italia di Strabone* (Bari: D.AR.FI.CL.ET.NS, 1988).

opposite was a grim prospect indeed to contemplate. Vesuvius as a barren and ash-strewn wilderness was difficult to reconcile with entrenched notions about the relationship between civilization and the natural world. From the perspective of Neapolitans, how could they exist next to this fire-belching monstrosity, when all prosperous cities were always encircled by an ordered and cultivated countryside, from which human industry drew bounty from the earth?

It was a deeply disturbing thought that nature could be so wrong next to Naples. The fear persisted in conceptions of the volcano's landscape from 1631 onwards, in ways that inevitably spoke about the condition of the city itself, and implied reactivity between nature and the human social and political order. The link between the natural world and the health of Naples was openly recognized, as the final section of this chapter will show. In a very important sense, the city was a city between opposing valences affecting each other. Writers in the 1620s, conscious of the political and social tensions that often brought the city to the brink of revolt, likened Naples to a garden whose tender shoots could at any moment be ravaged and destroyed by wild forces.

A Garden between Heaven and Hell

The vision of Vesuvius advanced by humanists like Leone and Alberti in the sixteenth century had contributed to the idea that the Bay of Naples was like a great garden that flourished because of the volcano's fertility. An interesting example from the volcano's dormant period shows how the garden metaphor was part of a Neapolitan

rhetoric of identity. To understand it requires a brief foray into the city's political life under the Spanish viceroys.

In the spring of 1620, the incoming Spanish viceroy received an urgent letter from Naples. The author of the missive is uncertain, though it may have been Antonio Caracciolo, a representative of one of the five noble districts of the city.⁶⁹ On May 25, 1620, Caracciolo was chosen to lead a delegation to greet the new viceroy, Cardinal Gaspar de Borgia, who was temporarily ensconced on the island of Procida. It is possible that he forwarded this letter in advance of his audience. The advent of a new viceroy in Naples was always a moment marked by political tension. New political players emerged and different alliances were forged to govern the city, but the transfer of power in 1620 was unusually fraught with dangers.⁷⁰

⁶⁹ Caracciolo was head of the *seggio* Capuano. The nobility was represented by four other *seggi*: Portanova, Montagna, Nido, and Porto. In addition to these five noble district representatives, there was also the *Eletto del Popolo*, an official elected from the merchant, professional, and artisan classes to represent the people. This latter office was often at the center of political turmoil. One such example, exemplary also of the risks run by these officials, was the lynching of Giovanni Vincenzo Starace in 1585. This is a case that has received much attention in Neapolitan historiography; see: Rosario Villari, *La rivolta antispagnola a Napoli. Le origini, 1585-1647* (Bari: Laterza, 1967).

⁷⁰ One might liken the transition to a new viceroy to the advent of a new pope in early modern Rome in the way in which the institutional change stimulated a realignment of formal, and informal, relationships of power and patronage. Ingrid Rowland has noted, for example, how quickly the fortunes of the curial marketplace could change with a new pope, see *The Culture of the High Renaissance: Ancients and Moderns in Sixteenth-Century Rome* (Cambridge: Cambridge University Press, 1998), 68-108. In the case of Naples in 1620, however, the question was whether the Duke of Ossuna was willing to concede to the new viceroy sent by Madrid, or whether he seriously planned to rebel and establish an independent southern Italian principality. Ossuna backed down, but his presumed treason has been the object of debate since the seventeenth century. The most notable modern work on the topic is Michelangelo Schipa's "La pretesa fellonia del duca di Ossuna," appearing in a series of installments in *Archivio Storico per le Province Napoletane* (1910-1912). Schipa took a critical and somewhat skeptical stance with regard to the accusations levied against Ossuna, noting that though the duke was on a clear collision course with the local aristocracy, his treason may have been more a matter of perceptions and miscalculated moves than a clearly defined agenda. Schipa also emphasizes a point made above, that, "ogni viceré disponeva d'una somma d'uffici, di onori, di favori da distribuire, le concessioni – ciò è ovvio – gli facevan tanti amici quanti gli procuravan nemici i dinieghi e peggio le rimozioni." Schipa, *ASPN* (Anno 36, 1911), 480.

The outgoing viceroy, Pedro Girón Tellez, Duke of Ossuna, had been recalled to Madrid to face serious charges of treason and corruption, charges that would lead to his complete disgrace and imprisonment. The accusation was that Ossuna had plotted with Carlo Emmanuele of Savoy to expel the Spanish from Italy. Ossuna presumably hoped to establish an independent principality in the south, but this has long been debated and never adequately demonstrated. It is evident that the charges against Ossuna stemmed largely from a disgruntled local aristocracy that feared an alliance between the viceroy and the popular leadership of Naples. It is also true, however, that in the last part of his administration Ossuna had established an uneasy relationship with an outspoken popular leader, Giulio Genoino.⁷¹

Genoino would figure very prominently in the revolt of 1647, largely as the intellectual and political strategist behind the rebel leader Masaniello, suggesting that Ossuna had at the very least planned a series of reforms aimed at further curbing the power of Naples' powerful nobility.⁷² Adding to these tensions in the spring of 1620 was the apparent unwillingness of Ossuna to surrender his authority to the new viceroy, who waited impatiently just a few miles off the coast of Naples. Ossuna was politically isolated and forced to give way, but for a moment the specter of rebellion had loomed large. It was a fear that haunted Naples, rightly so it turned out, for much of the seventeenth century. This will be considered in detail in the fourth chapter.

The letter sent to Borgia in 1620 expressed the volatility of the situation. Its author proclaimed "a universal desire, and in particular of all the People, to see you in this city:

⁷¹ Ibid.

⁷² Schipa, *ASP*N (Anno 37, 1912), 402.

and the most unhappy state and the grave and dangerous infirmities in which it finds itself along with the entire Kingdom.”⁷³ The exhortation that Borgia leave Procida and make good his formal entry into Naples continued in an even more strident tone:

Such is the desire Your Excellency of all those People of whatever state, rank, and condition to see your face, that I can easily liken it to that of pilgrims, sailors, agitated by tempestuous winds upon their seeing a secure port: and of the invalid travailed by ardent fever, on prognosis of death, upon seeing the doctor; of the Jewish people upon their leaving the cruel and tyrannical servitude of the evil Pharaoh: and of Holy Moses on seeing the face of God, from whom he hoped to be shielded from all evil, and be certain of every good.⁷⁴

Combined biblical and medical metaphors both highlighted the Neapolitan claim to be oppressed by an unjust viceroy. This rhetoric grew visibly in the following two decades, as Neapolitan patriots began to protest the injustices of the viceroys’ government and the heavy hand of Spanish rule ever more vociferously.⁷⁵

Political concerns about the potential tyranny of viceroys – or possible Neapolitan rage – could be expressed with reference to nature. In the letter to Borgia, the author couched his unease with Ossuna’s administration by describing a garden, meant to describe in a more general sense the state of Naples:

Your Excellency ought to imagine a garden of green and tender plants, enriched by flowers, and fruits, so agitated by angry winds, shaken by tempest and great amounts of hail and lightning, that the trees remain without flower, stem or branch: with broken limbs and tumbled trunks it becomes such that its former self can hardly be

⁷³ Biblioteca Nazionale di Napoli, Ms Brancacciani III D6 cc. 36.

⁷⁴ “È tale Ill.mo Sig.re il desiderio de tutti quei Popoli di qualsivoglia stato, grado, e conditione di veder la sua faccia, che ben posso assomigliarlo a quello di Peregrini, naviganti, agitati da tempestosi venti di veder il sicuro Porto: e dell’Infermi travagliati d’ardente febre, che li pronostica la Morte di vedere il Medico, e del Popolo Hebreo d’uscir dalla cruda, e Teranica servitu del empio Faraone: e del S. Mosé di veder la faccia di Dio, dalla quale sperava esser lontano d’ogni male, e certo d’ogni bene.” Ibid.

⁷⁵ See Chapter Four.

discerned: so finds itself the City, and the Kingdom of Naples, transformed, and changed from its original self.⁷⁶

In the tense and troubled political climate, Naples was like a garden that had been trampled and ravaged by a storm.

This language partly sprang from the idealization of nature in its right state as being nature tended by man, the sort of classical trope explored earlier in this chapter. It was also, however, rooted in Christian philosophies of nature. Both traditions expressed a basic fear that nature progressively deteriorated, growing older and lesser because of man's sinful state.⁷⁷ It was widely accepted that nature aged and diminished in the big picture, but beyond the notion of progressive senescence Christianity also directly connected the fallen state of nature to a particular episode.

Man had only once inhabited a garden that did not require his toil, but nature had since changed. Cardinal Borgia would not have ignored the underlying reference as he read the letter – the fall of the Garden of Eden. The Edenic narrative is one of the loss of innocence for man and woman, but it also speaks to a transformation of nature. In his anger God forever alters man's relationship with the natural world:

Cursed be the ground because of you! In toil shall you eat its yield all the days of your life. Thorns and thistles shall it bring forth to you, as you eat of the plants of

⁷⁶ "Imaginsi Vs. Ill.ma un giardino di tenere e verdeggianti piante, arricchito di fiori, e frutti, agitato da rabbiosi venti: percosso da fiere tempeste; e da gran copia di grandini, e di saette che restano senza fiori, frondi, e frutti l'alberi: spezzati i rami e precipitati a terra i tronchi, ne diviene a tale, ch'a pena si vede di quella vestigio: Così se ritrova la Città, e Regno di Napoli, mutato, e cangiato dal suo primo essere[.]" Ibid.

⁷⁷ Clarence Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley and Los Angeles: University of California Press, 1967) 1-50.

the field. By the sweat of your face shall you get bread to eat, until you return to the ground, from which you were taken; for you are dirt, and to dirt you shall return.⁷⁸

Banishment from Eden was a clear sentence; from then on man would have to labor upon the soil from which he came. The resulting elaboration of a distinction between wilderness and productive terrain, between the desert and the sown, expresses one of the most central themes of the Western approach to nature.⁷⁹ This sense in which nature requires the laboring hand of man to express its full measure of worth, and that by extension nature left to its own powers is a place of horror, shaped in very profound ways the early modern encounter with the Vesuvian landscape.

The letter to Borgia pointed to the teleology of nature that existed in classical and Christian narratives. The sense that nature had a purpose and a design was common to both traditions. So was the belief that the state of nature reflected the state of human affairs, as the author of Borgia's letter implied. It should also be pointed out that some distinctions existed. The classical tradition, for its part, did not express a consistent teleology of nature. It was also deeply ambivalent about the notion of senescence.⁸⁰ Does nature really grow old and decline, if so, what does this bode for humanity? Kircher's encounter with Vesuvius suggests, however, that the Christian tradition felt less ambiguity in this regard. His reference to the apocalypse presented little uncertainty as to the ultimate end of the created earth.

⁷⁸ Genesis, 3, 17-19. *Saint Joseph Edition of the New American Bible* (New York: Catholic Book Publishing Company, 1992).

⁷⁹ Carolyn Merchant, "Reinventing Eden: Western Culture as Recovery Narrative," in Cronon, ed., *Uncommon Ground*, 137.

⁸⁰ Clarence Glacken, *Traces on the Rhodian Shore*, 65-75.

The cultural geographer Clarence Glacken opened the first chapter of his study of nature and culture in Western thought, *Traces on a Rhodian Shore*, with the insight that, “what is most striking in conceptions of nature, even mythological ones, is the yearning for purpose and order.”⁸¹ This impulse, he noted, has taken the form of three basic questions:

In the history of Western thought, men have persistently asked three questions concerning the habitable earth and their relationship to it. Is the earth, which is obviously a fit environment for man and other organic life, a purposefully made creation? Have its climates, its relief, the configuration of its continents influenced the moral and social nature of individuals, and have they had an influence in molding the character and nature of human culture? In his long tenure on earth, in what manner has man changed it from its hypothetical condition?⁸²

The ideas of design in nature, environmental influence on human culture, and man’s impact on the natural world, were three strands Glacken followed in his peregrination through Western thought on nature. The first two notions in particular may be readily applied to charting this study’s own course through the sixteenth and seventeenth centuries. The idea that nature was designed for the use of man, and that this nature shaped the quality and form of the human cultures situated within it, is absolutely central to the metaphor of the fallen Garden of Eden expressed in the letter to Borgia.

Neapolitan attitudes toward *their nature* were very much caught between optimism and fear. Nothing shaped these sentiments more than Vesuvius itself, its two faces so radically different. By the early eighteenth century, when the volcano’s relationship with Naples possessed the unprecedented richness and complexity that only the seventeenth

⁸¹ Ibid., 3.

⁸² Ibid., vii.

century gave it, we can measure the fullness of these ideas. “Europe is the garden of the world, Italy the garden of Europe, the Kingdom of Naples the garden of Italy, and beautiful Parthenope the garden of our kingdom,” wrote one observer in 1711. He continued:

This beautiful Metropolis is surrounded by fructiferous hills, amenable and game-rich forests. Before it, it is washed by the sea ... for her rare beauty, fructiferous bounty she is the envy of all nations, and also because of the various actions of Rulers, this Siren [Parthenope] is rarely serene, and mostly perturbed, or she would surely be the Fifth Essence, granted only to the Earthly Paradise.⁸³

The darker side now was always there, thanks partly to the volcano and partly to Neapolitans themselves. The observer went on that since Naples’ piety, “made her dear to Heaven, so she was hateful to Hell, from which she was many times threatened with destruction by the vomiting of Vesuvius, and by plague, war, hunger, and the terrible shaking of earthquakes, and other things.”⁸⁴

Between 1500 and 1700, the stature of Vesuvius in Neapolitan and European culture grew significantly. In this process, its positive and negative valences were constantly in flux. They shifted between meanings that caused shudders of horror, or alternately deep curiosity. The latter sentiment concerns the following chapter, which is about

⁸³ Marco Antonio del Brison, *Breve Inscrizione del Sagro Monte della Pietà di Napoli* (Naples, 1711), 4. The entire paragraph reads: “Che l’Europa sia il Giardino del Mondo, L’Italia giardino dell’Europa, il Regno di Napoli giardino d’Italia, e che la bella e vaga Partenope sia giardino di questo nostro chiamato per Antomasia il Regno da niuno vien’ignorato, ogn’uno lo confessa; Questa bella Metropoli è circondata da Monticelli fruttiferi con boschi amentissimi, e dilettevoli per le varie caccie: a fronte e bagnata dal mare, partorendoli quei tanti decantati figli Pausillipo, e Mergellino: dall’altro lato è inaffiata dal placido Sebeto, misto (com’è fama) col rivolo del Giordano; ed in questo modo si rende giocondissimo Teatro di vaga spettativa, sicche, si può chiamare questa famosa Citta del Capo Sirena quart’essenza delle delizie del Mondo; e se non fusse, che per la sua rara bellezza, e fruttifera propagine vien resa gelosa appo tutte le Nazioni, si anche per i varii governi de’Ministri, questa Sirena poche volte serena, ma per lo più perturbata, sarebbe al certo la Quinta essenza, qual solo si concede al paradiso Terrestre.”

⁸⁴ Ibid.

precedents. Chapter Two explores, among other things, the beginning of a prolonged consideration of Europe's "fire mountains." Naples was unusually fortunate – or unfortunate depending on perspectives – with respect to volcanoes. There was yet another very different volcano on the Bay of Naples, opposite Vesuvius. This was the Campi Flegrei caldera.⁸⁵

⁸⁵ I will use the Italian term consistently, rather than the English appellation Phlegraean Fields.

Chapter 2

Antiquarianism and Natural History in the *Campi Flegrei*

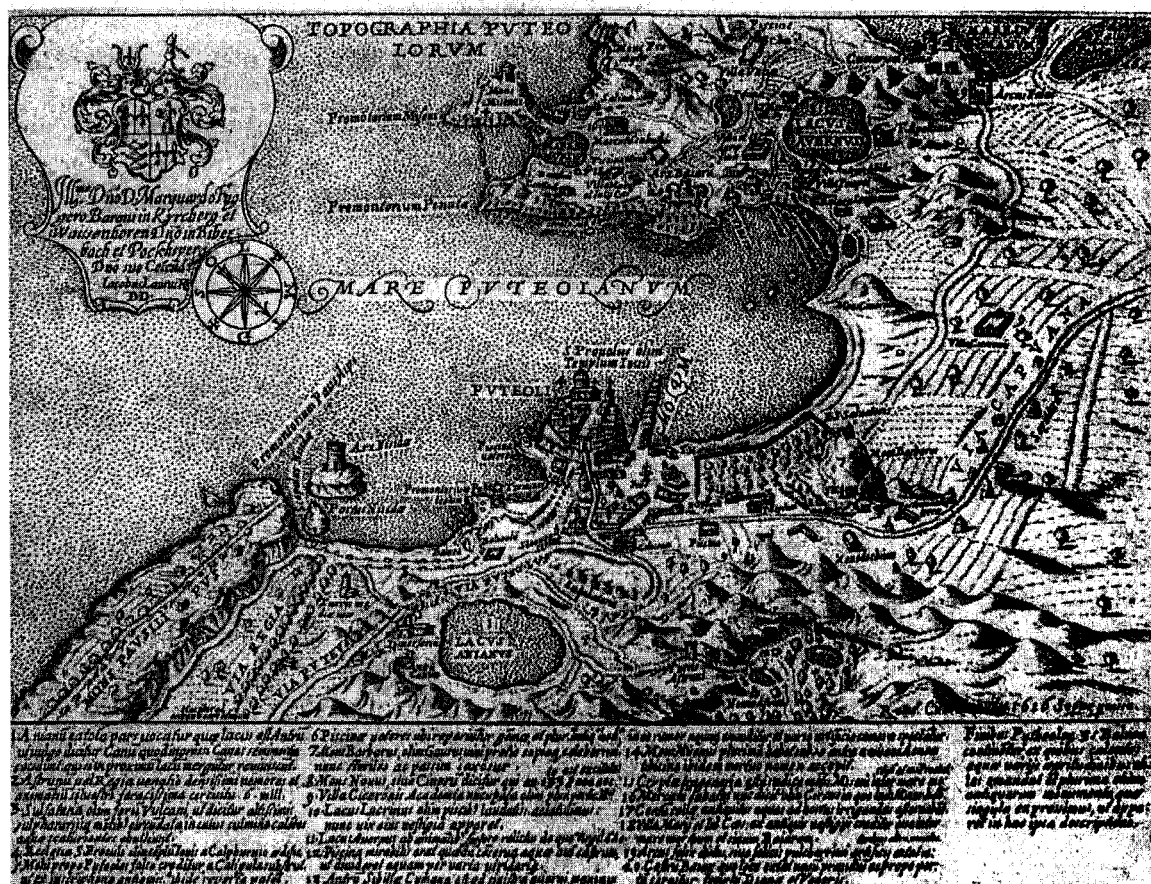


Figure 2.1 Giacomo Lauro, *Topographia Puteolorum* (1626)

This chapter temporarily shifts the focus away from Vesuvius, by considering antiquarianism and early volcanology in the Campi Flegrei, an active caldera over ten kilometers across located to the west of Naples.¹ It suggests that volcanic activity in the first half of the 1500s had an important effect on how Neapolitan antiquarians and

¹ Pliny the Elder referred to the region as the *campi phlegraei*, or the “fields of fire.” See: *Naturalis Historia libri xxxvii* (Stuttgart: Teubner, 1967), III, 5, 41.

naturalists described their city and its surroundings. As early as the 1540s, local scholars went so far as to assert that their region surpassed Rome's preeminence as a place to recover classical antiquity. They issued a challenge to the Eternal City principally on two grounds: their proximity to volcanic marvels and ancient ruins. Their humanist and naturalist rhetoric was an important precedent to representations of Vesuvius in the seventeenth century. Most important, some writers transformed this unusual place into a patriotic landscape. The Campi Flegrei contained the vestiges of a unique Neapolitan classical past they sought to identify and reconstruct, to the benefit of city pride (**Figure 2.1**).

Because Campania – the Italian region that begins about 100km south of Rome – had been such an important area in classical antiquity, humanists throughout the peninsula were fond of recalling that the *iter* from Rome to Naples retraced ancient and mythical footsteps. According to classical sources, Hercules once journeyed down the boot of Italy after having defeated the brigand Cacus on the future site of Rome. The first century BC Greek historian Diodorus Siculus described how the hero arrived in the plain of Cuma, on the edge of the Campi Flegrei, and fought a pitched battle against a band of local giants. Hercules was not the only ancient hero to have wandered Campania; the Argonauts and Ulysses had come on their own journeys. Aeneas encountered the Cumaean Sybil on the Bay of Naples, and here gained passage into the underworld, according to Virgil.²

² Diodorus Siculus, IV, 21, 5; Virgil, *Aeneid*, VI. See Paul Martin, *La Campanie antique des origines à l'éruption du Vésuve: Peuplement et développement* (Clermont-Ferrand: Adosa, 1984), 12-25.

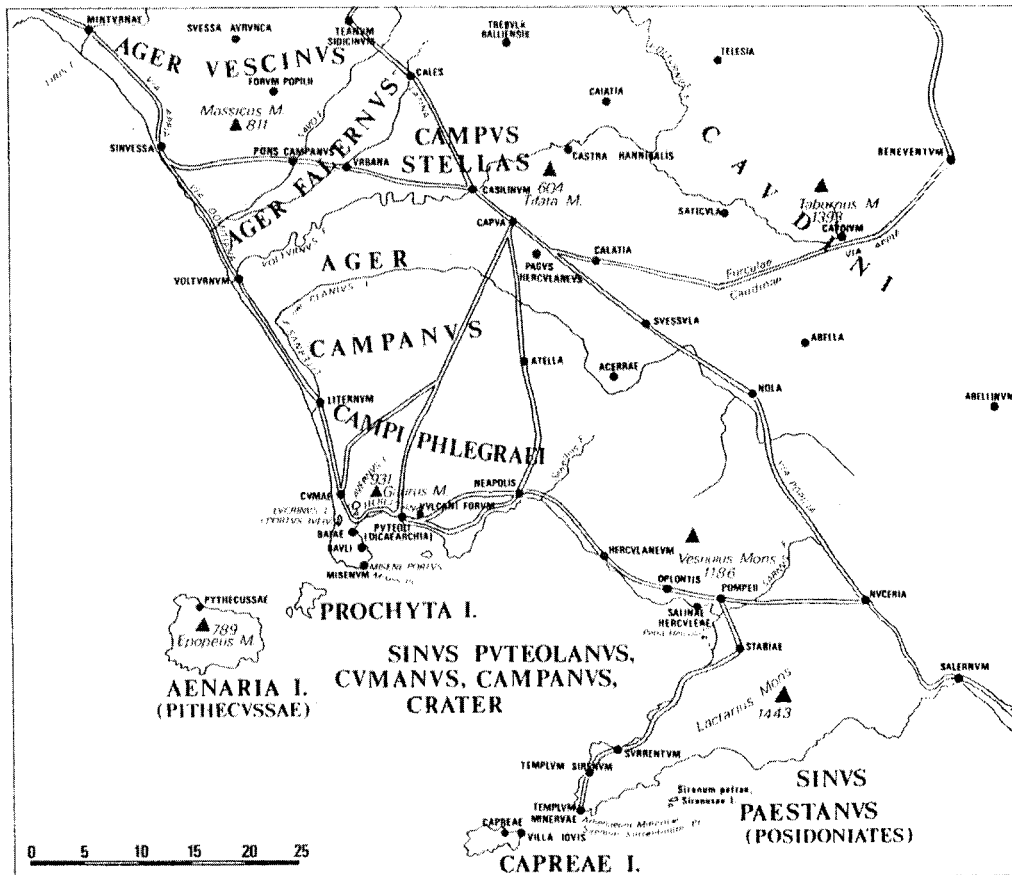


Figure 2.2 The *Campi Flegrei* (with Latin names)

The road that an early modern traveler would have followed to reach Naples from Rome was the Appian consular road, which wound its way south all the way to its terminus in Brindisi. In its initial stretch near Gaeta on the Mediterranean, it passed through the celebrated vineyards and olive groves of the *ager Falernus*, once reputed to yield the best wines in the Roman Empire. An artery of this ancient thoroughfare arrived at the remains of Cuma, site of the first Greek colony in this part of Italy. Its ruins were on the northwestern edge of the Campi Flegrei (Figure 2.2).

Even if the Italian South had acquired a reputation for being dangerous country by the sixteenth century, its attractions seemed undeniable to scholars. The added element of risk – one might fall prey to bandits on the way down or be scorched by a volcano once there – seems to have done little to discourage interest. If anything, this wildness enhanced the reputation of Naples as a must-see destination for natural historians and antiquarians.

The prospect of temples, amphitheatres, baths, docks and many Roman ruins still standing in a place where the earth rose, fell, shook and exhaled, tended to provoke exclamations of *meraviglia*. This was a word contemporary authors used to denote wonder and marvel.³ Both natural history and antiquarian studies in the Campi Flegrei first became a serious enterprise around the mid sixteenth century. The search for antiquities, for example, led to the ruins clustered around the contemporary town of Pozzuoli, once Roman Puteoli.⁴ These were important sites that could be compared very reasonably to those in Rome. The Flavian amphitheatre at Pozzuoli, for example, was second in Italy only to its more famous counterpart in Rome, the Colosseum. There were other ruins scattered about the former site of Cuma and the thermal baths of Baia, near the shores of Lake Avernus. Few places in the Italian peninsula, or the entire

³ Among the most significant studies on the topic of wonder in early modern European culture are: Stephen J. Greenblatt, *Marvelous Possessions: The Wonder of the New World* (Chicago: University of Chicago Press, 1991); Lorraine Daston and Katherine Park, *Wonders and the Order of Nature, 1150-1750* (New York: Zone, 1998); Peter G. Platt, ed., *Wonders, Marvels, and Monsters in Early Modern Culture* (London: Associated University Presses, 1999). For the importance of wonder in the Middle Ages see: Caroline Walker Bynum, "Wonder," *American Historical Review* 107, 1 (1997): 1-26.

⁴ Lucio Fino, *Vesuvio e Campi Flegrei. Due miti del Grand Tour nella grafica di tre secoli. Stampe, disegni, e acquarelli dal 1540 al 1876* (Napoli: Grimaldi, 1993).

Mediterranean for that matter, were so well suited for the recovery of antiquity and certain forms of natural history.

An unusual occurrence in 1538 was possibly the single most important event in awakening new interest in the area. That surprise was a new volcano, the youngest in Europe.⁵ The tuff cone was soon called Monte Nuovo. Very strikingly, it jostled itself into place amid cultivated plots, overgrown ruins, a small village, and two lakes – lifting here and burying there. Some of the first guides to the natural and historical sights of the Campi Flegrei were attempts to sort through the causes and effects of this volcanic outburst. Naturalists and antiquarians came to one conclusion that was to have long-term effects. They began to declare the urgency of rediscovering Naples' ancient past before it was effectively lost and could no longer contribute to the city's glory, fearing all along that the eruption of 1538 was simply the prelude to even more serious disruption in the caldera. Ferrante Loffredo's *Le antichità di Pozzuoli* (1573) and Giulio Cesare Capaccio's *La vera antichità di Pozzuolo* (1604), works considered below, were partly the product of these concerns.

The eruption of Monte Nuovo in 1538 was a sign of things to come. It should be noted, first off, that the curiosity about volcanoes began to intensify after the middle of the sixteenth century. This had something to do with volcanism in the Italian south, even if Vesuvius still remained dormant. Some of the first widely distributed print images of volcanoes in this early period were surely those in Sebastian Münster's *Cosmographia*. A woodcut in this popular folio volume depicted Etna threatening the Sicilian town of

⁵ John Dvorak and Giuseppe Mastrolenzo, "The mechanisms of recent vertical crust movements in Campi Flegrei caldera, Italy," *Special Paper: Geological Society of America* 263 (1991).

Catania, possibly in illustration of the volcano's 1537 eruption. In another important example from the 1590s, frescoes by Annibale and Agostino Caracci in Rome's Farnese palace also included the Sicilian volcano smoking and in flames.⁶

The eruption of Monte Nuovo also had a more distant ring of familiarity to it. Neapolitan writers referenced the works of ancient natural historians, most notably Aristotle and Pliny, to explain the unusually intense rumblings in the Campi Flegrei that caused no small measure of consternation and surprise. Scouring ancient texts, however, was not limited to understanding strange volcanic phenomena in the caldera. It involved a more broadly conceived antiquarian enterprise related to creating an accurate and detailed accounting of every significant ancient site in the region. Local antiquarians were convinced that the Campi Flegrei still contained the material evidence of Naples' glorious past in antiquity, which they hoped to recover for their own prestige and to the benefit of civic pride. In a sense, volcanoes were conceived of as a fascinating but possibly threatening addition to a bigger picture.

The most significant effect of volcanism and its related effects was that of stimulating a vocabulary of marvel particular to the Campi Flegrei. Both contemporary

⁶Sebastian Münster, *Sei libri della cosmografia universale, ne quali secondo che n'hanno parlato i piu veraci scrittori son disegnati i siti de tutte le parti del mondo habitabile e le proprie doti: Le tavole topographice[sic] delle Regioni. Le naturali qualita del terreno, onde nascono tante differenze, e varietà di cose, e animate e non animat. Le nature, e le dipinture degli animali pellegrini. L'imagini, e dscrittioni delle citta piu nobili: I principi de Regni, gli accrescimenti, e tramutamenti. I costumi di tutte le genti, le leggi, la Religione, i fatti. Le mutationi: le genealogie altresì de Re, e de principi.* (Basel: Heinrich Peter, 1558). The Carracci fresco dates to 1594. On volcanoes in art: Haraldur Sigurdsson, ed., *Encyclopedia of Volcanoes* (San Diego: Academic Press, 2000), 1315-1338. Mount Hecla, in Iceland, was probably the most renowned volcano in the Middle Ages. It's worth noting that Münster's used the same woodcut for this mountain (a gross inaccuracy, considering the woodcut showed a large town at the base) as he did for Etna.

naturalists and antiquarians – often one and the same – used local *meraviglie* to proclaim the uniqueness of the region, and by extension nearby Naples.

Volcanic Marvels

The rhetoric of sixteenth-century describers of the Campi Flegrei was deliberately one of wide-eyed amazement, and readers willingly shared in the wonder. The whole area had an ancient reputation for marvel, oddity, and a fair measure of doom that late Renaissance authors exploited to fascinate their audiences. Ancient sources, for example, located the Acheron, or ‘river of woe,’ in the southern proximity to the acropolis of Cuma, somewhere near the Acherusian swamp (*Acherusia palus*), known more commonly in the early modern period as lake Cumano or Fusaro. According to Virgil, Aeneas had been uncertain about finding the precise entrance to the underworld, but in his conversation with the Sybil he announced that he suspected the hallowed gates to lie somewhere between this gloomy marsh and vapor-emitting lake Avernus.⁷

Virgil situated Hades’ portals on the shore of this mysterious lake. In a shady grove near the entrance of a cave, the Sybil instructed Aeneas in the precise rituals that enabled him to descend into the nether regions. According to Lucretius, the Greeks considered the lake a ‘bird-less place,’ on account of the sulfur vapors that exhaled from its embankments and bubbled up from its depths.

Come now, I will unfold to you the nature of all Avernian sites and lakes. First of all, the name Avernian is a consequence of their harmful aspect to all birds, for when they come directly over those locales in their flight, forgetful of the oarage of their wings, they slacken their sails and fall headlong, drooping with languid neck to earth

⁷ Virgil, *Aeneid*, 6, 105-109. See A.G. McKay, *Ancient Campania*, 2 vols. (Hamilton: The Vergilian Society, 1972), vol. 1, 1-7.

if by chance the nature of the locales determines it, or into the water, if by chance the lake of Avernus spreads beneath them. That spot is Cumae, where mountains smoke, choked with acrid sulfur and enriched with hot springs.⁸

Other locations in the Campi Flegrei had the same infernal overtones. Still, alternate themes counterbalanced such ominous aspects. These included the caldera's unusual fertility and its many ancient thermal springs and baths.

Much of the Campi Flegrei caldera contains a volcanic-hydrothermal system.⁹ A constant supply of hot, sulfur-rich waters had once fed the Roman thermal complex of Baia, which was still visible as a set of massive and overgrown ruins across the bay from Pozzuoli. Elsewhere, fumaroles – essentially hot vents that were another typical geological feature of the caldera – emitted steam and sulfur gas. One especially large concentration of these fumaroles was in a crater Lucretius described in the first century BC as the *forum Vulcani* – ‘Vulcan’s furnace’. Both the Greeks and Romans had imagined that amidst steam, boiling mud, and noxious fumes, Vulcan’s forge pumped and bellowed. They commented on the foreboding aspects of this crater, noting that it was a passage into the infernal depths, but some authors were also convinced of the beneficial qualities of the place.¹⁰

Pliny the Elder announced famously in the *Naturalis Historia* that here, “the inconvenience of mountains was turned to good.” The Roman naturalist meant to say that the fires that appeared to smolder beneath the terrain of Pozzuoli did not produce only ill effects. In fact, Pliny reasoned that the cinders spewed by the crater’s perpetual

⁸ Lucretius, *De Rerum Natura* 6, 739-49; translated in *Ibid.*, vol. 1, 7.

⁹ The Solfatara is an active volcanic-hydrothermal system within the Phlegraean caldera. Its vents discharge H₂O steam, CO₂, H₂S, SO₂, with sulfur encrustations forming on the outer portions.

¹⁰ Silius Italicus, *Punica*, 12, 133-46; Strabo, *Geographica*, 5, 4, 4; Polybius, 3, 91, 7.

combustion were the source of the region's celebrated fertility. They made the soil porous and spongy, trapping precious water that would have instead flowed along rivers into the sea. Mixed with pumice and ash, this rainwater created subterranean juices (*suci*) that slowly released their fertility to plants.¹¹

It is necessary to offer some explanation of the region's geology. Today, volcanologists define the Campi Flegrei a large nested caldera. Its size is almost precisely twelve kilometers in diameter, and it is the result of two distinct phases of geological activity, occurring thirty-seven thousand and twelve thousand years BP respectively. Generically defined, calderas are large volcanic depressions produced by the deformation and collapse of terrain just above a large magma chamber. This effect is the result of emptying following one or more massive eruptions.¹²

Since the Campi Flegrei caldera was formed during the two past periods of acute volcanism mentioned above, it acquired the characteristic shape of a ring surrounding a large depression. The entire area is still very active, with a magma chamber located approximately three to four kilometers below the surface. The oldest phase of volcanism covered an area of roughly thirty thousand square kilometers with tephra (ash, pumice, clasts, and so forth). It also caused the collapse of the western portion of the Bay of Naples and the area subsequently occupied by Naples and Pozzuoli. The more recent

¹¹Pliny, *Naturalis Historiae libri xxxvii* (Stuttgart: Teubner, 1967), 18, 109-111.

¹² Though it has collapsed into a caldera, the volcano that makes up the Campi Flegrei is a strato volcano like Vesuvius. Strato volcanoes are formed from the composite action of lava flows and the build-up of pyroclastic material. Vesuvius, as it was in the seventeenth century and as it is today, is a cone built up by exactly this sort of action, inside the caldera left by the huge eruption of 79 AD. In its early history Vesuvius likely had the nearly perfect conical shape of a strato volcano. See: Sigurdsson, ed., *Encyclopedia of Volcanoes*, cited above; also François Girault, *Vulcani* (Novara: Istituto Geografico Agostini, 1998).

phase, with its yellow tuff stone, led to the lowering of the areas on which the historical sites in the Campi Flegrei eventually stood. Between twelve thousand and thirty-eight hundred years BP, frequent and convulsive volcanism shaped the region, activity that was accompanied by the recurring formation of lava domes, tuff-rings, and tuff-cones. Quiescence has largely followed, broken only by sporadic events such as the formation of the new tuff-cone in 1538.¹³

Within the Campanian Plain, an active volcanic belt runs from the isolated cone of Vesuvius to a line of volcanic centers along its northwest coast. This includes the Campi Flegrei as well as the volcanic islands Procida and Ischia. Modern geologists are now able to tell that distinct magmatic chambers fuel Vesuvius and the Campi Flegrei. Importantly, this was not how sixteenth-century natural philosophers understood the region's volcanism. Their stress lay on a sort of interconnectedness between the two places. Recalling the episode in the first chapter, this belief is what led Athanasius Kircher to assert in 1638 that a great subterranean pool of fire spanning the breadth of Naples linked all these volcanoes together. The Vesuvius-Campi Flegrei system, as he imagined it, was just a branch of the immense network that not only fed the other large Mediterranean cones, Stromboli and Etna, but all those of the world. Kircher likened this to the blood that flowed through the veins of the human body. .¹⁴

¹³ Giovanni Orsi, "Storia geologica e deformativa della caldera dei Campi Flegrei," in *Archeologia e Vulcanologia in Campania* (Naples: Arte Tipografica, 1998), 29-37. See John and Giuseppe Mastrolenzo Dvorak, "Special Report: The Mechanisms of Recent Vertical Crustal Movements in Campi Flegrei caldera, southern Italy," (The Geological Society of America, 1991).

¹⁴ Athanasius Kircher, *Mundus subterraneus in XII Libros digestus* (Amsterdam: Johan Jansson, 1678). See in particular Caput III, IV, and VI.

Long before this, however, the volcanic marvels of the caldera had figured in Western literature. Campanian *meraviglie* were part of a coherent tradition that had persisted from antiquity and would endure to the edge of the Enlightenment. European visions of the marvelous, more broadly, encompassed everything from monsters, gems, and strange phenomena. The things that made the surroundings of Naples such a spectacle fit readily into this picture: volcanoes, thermal springs, and vapors exhaling from the earth.

Significantly, one of the most important classical describers of the Bay of Naples considered in the previous chapter, Pliny the Elder, was also very important for the Western sense that the world pullulated with marvel. Besides being read directly as an authority on the region, the Roman naturalis had an important indirect effect on sixteenth-century descriptions of the Campi Flegrei. This was because Pliny's massive work, the *Naturalis Historia*, inspired in turn numerous medieval writers who made an immense contribution to the perception of marvelous things in the West. These sources from the thirteenth century were still influential in the mid 1500s, when the first antiquarian guides to the Campi Flegrei began to appear.

Medieval travel chroniclers especially drew from Pliny's *mirabilia* to create their own narratives on the marvels of the world. Most widely read was a travel journal attributed to the dubious figure of John Mandeville. The *Travels*, composed sometime in the middle 1300s and of uncertain authorship, was an astonishingly popular work. Two other medieval authors, Gervase of Tilbury and somewhat later Peter of Eboli, were the

most important chroniclers of southern Italian marvels since antiquity, though they were never read as widely as Mandeville.¹⁵

As Pliny's *Natural History* had done in the classical period, the *Travels* stressed the particularity of wonder in different geographic places. The island of Calanok (likely somewhere in southeast Asia), for example, had its own unique marvel in the form of amazing self-sacrificing fish. Mandeville's description ran as follows:

In that land too, there is a marvel that is not in other lands. For all kinds of fish in the sea come at a certain time of the year, each kind in turn, and gather close to the shore – some on the shore. They lie there three days, and the men of that country come there and take what they want. And then that kind of fish goes away, and another kind comes ashore for another three days, and the people take them. And thus do all kinds of fish until all of them have done it.¹⁶

If Calanok was the site of piscine suicide, Sicily had Etna, a place that Mandeville imagined as eternally on fire, with great vents spouting multi-colored flames day and night.¹⁷ Volcanic phenomena was a big part of the Italian peninsula's own distinct claim to the marvelous as early as the 1300s.

Early modern authors owed a very significant debt to their predecessors. The thermal springs of the Campi Flegrei, for example, were described in Peter of Eboli's thirteenth-century poem, *De balneis puteolanis*. Peter's work was dedicated to the German emperor Frederick II, meaning that it was likely composed sometime around 1220. Frederick may never have read the poem, but he is known to have taken the baths at Pozzuoli in 1227. Peter of Eboli enjoyed a measure of popularity even in the following

¹⁵ Daston and Park, *Wonders and the Order of Nature*, 34. Chapter one, precisely on the topic of marvels and medieval travel writing, bears the title, "The Topography of Wonder."

¹⁶ John Mandeville, *The Travels of Sir John Mandeville* (London: Penguin, 1983), 133.

¹⁷ *Ibid.*, 68.

centuries. By the mid 1400s, the *De balneis* had been translated into the Neapolitan dialect and into French, and as late as the 1600s it continued to be the basis for subsequent works on the subject of thermal baths in the Campi Flegrei. Importantly, the poem was available to sixteenth-century Neapolitan antiquarians in multiple printed versions, from which they drew heavily.¹⁸ Even one of the definitive writers on Campi Flegrei antiquities and natural wonders in the early seventeenth century, Giulio Cesare Capaccio, revealed his debt to Peter of Eboli by quoting him in his entirety in the preface to his guide to Pozzuoli.¹⁹

Peter of Eboli's knowledge of the thermal baths found further elaboration in the works of fifteenth-century medical writers. Among the most frequently cited was Michele Savonarola, author of the *De balneis et thermis naturalibus omnibus Italiae*. Savonarola very often simply plagiarized his thirteenth-century predecessor, but his work did have some original aspects. Medical treatises on hot springs reported on the marvelous accidents of each particular thermal source, noting their even temperatures, beautiful mineral deposits, and small animal inhabitants. Historians of science have argued that the writings of balneologists on individual thermal springs had the important epistemological consequence of stressing the particular. Savonarola argued, for example,

¹⁸ The origin of the poem and its distribution is traced in C.M. Kaufmann, *The Baths of Pozzuoli: A Study of Medieval Illuminations of Peter of Eboli's Poem* (Oxford: Bruno Cassirer Publishers, 1959).. Here the success of the poem is amply recorded. In the sixteenth century it was revised by the Italian humanist Pietro Aretino and dedicated to Pope Pius II. It also formed the basis of important later works on the baths of Pozzuoli. The anonymous *De Balneis Omnia quae extant apud Graecos, Latinos et Arabas* (Venice, 1553), contained the *Breve Compendium de Totius Campaniae Balneis* by the Neapolitan doctor Giovanni Elisio, and it also contained Michele Savonarola's *De balneis et thermis naturalibus omnibus Italiae* – both works that drew from Peter of Eboli and were cited in turn. For more on this see: Kaufmann, *The Baths of Pozzuoli*, 14-23.

¹⁹ The poem is in Giulio Cesare Capaccio, *Historia Puteolana* (Naples: Costantino Vitale, 1604), 69-84. A modern facsimile and translation is available in *De balneis puteolanis, sec. XV*, translated by Carlo Marcora and Jane Dolman (Milan: Edizioni Il Mondo Positivo, 1987).

that only experience and observation, not the methods of abstract logical demonstration dear to the Aristotelian natural philosophers of the thirteenth century, could help one derive the properties of each unique spring. The stress medical writers put on observation and the particular is understood to have made a significant contribution to the development of scientific methods in the early modern period.²⁰

Most important of all, the marvels of Campania filled another medieval work that survived in numerous manuscripts by the 1500s. It was also the earliest of the sources mentioned here. This was Gervase of Tilbury's *Otia Imperialia*. The *Otia* was composed sometime after 1211, for the delight and recreation of the Germanic emperor Otto IV. Its author was born in England, but traveled widely and spent much of an itinerant career in southern Italy, where he searched for marvels. Gervase divided his great opus into three sections, the first being a commentary on Genesis and an account of the world's creation.

The latter two books of the *Otia* were different. The second offered a veritable *mappa mundi*, a description of the world and an enumeration of its diverse provinces, while the third was entirely devoted to wonders. Unlike Peter of Eboli's balneological treatise, however, the *Otia* did not belong to any single genre. It was encyclopedic in its cosmographical, geographical and historical scope, and much more similar to Pliny's *Naturalis Historia*. It offered the emperor snippets of marvel drawn from the entire world. By being a kind of 'wonder itinerary' that passed, at points, through the region of Naples, the work was an important predecessor to the guides of the sixteenth century. In

²⁰ Kaufmann, *The Baths of Pozzuoli: A Study of Medieval Illuminations of Peter of Eboli's Poem*, 8-13. Daston and Park, *Wonders and the Order of Nature*, 136-140. On wonder as a cognitive emotion in the Middle Ages – in particular wonder as central to a thing's singularity and significance – see also Bynum, "Wonder," 1-26.

another respect it clearly was not: later antiquarians would reject nearly everything Gervase had to say about Roman antiquities in this part of Italy.²¹

Gervase tellingly chose the Roman poet Virgil as his guide to Campanian wonders. In his conception, Virgil was a fabricator of marvels, a great *magus*, who had made the Bay of Naples his playground. Gervase felt very strongly that the evidence of the poet's magical powers could be seen throughout the region, this being the notion that antiquarians three centuries later would openly scorn and refute. The medieval writer imagined an enchanted landscape, different in important ways from what the sixteenth century humanist claimed to see. He wrote, for example, that Naples had a famous and ancient butcher's shop. In one wall, Virgil had once tucked a piece of meat. The wall has such a powerful effect on flesh that no meat went rancid there, no matter how long its stay.²²

There were numerous other strange things. Gervase described elsewhere how Virgil had tended a garden on a mount overlooking the city. Here, the poet magician sowed many plants, including one that reputedly restored the sight of blind sheep. In this magical garden there had also once stood a statue of a man holding a bronze trumpet to his mouth. Reputedly, any fierce wind blowing against the garden would be powerfully thrown back by a blast of the trumpet. Very significantly, in the same passages Gervase warned the reader that across from Naples an ominous mountain loomed. He was undoubtedly referring to Vesuvius, but the name escaped him. The "mountain," as he

²¹Gervase of Tilbury, *Otia Imperialia*, ed. S.E. Banks and J.W. Binns (Oxford: Oxford University Press, 2002), xli.

²²Ibid., 3, 12.

called it generically, belched fire and smoke regularly – which makes perfect sense considering he was writing less than a century after the volcano’s last notable eruption (in the late 1130s). In his description, it hurled timbers charred as coal and burning-hot ash that scorched fruits and the crops in the countryside. Gervase finally conjectured that over time, possibly because ignorant people feared Virgil’s magic, Virgil’s apotropeic statue had been destroyed, even if it had once protected the city from the fire mountain.²³

Gervase’s tour of marvels even strayed up the slopes of Vesuvius itself. He may well have explored the volcano during his long stay in Salerno, not distant from the volcano. One of the marvels he claimed existed on its slopes was the “upside-down bean,” a plant that contained pods resembling beans. Very oddly, the Vesuvian bean was like no other in that it grew contrary to the cultivated plant, by pointing at the ground. The seeds of this plant had the marvelous quality of transferring the mood or actions of the picker to the one who tasted it. A person who gathered the bean laughing would laugh until sunset, and so forth.²⁴

Strange plants were the least things later antiquarians would reject about their predecessors’ writings on the Bay of Naples. What they refuted was the idea that Virgil was personally responsible for many of the Roman buildings, temples and baths in the area. Gervase, for example, was convinced that the baths on the Mediterranean shore at Baia had been built by Virgil. The Roman magician had apparently wished to master the heat and vapors rising from the ground and had created this thermal complex in order to

²³ Ibid.; 3, 13.

²⁴ Ibid.; 3, 14. It’s not clear what Gervase meant by ‘upside-down’ bean, and can only guess that he meant that the shoots of new growth pointed downward.

help cure the ills of the local population. In Gervase's mind, the poet's building projects also extended to the tenebrous *crypta Neapolitana*, the tunnel beneath Cape Posillipo described in the first chapter.²⁵

This passage had actually been bored well before Virgil, despite Gervase's claims otherwise. Hoefnagel's depiction of Naples and Vesuvius showed its entrance, and sixteenth-century antiquarians would register it among the most important traces of the Romans in the area. They also associated it closely with Virgil, like their medieval predecessor, but only because they thought that his tomb was located near the tunnel's entrance. Very differently, they refused to believe that Virgil had anything to do with its construction.²⁶

Along with the tunnel and Virgil's thermal complex, Gervase described lake Avernus. He quoted a text not commonly cited in the thirteenth century – Lucretius' *De rerum natura* – repeating the ancient theory that the lake was deadly to flying birds.²⁷ This surely demonstrates his familiarity with ancient authors, and in sum the range of Campanian marvels Gervase described in the *Otia* was extraordinarily rich and really without parallel at least until the mid 1500s. Nonetheless, if one compares him to his early modern counterparts, a significant contrast emerges when it came to knowledge of the ancient sources.

Sixteenth-century authors simply had a more accurate understanding of the region's antiquities. They had access to a greater part of the classical literary tradition, and they

²⁵ Ibid; 3, 15-16.

²⁶ The tunnel's entrance is clearly visible in an illustration by Joris Hoefnagel: "Elegantissimus ad mare Tyrrhenum ex monte Pausillipo NEAPOLIS Montisque Vesuvii Prospectus," (Naples, 1578). Biblioteca della Società Napoletana di Storia Patria III C21*. See Chapter One, above.

²⁷ Tilbury, "Otia Imperialia: Recreation for an Emperor,"..

approached these ancient texts from different perspectives. Gervase cited Virgil and Lucretius, but he read ancient sources differently than Neapolitan antiquarians a few centuries later. It would be fair to say that his Virgil looked very odd by the standards of the late Renaissance. Sixteenth-century writers admittedly did not abandon the marvelous when they traced their itineraries through the Campi Flegrei, but their sense of *meraviglia* opened into a different enterprise. First, they accompanied an intensive, and increasingly extensive reading of ancient sources with trips to the field. These explorations were hardly systematic, but at least antiquarians liked to think that the fact that they tramped about and read inscriptions put them ahead of their predecessors centuries earlier. In this fashion, one author noted, they finally saved this knowledge from the “jaws of time,” where it risked being devoured and lost.²⁸

For good reason, local scholars were also deeply curious about the natural forces at work in the subterranean world. Was this still the rich soil that had nourished the orchards and vineyards of Roman emperors, as Pliny had once described the effect of underground “juices?” Could the underground heat that made the Campi Flegrei so unstable also serve to reveal more about the area’s Roman past? Or did it threaten it? What caused eruptions? Antiquarians and natural philosophers grappled with these questions only after the 1540s. For their impetus they could in part thank Monte Nuovo, as the next section shows. The volcano’s emergence made it possible to see a bit more of antiquity than had been hitherto visible, though it destroyed and erased the classical past elsewhere.

²⁸ Loffredo, *Le antichità di Pozzuoli*, 1.

Monte Nuovo

Until the advent of modern archaeology in the mid 1700s, the discovery and recovery of antiquity – especially what was buried and unseen – could only be essentially the result of good fortune.²⁹ Renaissance humanists and artists enjoyed, however, a fair measure of luck. They exhibited a growing awareness that many traces of the classical past were buried beneath the soil. One important instance is worth recalling, serving to suggest how Neapolitan antiquarians were conscious of emulating trends elsewhere in Italy.

Rome was the site of a truly extraordinary and historic unearthing at the turn of the sixteenth century. In 1506, during the pontificate of the ambitious and industrious pope Julius II, the ancient Laocoön statue was discovered in a vineyard on the Esquiline hill, not far from the Colosseum. One witness to the discovery was Francesco Sangallo, son of the papal architect Giuliano. Francesco recalled that his father had immediately recognized the statue from a line in Pliny: “I climbed down to where the statues were when immediately my father said, ‘That is the Laocoön, which Pliny mentions.’ Then they dug the hole wider so that they could pull the statue out. As soon as it was visible everyone started to draw, all the while discoursing of ancient things, chatting as well about the ones of Florence.”³⁰ Sangallo expressed much of the Renaissance humanist’s

²⁹ For the development of archaeology in the Bay of Naples see: Antonio d’Ambrosio, *Pompei. Gli scavi dal 1748 al 1860* (Milan: Electa, 2002), 2-50.

³⁰ Leonard Barkin, *Unearthing the Past: Archaeology and Aesthetics in the Making of Renaissance Culture* (New Haven and London: Yale University Press, 1999), 3

relationship with antiquity: the thrill of discovery, the recognition that came from knowing the artifact through the words of ancient texts, and the desire to emulate.

No such singular ancient artifact came out of the Campi Flegrei, but some notable discoveries were made there three decades later. The example of the Laocoön and Rome in the High Renaissance is instructive because it suggests how Renaissance culture became sensible to the way lost artifacts could come to light. Sometimes this was not the product of unearthing per se, but of a descent into the subterranean world lit by the flicker of a torch. The Florentine artist Benvenuto Cellini, who came to Rome two decades after the discovery of the Laocoön, made this point in his autobiography. He noted that the discovery of *grotteschi* – reliefs and frescoes that decorated the subterranean vaults of buried Roman buildings – were evidence that the ancient city lay beneath the level of the present city. Cellini's recognition evoked a sort of stratigraphy, in which bits of antiquity were understood to hide beneath the strata of later periods.³¹

A similar awareness formed in the minds of those who explored the Campi Flegrei. Rather abruptly, in the first half of the sixteenth century, it appeared that ancient ruins could rise and shift, but also be lost, with the strange exhalations of the earth. It was partly volcanism that made this awareness possible.

The small tuff cone that emerged over the course of a few days in 1538, taking the name Monte Nuovo, had an effect that can be likened to the unearthing of the Laocoön. On one hand, the young volcano joined an ancient cluster of oddities like the sulfur-rich Solfatara crater and lake Avernus. In fact, this little eruption did two significant things.

³¹ Benvenuto Cellini, *Autobiography* (London: Penguin, 1998), 52.

First, it surely contributed to a new phase of interest in the region. Second, it was the most immediate precedent to what would happen when Vesuvius erupted a century later. It served as a rehearsal for the great geological event that would shape profoundly the culture of Naples.

One reason why this minor volcanic outburst foreshadowed the far more dramatic experience with Vesuvius in the seventeenth century was that it sharpened the encounter with the area's classical past. Some ancient ruins rose vertically in the 1538 terrain uplift of the Campi Flegrei, even as others were destroyed – a remarkable combination of effects. Sixteenth-century accounts record the fact that the shoreline near Pozzuoli receded significantly as a result of the terrain rise caused by Monte Nuovo. The extension of the littoral exposed Roman ruins that had fallen beneath the level of the Mediterranean as a result of the caldera's general sinking over hundreds of years, which had been accompanied also by a general rise in sea level since the classical period. Geologists estimate that the vertical rise near the tuff cone was possibly in excess of seven meters, and that the shoreline may have receded over three hundred meters. Contemporary illustrations revealed how the sea had retreated in this fashion. The Roman dock commonly referred to as Caligula's bridge was among the antiquities brought into greater relief by these changes in the landscape (**Figure 2.3**).³²

³²Dvorak, "The mechanisms of recent vertical crust movements in Campi Flegrei caldera, Italy," *Special Paper: Geological Society of America* 263 (1991).

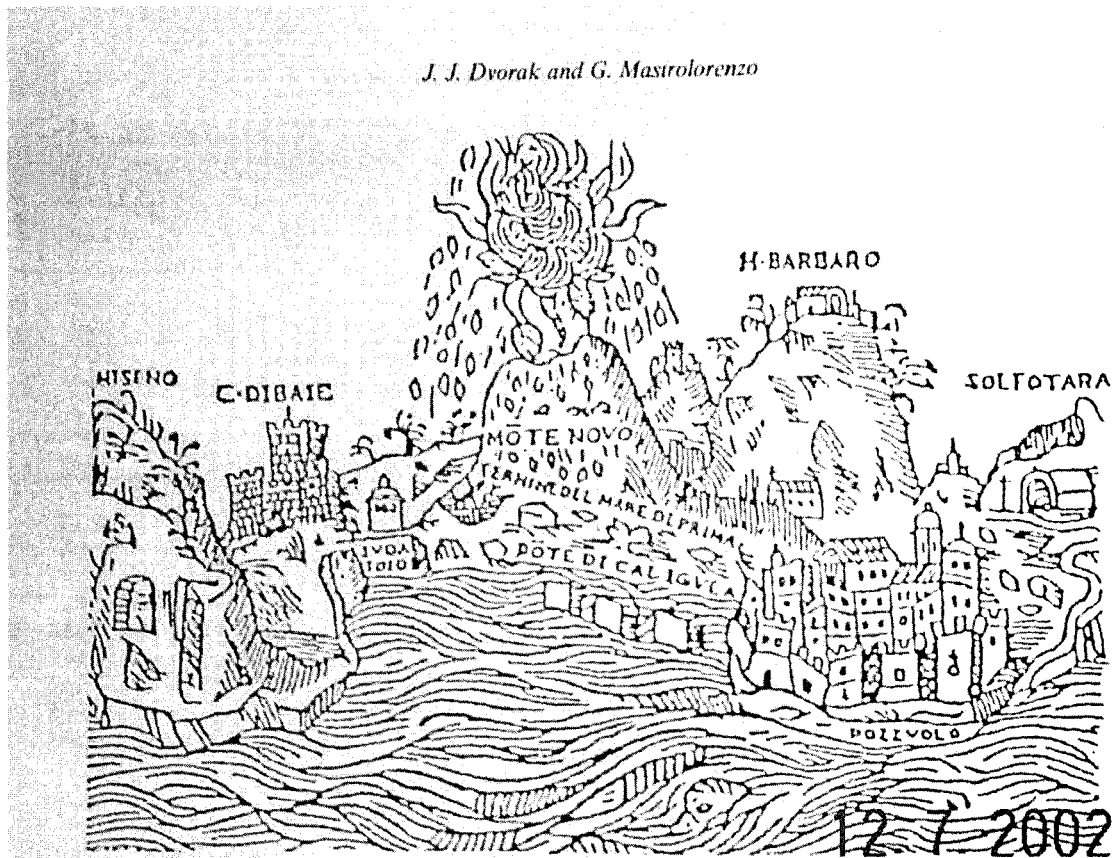


Figure 2.3 Pietro Giacomo Toletto, *Ragionamento del Terremoto* (1539)

A woodcut illustration in a rare work by Pietro Toletto, *Ragionamento del Terremoto* (1539), gives some idea of how these changes may have looked to contemporary viewers. As a matter of fact, the ancient dock that extended from Pozzuoli was of great interest to sixteenth-century antiquarians. According to the Roman historian Suetonius, the Roman emperor Caligula (37-41 AD) had constructed a bridge to connect Baia and Pozzuoli, a citation that led many mistakenly to call the structure “Caligula’s bridge.” Actually, it was likely something else, possibly the structure Strabo had praised as a major

engineering feat and a good example of the Roman ability to build sheltered port facilities.³³

Monte Nuovo caused portions of the ancient ruin to rise further from the sea, undoubtedly an astounding sight. The formerly submerged parts were densely covered by marine algae and bored through by the stone dwelling marine mollusk, *Lithodomus litophagus*, but recognizable nonetheless. The illustration to Toletto's *Ragionamento* revealed just how far the shoreline had retreated, leaving the dock to jut out prominently from the coast of Pozzuoli. In order to show the new land at the base of the neonate volcano, the engraver marked the former shoreline with the words, "The end of the sea before."³⁴

The new little volcano covered and destroyed ruins in other places. The 1538 eruption damaged the town of Pozzuoli severely, for example, causing much of the local population to be displaced. It also buried the ancient thermal spas close to Baia, along with most of Lake Lucrino, reducing the shallow and brackish lake into a small muddy pond. Antiquarians sadly reminisced that this was once the site of prized bream, mullet, and shellfish farms for the Romans, a constant exchange of seawater having been

³³ Suetonius, *Gaius*, 19; Strabo, *Geographica*, V, 4, 6.

³⁴ It was the presence of these mollusks on the pillars of the market place of Serapis, in Pozzuoli, that led eighteenth-century geologists like Charles Lyell to conclude that the local terrain rose and fell. Even in recent decades this had been made evident, for in the ruins of the market are currently out of the sea, whereas they were underwater in the 1950s. Worth noting is the fact that 1538 actually saw a collapse and lowering of the terrain in many areas; the rise noted here pertained to the terrain proximate to the tuff cone. See: Stephen Jay Gould, "Lyell's Pillars of Wisdom," in *The Lying Stones of Marrakech* (New York: Three Rivers Press, 2000).

provided by an elaborate system of locks and canals.³⁵ These feats of Roman ingenuity and engineering were in danger.

It later became commonplace to assert that Monte Nuovo's emergence had portended something else. After the seventeenth-century eruption of Vesuvius, Neapolitan authors argued in hindsight that the minor eruption in the 1500s had been a sign of the greater volcano's impending volcanism. This was Giulio Cesare Braccini's conclusion in his chronicle, among the most important written after 1631. His *Dell' incendio fattosi nel Vesuvio* (1632) listed all the known eruptions of the volcano since antiquity, partly to stress that a full record of volcanism had existed but had been lost by lesser scholars of earlier centuries. One of the most important clues, he concluded, was the isolated eruption that occurred in the Campi Flegrei. He complained that few authors had retained any memory of ash and fire. "In that time," he wrote, "all memory of the fires of Mount Somma [Vesuvius] had been nearly extinguished." Near Pozzuoli, "such a great amount of stones and ash was ejected that there was born in the place a little mountain, as all can see. And it was for our day an extremely novel thing, and terrifying, as all memory of the fires of Mount Somma, and of Ischia, that also burned on past occasions, had been almost lost."³⁶

³⁵ Toletto, *Ragionamento del Terremoto, del Nuovo Monte, del aprimento di Terra in Pozzuolo, del anno 1538 e de la dignificatione d'essi.*; Capaccio, *La vera antichità di Pozzuolo descritta da Giulio Cesare Capaccio Secretario dell'inclita città di Napoli. Ove con l'istoria di tute le cose del contorno, si narrano la bellezza di Posillipo, l'origine della Città di Pozzuolo, Baia, Miseno, Cuma, Ischia, riti, costumi, magistrati, nobiltà, statue, inscrittioni, fabriche antiche, successi, guerre, e quanto appartiene alle cose naturali di Terme, Bagni, e di tutte le miniere. A modo d'itinerario, acciò tutti possano servirsene*, 163.

³⁶ G.C. Braccini, *Dell'incendio fattosi nel Vesuvio a XVI di dicembre MDCXXXI e delle sue cause ed effetti* (Naples: Rocagliolo, 1632), 22.

This was hindsight speaking. What about immediate responses to Monte Nuovo? The Neapolitan humanist, antiquarian, and natural philosopher Simone Porzio was among the first to recognize the significance of Monte Nuovo. Fascinated and not a little concerned by the eruption, he sent a letter to Naples' governing Spanish viceroy, Pedro Toledo (1532-1553), considering two important things in the missive: the natural causes of volcanic activity and the pressing question of what the occurrence meant for the area. His words revealed a kind of rhetoric that would progressively intensify over the course of the seventeenth century, and importantly, some of the key elements of a later vocabulary were already present. They included naturalistic explanations, an intense engagement with classical sources, concern for the portentous implications of volcanism, and the significance all these things had for Naples.

The *De Conflagratione Agri Puteolani* (1551) was a courtier's gesture to his prince. It opened, therefore, with the requisite flattery of the powerful viceroy. "You certainly observed the eruption," he wrote, "and inspected the entire area of Pozzuoli." This was indeed the case, for other sources recorded Pedro Toledo's concern for the population of Pozzuoli, but also his interest in preserving Roman ruins from further damage.³⁷

Porzio's letter suggests that the natural philosopher aspired for Toledo's attention, since he was reasonably a person admirably suited to explaining the unusual volcanic occurrence. He had observed it and, as importantly, he understood the ancients' theories describing such phenomena. The merit of his conclusions, presumably, would enhance

³⁷ Porzio was also the author of a treatise on the nature of colors, entitled the *De Coloribus* (1551). Simone Porzio, *De Conflagratione Agri Puteolani, Simonis Portii Neapolitani Epistola* (Florence: Lorenzo Torrentini, 1551). Toledo's interest in the Campi Flegrei is recorded in Capaccio, *La vera antichità di Pozzuolo*, 145

his prestige at court.³⁸ The crucial point was to dispel a number of ideas that the natural philosopher identified as dangerous superstition, a rhetoric that Porzio knew Toledo would appreciate. It was in this contemptible category that the philosopher placed the notion that Monte Nuovo was a portent of terrible things, like rebellion. This suggests that understanding subterranean heat per se was not the only thing at stake in explaining volcanic activity.

The 1530s and 1540s were a period when the interests of the Neapolitan cultural elite and their Spanish overlords were still largely convergent – though this changed considerably a century later. The local and Spanish establishment shared a common contempt and fear of the restive lower classes. Porzio's stress on the natural causes of volcanism, along with his open rejection of the portentous nature of volcanoes, put naturalistic discourse at the service of power. Volcanic marvels and ancient ruins in the Campi Flegrei served to glorify both rulers and governed, as part of the imagined partnership between Spain and Naples that was developing in these same decades. It was for this reason that Toledo built a splendid villa in the caldera, as close as he could to the ruins of Cicero's.³⁹ Likewise, it was why he solicited a natural history of Monte Nuovo.

³⁸ The career of Galileo has been considered in similar terms. See: Mario Bagioli, *Galileo Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1993).

³⁹ The breakdown of this imagined partnership between Naples and her Habsburg lords is traced in chapter four, which considers the development of Neapolitan patriotism leading up to the Masaniello revolt of 1647. During Toledo's long governance of Naples (1532-1553), the Neapolitan baronage and cultural elite were both largely convinced – alternately by incentives and threats – of this alliance between the city and Spain. The viceroy's intense patronage, which included significant building projects in the city, as well as outside it in the Campi Flegrei, were meant to draw parallels between his governance and the highest virtues of classical antiquity. This is the thesis proposed by Carlos José Hernando Sánchez, in an admirable study entitled *Castilla y Nápoles en el siglo XVI. El virrey Pedro de Toledo. Linaje, Estado y Cultura (1532-1553)* (Salamanca: Junta de Castilla y León, 1994).

The lesser volcanic marvels of the Campi Flegrei had become familiar over the centuries, but the usual thermal pools and fumaroles paled before a real volcano – even if built on a relatively minor scale. Furthermore, it was not simple to explain why the fire-spewing mountain had risen from the ground in just a few days. Porzio knew that Toledo feared that the unusual occurrence might cause confusion and consternation. “Many are the things,” Porzio declared, “which although they happen due to natural causes, because they present themselves so rarely they seem portents, especially to those who perceive them by hearsay rather than by sight.”⁴⁰ It was a rare event, he conceded, but the explanation was not impossible to derive.

The viceroy needed to know that the sun heated the humid soil of the region, causing it to often emanate great quantities of vapor. This was habitually the source of normal clouds and rain. This vapor still rose during arid months of the year, but it was hotter and had the effect of drying things further. The word Porzio employed was *fumus*, which might better be translated as smoke. This smoke was generated in subterranean caverns, and then made its way to the surface through cracks and openings. The more it was impeded from rising, the more it shook the ground and caused earthquakes. The *fumus* always sought the most rapid and explosive exit, but pressure was habitually relaxed by partial venting – the fumaroles scattered about the caldera. But sometimes it all exploded

⁴⁰ “Multa sunt, quae etsi naturali ratione eveniant, quia tamen raro contingunt, portenta hominibus: atque iis maxime, qui rumore potius ea quam visu percipiunt, videri solent.” Porzio, *De Conflagratione Agri Puteolani*. . Porzio’s resistance to seeing the eruption of the mountain as a portent reflects contemporary debates about the distinctions between preternatural events (occurring rarely, but nonetheless by the agency of the created) and miracles. See Lorraine Daston, “Marvelous Facts and Miraculous Evidence in Early Modern Europe,” in Peter G. Platt, ed., *Wonders, Marvels, and Monsters*, 76-104. Daston argues that, “in the course of the sixteenth and seventeenth centuries preternatural phenomena swung from the almost-supernatural extreme of portents, to the almost-natural extreme of Baconian facts.” She also stresses that, despite a widespread fascination with portents, both learned and popular interpretations, “did not saddle every prodigy they reported with portentous interpretation.”

at once, especially in certain seasons like spring and autumn, periods of warming and increased rain, respectively. The eruption of Monte Nuovo occurred between September 26 and 27, in confirmation of Porzio's theories. The repeated earthquakes of this period had set fire to the 'pitchy matter' (*materia bituminosa*) present in large quantities on the hollow and spongy terrain of the Campi Flegrei, sparking the eruption.⁴¹

Porzio lacked a specific vocabulary for volcanoes, a strong indicator of how novel this kind of discourse was to him and presumably others. The eruption was an *incendium*, or a conflagration, caused by the same forces that produced earthquakes, and with these he seemed to have much greater familiarity. The *De Conflagratione* was perhaps the most significant attempt since antiquity to reason through the causes of volcanism. Another volcano understandably came to mind: how did this eruption compare to that of Vesuvius in 79 AD? Now recalling this past occurrence, Porzio argued that it was too early to tell how Monte Nuovo compared to Vesuvius, but he suspected that the vast hollowness full of combustible material that lay beneath Pozzuoli would give ample fodder to the fire.

What to make of all this? What advice could the natural philosopher give the viceroy in this regard? The right conclusions were important not just for Porzio's reputation as a naturalist, but also because the wrong interpretation risked transforming the Campi Flegrei into the wrong type of landscape. Naples was a restive city often on the edge of outright rebellion. Any predictions that these earthquakes in the region

⁴¹Porzio, *De Conflagratione*.

portended social upheaval in the city, or that pestilence was imminent, were dangerous to say the least.⁴²

Troubling portents were certainly the last thing the Pedro Toledo would have welcomed. "Some ask me anxiously," Porzio stated, "what phenomena are prognosticated by these events. In truth, I hold with the Peripatetics that there is no certain thing in this presage. Even though Cicero attributes much to portents, he also detracts much from them." No amount of persuasion could lead him to adopt the argument of astrologers that internecine wars and rebellion often followed earthquakes. At worst one could expect droughts for natural reasons, and no one should declare the threat of impending plagues. One only had to consider other examples to understand that the eruption was simply a natural process. Vesuvius had erupted in the distant past, and more recently, in 1300, Mount Epomeo on Ischia had set the island aflame.⁴³ The very striking thing is that a little over a century later many Neapolitans would feel very differently than Porzio. The portentous nature of volcanism imagined in the 1600s had to

⁴² See: Nicola Badaloni, "Fermenti di vita intellettuale a Napoli dal 1500 alla metà del 600," in *Il vicereame*, Storia di Napoli (Naples: Società Editrice Storia di Napoli, 1975), 643-689. There was a significant Neapolitan tradition related to reading natural signs as markers of social upheaval and change, often in close conjunction with astrology. This is a very complex topic that touches many of the city's greatest intellectuals, among them Giovanni Battista Della Porta and Tommaso Campanella. In the early part of the sixteenth century Della Porta's teacher Giovanni Abosio da Bagnolo argued that astrology would enable men to predict and avoid future troubles. See: *Joannes Abiosus Regni Neapolis ex Balneolo philosophus ... vaticinans eventus anni MDXIII* (Naples, 1523). Bagnolo predicted, for example, that great cataclysms would occur in 1693 and 1789. On Campanella there is a vast bibliography. A good place to start in English is John M. Headley, *Tommaso Campanella and the Transformation of the World* (Princeton, 1997). On prophecy in the decades that led up to the Masaniello revolt see: Rosario Villari, *La rivolta antispagnola a napoli* (Rome-Bari: Gius. Laterza e Figli, 1967).

⁴³ "Atqui quid haec portendant nonnulli anxie quaerunt ego vero cum Peripateticis dico, nullam praesentionis istius certam esse causam: tametsi Cicero portendis multum tribuat, multum etiam detrahat." Porzio, *De Conflagratione*.

do with Vesuvius' ferocity and the worsening political condition of Naples. This is considered in subsequent chapters.

Porzio chose forceful words as he concluded his letter, shortly after Monte Nuovo's emergence. "Therefore, my Mecoenas, I felt compelled to write this so that fortune tellers, readers of dreams, and vulgar astrologers not seek to explain those things that otherwise occur by virtue of nature," he asserted in a parting shot.⁴⁴

Porzio's naturalistic approach to Monte Nuovo suggests that some had begun to imagine a real connection – a link of fire of sorts – between this new volcanic oddity and ancient Vesuvius. Another awareness resulted from volcanism in the Campi Flegrei caldera. This was a fear that the conflagrations and earthquakes in the region threatened Roman ruins. It was a concern expressed by antiquarians seeking to recover antiquity and enhance the prestige of Naples, working in the decades shortly following Porzio's account.

Guides to the Campi Flegrei

Full-fledged guides to the Campi Flegrei and the antiquities of Naples first appeared in the following decade. They were, first off, considerably more sophisticated than the hurried descriptions stimulated by the eruption of Monte Nuovo. In 1549, the first edition of Benedetto Di Falco's (1480-1550) *Descrittione dei luoghi antichi di Napoli e del suo amenissimo distretto* hit the press, inaugurating what would become a local genre of guidebooks to the classical and natural sites of the area. These books tended to be

⁴⁴ "Haec igitur mihi Mecoenas scribenda duxi; ne Haroli, somniorum interpretes, ac vulgares Astrologi alio trahant, que nature duce proveniunt." Ibid.

small and easily portable, perhaps reflecting their author's hope that they might accompany the erudite traveler through the landscapes they described. Guides of this nature had already been published elsewhere in Italy and Europe, a fact that Di Falco recognized in the first pages of his *Descrittione*. He noted that similar accounts had been written on Marseille, Venice, Milan, and of course, Rome. Why not Naples, which was more deserving? Di Falco was partly inspired by Flavio Biondo's *Italia Illustrata* (1507), a work that had set both the tone and standard when it came to describing the historical sites of prominent Italian cities. No such work had come out of Naples, partly because the Neapolitan printers had weathered a number of crises in the early 1500s, including a complete shut down of their presses between 1526 and 1527. Di Falco betrayed a sense of urgency in his book, stemming from the fact that Naples was behind in this sort of production. The city's history was in his opinion, "day by day plunging into the waves of obscure oblivion."⁴⁵

Di Falco's anxiety about Naples' threatened historical and classical patrimony partly reflected the fact that the *Descrittione* was composed in a difficult period in the political life of the city. The imagined partnership between Naples and Spain was at best always a lopsided thing. Viceroy's were basically supposed to be the guarantors – by threat and incentive – of the city's compliance with Habsburg interests, despite the rhetoric of harmony. Exactly one hundred years before the city's break with Spain in the 1647 Masaniello revolt, the viceroy Pedro Toledo tried to introduce the Spanish Inquisition

⁴⁵ Di Falco, *Descrittione de i luoghi antichi di Napoli*.

into the city. This occasioned a temporary period of serious strife and near rebellion.⁴⁶ Di Falco's frequent reference to the Habsburg emperor Charles V throughout his work reflected his desire to mend the unacceptable rifts that had emerged between Spanish rulers and Neapolitan subjects in these years.

For Di Falco, the splendors of the Campi Flegrei offered one reason to celebrate Naples in this moment of dipping relations with Spain. The notion that the city deserved prestige and respect because of its glorious surroundings – despite its political woes – was truly one of the singular themes to emerge not only in Di Falco's work, but also in Neapolitan efforts to defend the reputation of their city. As the fourth chapter will explain, this became especially important when Neapolitan attitudes toward Spain reached their lowest point in the late 1640s. As this defensive attitude manifested itself a century earlier in the *Descrittione*, it was first a claim to the singular qualities of the Campi Flegrei.

Di Falco consented that there were other beautiful places in the world. He praised the French countryside, the green slopes washed by the Rhine, and the shores of Lake Garda, in northern Italy. All these places lacked the temperance and beauty of Campania. "In part for the bounty and fertility of the soil," he wrote, "in part for the clement and temperate air, what's more that it is divided in plain, mount, and fruit laden hills washed by a tranquil sea, it is clear that Naples enjoys for every reason the most beautiful, useful, and salutiferous place in the world, and this is what we wanted to say."⁴⁷

⁴⁶ The Masaniello episode is considered in the fourth chapter. Rosario Villari has written extensively on religious and social conflict in the Kingdom of Naples leading up to 1647. See: Villari, *La rivolta antispagnola a Napoli*, 33-91.

⁴⁷ Di Falco, *Descrittione de i luoghi antichi di Napol*, 6.

In terms of nature, Naples was superior. When Di Falco imagined the *bel sito* of his city, he had the Campi Flegrei largely in mind. He even ventured that the Habsburg emperor would choose this region as the site of his well-deserved retirement. He also recalled – in no casual allusion – that Roman emperors had come south from Rome in search of health and restoration in the spas of Baia. Why not Charles V? Here Di Falco's rhetoric was meant to repair any damage caused by the suspicion that Naples might be any less than loyal to the Habsburg emperor.

It would be the highest honor, Di Falco proclaimed, to see the emperor at leisure in the caldera. He wrote:

Our Emperor Charles V come to reside in his dear Naples, so that after the many travails of his rule he might rest here and enjoy the delightful places, and might be healthy, and have a long life and be happy. Of what common utility this would be for us and the kingdom that constantly mourns having a patron it does not ever see.⁴⁸

Di Falco knew that there was little likelihood that Charles would ever live out his retirement in the Campi Flegrei, near the restive and troubled city that the author nonetheless claimed to be ever faithful to its sovereign. His words were meant to elevate the status of Naples, and to defend it from the idea that it was somehow not faithful to its Habsburg masters.

Another salient theme in the early modern discourse on the Neapolitan landscape becomes apparent in Di Falco's rhetoric. This was the ever-charged comparison to Rome. Di Falco spoke directly in terms of patriotic pride. "You should know that Pozzuoli is more ancient than any place in Italy. Virgil wrote that Aeneas (whose

⁴⁸ Ibid.

descendants founded Rome hundreds of years later) came to Cuma, which had been built by the Greeks, who had come to Italy and Pozzuoli long before him.” What about Rome? “I therefore conjecture that Naples is more ancient than Rome,” he announced.⁴⁹ Two significant claims were present in these passages, being mutually supportive. Naples came out on top in terms of its natural splendors, and in Di Falco’s eyes it also suffered no inferiority when it came to antiquity.

There are other details about this early guide to the Campi Flegrei worth noting. For one thing, Di Falco systematically dismantled some of the myths constructed by medieval authors like Gervase of Tilbury. Among the most glaring errors from Di Falco’s perspective was the idea that Virgil had somehow been a magus capable of fabricating the wonders of Campania. This, he concluded, was patently ridiculous. He noted that even Petrarch had tried to refute the lie two centuries before, when the humanist was visiting Naples. One of the stories in Gervase’s *Otia*, however, seems to still have enjoyed some credence. This was that the tunnel running under Posillipo was the work of dwarves enchanted by Virgil. In the fourteenth century, King Robert of Anjou had reputedly pressed Petrarch on this very question as the two rode through the lugubrious passage. Di Falco wrote that Petrarch’s reply had been something to this effect: nowhere had he read that Virgil had possessed magical powers, case closed. This humanist logic appealed to the Neapolitan antiquarian. That the tunnel was the product of Roman

⁴⁹ Ibid., 39.

engineering was manifestly evident, declared the *Descrittione*, because of the Roman inscriptions that one could read in its interior with just a little cleaning and a good torch.⁵⁰

Beyond the tunnel, the *Descrittione* catalogued all the antiquities of importance in the Campi Flegrei, setting the standard that would be followed by subsequent guides. Di Falco recalled that Cicero had been fond of calling Pozzuoli a little Rome, and that he had chosen the shore between Lake Averno and the town as the site of his great villa. Here the philosopher had founded his academy to rival that of Hellenic Athens, in a complex famous for its large portico and surrounding groves. Not far away were the remains of the *piscina mirabile*, the Roman water reservoir that in Di Falco's exaggerated vision had once stretched from the tip of the Miseno promontory to lake Avernus. His view of Roman antiquities benefited from the significant uplift of the littoral caused by Monte Nuovo in 1538. One of the ruins that caught his eye was the breakwater of Pozzuoli, the so-called bridge of Caligula. Between Pozzuoli and the opposite shore, "one sees, not without great marvel, great remains of the miraculous dock."⁵¹

These ancient remains, it would seem, demanded greater explanation in the decades that followed. By the 1570s, a number of other authors had written guides to the area.⁵²

Scipione Mazzella was the author of the *Opusculum de Balneis Puteolanum Baiarum et*

⁵⁰ Benedetto Di Falco, *Descrittione dei luoghi antichi di Napoli e del suo amenissimo distretto per Benedetto di Falco Napolitano* (Naples: Mattio Cancer, 1568). Also: Giovanni Summonte, *Historia della Città e Regno di Napoli* (Naples: Antonio Bulifon, 1675), 292. Who exactly had constructed this tunnel was the object of some debate among scholars of the period. In his authoritative history of Naples, Giovanni Summonte concluded that the tunnel had been constructed by the Roman architect Cocceius, in the late Republic, this on the authority of Strabo. He also rejected Virgil's dwarves, noting the Giovanni Villani's medieval *Chronica* was the source of this misinformation.

⁵¹ Ibid., 39-41.

⁵² Besides Di Falco one should note the following authors: Pietro di Stefano, *Descrittione de i luoghi sacri della città di Napoli*, (Naples: Raimondo Amato, 1560); Antonio Sanfelice, *Campania Antonii Sanfelicii Monachi*, (Naples: Matthias Cancer, 1562); Giovanni Tarcagnola, *Del sito et lodi della città di Napoli con una breve historia de gli re suoi*, (Naples: Giovanni Maria Scotto, 1566).

Pithecusarum (1593), an account of the thermal springs around Pozzuoli and the island of Ischia.⁵³ This work did not stray far from the accomplishments of earlier balneologists like Peter of Eboli and Savonarola, but there were other authors who moved more visibly to a different sort of book on the Campi Flegrei.

The most notable example was Ferrante Loffredo (1501-1585), a figure of great prestige, status and power. In the course of a long and illustrious career, the Marquis of Trevico served Charles V in the wars of Italy, Germany, and Hungary. He also took part in the Christian expeditionary raid on Tunis in 1536. Later, he organized the Kingdom of Naples' coastal defenses against Ottoman piracy, and coordinated the defense of its borders when French forces threatened to invade by passing through the Papal States. The southern Italian city of Lecce dedicated an inscription to him on one of its city gates, in honor of his stalwart defense of the Salento coasts from pirate raids. His later years were spent in the royal court of Madrid, where he was selected by Philip II to serve at Don Juan of Austria's side at the battle of Lepanto. When he returned to Naples, he sat on the city's chief fiscal council, the *Sommaria*, and passed to the governorship of the Terra di Otranto, one of the kingdom's provinces. The apex of his career came when he was appointed viceroy of Sicily. The only work he appears to have published was the singularly important guide entitled *Le antichità di Pozzuolo et luoghi convicini* (1573).⁵⁴

⁵³ Scipione Mazzella, *Opusculum de Balneis Puteolanum Baiarum et Pithecusarum* (Naples, 1593).

⁵⁴ Francesca Ammirante, "Il cinquecento," in *Guide e descrizioni di Napoli* (Naples, 1994), 29. In 1675 Antonio Bulifon republished Loffredo's book, the first edition of which dated to 1573; the later reprint is the one consulted here. Loffredo, *Le antichità di Pozzuoli e luoghi convicini del Sig. Ferrante Loffredo Marchese di Trevico, e del Consiglio di Guerra di sua Maestà. Con le descrittioni de Bagni d'Agnano, Pozzuolo, e Tripergole, trascritte dal Vero antichissimo Testo de lo generosissimo Missere Iohanne Villano. Tolte dalle fauci del Tempo dal Signor Pompeo Sarnelli..* Bulifon appended *L'antichità* to his second edition of Giovanni Summonte's *Historia del Regno di Napoli* (Naples, 1675). Summonte's

Ferrante's high rank and prestige in both the Neapolitan and greater Habsburg establishment suggest that the rhetoric on the Campi Flegrei was very well situated. This makes it all the more important that Loffredo established the Campi Flegrei guidebook as a staple of Neapolitan learned culture. Later authors continued to cite his guide to the area, praising its accuracy and erudition, even when Vesuvius became the most compelling part of Naples' landscape. *Le antichità* was even reprinted in 1675 – a century after its first publication – when it was appended to another reprint: Giovanni Summonte's seminal history of Naples, *Historia del Regno di Napoli* (1675).⁵⁵

His work was a descriptive *iter*, a precise guide to each and every marvel in the Campi Flegrei. It did not abandon the vocabulary of wonder employed by medieval authors, for in fact Loffredo applied the word *meraviglia* both to ruins and volcanic sites, though he drew a clear definition between what was of human artifice and what was natural. More importantly, the book surpassed all previous works in terms of precision. Loffredo thought he had a great deal of ignorance to dispel when it came to Roman ruins, like Benedetto Di Falco a bit earlier.

One of the things that really distinguished *Le antichità* was Loffredo's extensive personal exploration of the caldera. Loffredo reassured his readers, however, that his activities in the field were always backed up by exhaustive consultation of ancient sources. He was obviously not a man who took easily to idleness, even if the guide was supposedly composed in a moment of leisure away from the duties of state and warfare.

was a very important work, and his gesture to Loffredo can only be suggestive of *L'antichità*'s enduring significance.

⁵⁵ See footnote 39, above.

By his own account, he relished the vigorous exercise and effort of riding through the Campi Flegrei in the search of ruins and volcanic marvels. He must have cut a striking figure as he explored the caldera.

Loffredo adopted a number of postures and practices surely meant to convince his readers. Some were made apparent in the preface of his book, in a very significant passage. He wrote:

By day I would go riding through the countryside, seeking out all things worthy of consideration and marvel, natural as well as artificial, that are present between the promontories of Posillipo and Miseno, then Cuma along the shore, and up along the hills and the surrounding mounts. Then at night, I would confer with the writings of ancient authors that tell of these places. In a similar fashion I would gather the best recollections of local inhabitants, left to them by their fathers and ancestors. Bunching all these together, even if I found many conformities between what I observed riding and the fame of books, I continued to find some discrepancies and differences, and in numerous matters I was put in great difficulty by the silence of authors, fame lost, the ruins of buildings in complete disrepair, and finally the absence of all things that normally guide conjecture in such matters. I was nevertheless determined to conquer with as much diligence necessary all those inconveniences, revisiting many times these places, examining the inhabitants minutely, and diligently reviewing and considering books, so that no labor remained. Unless I am fooling myself, I worked in such a fashion as to shed all the true light that could be in such darkness.⁵⁶

⁵⁶ “Andavo il dì cavalcando per il paese, particolarmente vedendo tutte le cose di consideratione, e di meraviglia; tanto naturali, come artificiali, che sono dal capo di Pausillipo, insino a Miseno, e quindi a Cuma, lungo il lido, e su per i colli e monti d’intorno: e poi la notte conferendoli con li scritti de’ gli Autori antichi, che ne parlando, e similmente pigliandone quelli rincontri che migliori si poteano da i Paesani per fama, e per memoria lasciata loro da i Padri, e auoli, accozzando tutte queste cose insieme, se ben ritrovai molte conformità di quel che vedea cavalcando, con i libri, e con la fama; nondimeno ritrovai alcune difformità ancora e differenze, e in parecchie cose mi fecero gran difficoltà il silentio de’ Scrittori, la fama perduta, le reliquie di fabbriche di tutto disfatte, e finalmente il mancamento de’ tutti gli aiuti, che sogliono guidare la congettura di simil cose. Pure determinai di vincere, quanto si bastava, con la diligenza tutte quelle incomodità, e rivedere tante volte i luoghi, esaminare sì minutamente i paesani, e diligentemente rivolgere e considerare i libri, che non rimanesse industria da fare. Et travagliai di modo che mi pare di esserne parvenuto, se non m’inganno, a tutta quella vera luce, che si potea in tante oscurità.” Loffredo, *Le antichità*, 2

This is a splendid image of the *curioso* at work in the Campi Flegrei. It is also telling of how Loffredo conceived of his exercise. It entailed a day spent riding through the area, with the great gentleman dismounting from his horse to peer into the Flavian amphitheater locals called the Colosseum, or perhaps pausing to interview a local villager on the precise location of a fumarole, its smell, and the possible risks of approaching it. Then, dusty boots off, there followed an evening of consultation with various ancient authors, much like the evenings Machiavelli described having “spent” in the company of the ancients, the Florentine’s sole consolation during an exile spent among rude and illiterate peasants.⁵⁷

Loffredo’s intention was to recover antiquity in Naples’ backyard by replicating the gestures of the ancients themselves. For one, the frequent references to his discipline and curiosity were meant to recall Pliny the Elder. As the Marquis most certainly knew, the Roman naturalist had spent his best years in assiduous study at his villa on Cape Miseno, not far at all from the noble’s daily cavalcades. It had also been in the pursuit of science that Pliny had died, driven by his insatiable curiosity to the base of a flaming and deadly Vesuvius. One might surmise that this was the type of bold gesture Loffredo appreciated as he stepped gingerly over the hot ground of the Solfatara, careful not to plunge his horse into boiling mud.

⁵⁷ Machiavelli wrote: “When evening comes, I go back home, and go to my study. On the threshold I take off my work clothes, covered in mud and filth, and put on the clothes an ambassador would wear. Decently dressed, I enter the courts of ancient rulers who have long since died. There I am warmly welcomed, and I feed on the only food I find nourishing, and was born to savor. I am not ashamed to talk to them, and to ask them to explain their actions. And they, out of kindness, answer me. Four hours go by without my feeling any anxiety. I forgot every worry. I am no longer frightened of death. I live entirely through them.” “Letter to Vettori, December, 1513,” in Niccolò Machiavelli, *The Prince*, ed. and trans. by David Wootton (Cambridge: Hackett, 1995), 3.

When it came to the quality of his work, Loffredo's claims had an obvious ring of authority. It can be said that studied the Campi Flegrei with more care and interest than any antiquarian before him. *Le antichità* was principally a marker of the genre's emerging characteristics as well as its mounting sophistication. As Loffredo suggested in his introduction, Campi Flegrei guides should delight and inform the reader with lengthy and accurate descriptions. His itinerary moved west from Pozzuoli into the heart of the area, with the first significant stop being the great amphitheater. He noted that this structure had been remarkably well preserved up until the eruption of Monte Nuovo caused portions to collapse. Damaged, but also highly visible, was the dock that protruded from Pozzuoli, a "magnificent work, and well liked for its superb and great construction, and the beautiful architecture of its pilings, with arcs from one to the other, built in great stones well connected." Cicero's villa was not far away, and one was still able to discern the courtyard and the portico.⁵⁸

Loffredo's descriptions were exhaustive. They were filled with digressions into the origin of names, often followed by lengthy refutations of other authors' opinions. Antiquarian that he was, these details mattered. Understandably, he found it particularly difficult to sort through what he felt was a quagmire of superstition and misinformation that had accrued in the long centuries between antiquity and his investigations of the caldera. Local inhabitants were scarcely a reliable source of information, and even his observations in the field had their limits because of the ruins' disrepair. He achieved the greatest clarity in the evening – returning to the image he gave of his daily routine – with

⁵⁸ Ibid., 6-12.

his collection of ancient texts. Even here he found dissonance and uncertainty. On the question of who had built the tunnel between Naples and Pozzuoli, for example, he had to puzzle through the differing accounts of Plutarch and Strabo. He concluded that the latter was more on the mark.⁵⁹

The terrible state of many of the ruins was worsened by the recent increase in volcanic activity in the Campi Flegrei. This must have heightened Loffredo's sense of urgency in getting it right. These sites could be recovered and understood to Naples' glory, but unfortunately nature threatened. It was not just the progressive ravages of time, but the region's volcanic instability that warranted the most concern.

The role that volcanism played in relation to these ruins was a conflicted one, in a few ways. Loffredo reckoned, for example, that the territory suffered earthquakes more than any other part in Italy. These had only increased after the eruption of Monte Nuovo, a fact that did not bode well for the ruins already heavily damaged by that occurrence. The source of the problem, he reasoned, was the subterranean heat that fed all the fumaroles of the Campi Flegrei:

Since [Pozzuoli] is underneath made up entirely of flammable material, and since its fires are already lit, I am convinced that it will always be in this unhappiness, and that there will always be earthquakes, which will not be lessened by the exhalations. In ancient times it must have been the same, and one can observe many places similar to this [Monte Nuovo], which could not have been made in a different manner than through exhalations, among these the Solfatara, the Astroni, and Campiglione. These exhalations have ruined many magnificent buildings, which one can now see destroyed throughout town.⁶⁰

⁵⁹ The sources were Plutarch's life of Lucullus and Strabo's *Geographica*, 4. Loffredo, *L'antichità di Pozzuolo*, 24. Cf. Summone, *Historia del Regno di Napoli*, 292.

⁶⁰ "Et come questo paese di sotto è tutto di materia accomodata ad ardere, già che il suo fuoco vi è tanto acceso, mi persuado, che stara sempre in quest infelicità, e che vi saranno sempre terremoti, i quali non dimeno mancaranno con le essalationi, e in tutti i tempi antichi debbe essere stato il medesimo, e si vedono molti luoghi simili a questo monte, i quali non potevano farsi altrimenti, che per essalationi, fra

Loffredo obviously felt ambivalent. On one hand, the volcanic marvels threatened the artifice of the ancients, since every ruin seemed to be at the mercy of telluric forces that were hard to predict and impossible to control. He was also an old soldier with more than his share of aches and pains, on the other hand. One of the reason he had come to Pozzuoli in the first place was to seek some remedy in its famed hot springs, not unlike the Romans themselves. He was sure that subterranean heat – the very reason they had built so much in the area – was responsible for all the destruction.

Loffredo suspected that much of Naples' patrimony had already been lost, and this left him even more gravely concerned. Four springs had once gushed forth extremely hot water in Naples; no less than thirty-five had done so near Pozzuoli. Around these places the Romans had constructed vast bath complexes like the ones at Baia and the shore of Avernus. They were, however, now in a terrible state of disrepair, and the baths on the lake had been destroyed almost completely. It was in the end an intractable problem, exemplified perhaps by one of the area's best-known wonders, the Solfatara crater. "Here," wrote Loffredo, "among other natural things worthy of consideration one sees that the humors in the water preserve the sulfur, in such a way that though it burns continuously for a long time it cannot be consumed completely. And so the fire burns in its tunnels, and the waters pour from the canals."⁶¹ The infirm could seek remedy as long as the heat persisted, but antiquarians would ever have reason to fear the tremors of the earth.

quali la Solfatara, li Struni, Campiglione. Et queste essalationi hanno rovinato tante fabriche magnifiche, che per lo paese si vedono distrutte." Loffredo, *L'antichità di Pozzuolo*, 15.

⁶¹ Ibid., 3.

Despite Loffredo's anxiety that the Campi Flegrei would consume what was left of its Roman past, the natural surroundings of Pozzuoli were still generally seen in favorable light.⁶² Even Monte Nuovo failed to seriously disrupt visions of a splendid Neapolitan landscape. At the beginning of the seventeenth century another erudite Neapolitan, Giulio Cesare Capaccio, wrote a guide to the area that rivaled Loffredo's in importance, echoing similar themes.

"Nature wished to show herself generous to all places in the world in the distribution of her treasures," Capaccio announced in the opening lines of his guide, entitled *La Vera Antichità di Pozzuolo* (1607). Still echoing medieval wonder writers, he described how marvels came in countless and varied forms: strange beasts, salutiferous plants, extraordinary stones, mysterious springs, even immense tides that made the sea rise and recede. Bold adventurers – Columbus, Vespucci, Magellan, and Cortés – had revealed these wonders to the wider world "in a new way," confirming how "nature herself wishes to make a display of her grandeur."⁶³ Capaccio's gaze, however, was not set out over the Atlantic to distant and exotic lands. It was fixed, rather, on his own immediate proximity.

The caldera did not pale before the wonders of the greater globe:

When [nature] came to Pozzuoli, gathering herself together, she determined to make herself known so great, so courteous, even so prodigious, that generously she opened her bosom to all goods, and girded [Pozzuoli] not only with a playful and delightful

⁶² Loffredo was not the only one to have these concerns. Another local *curioso*, Scipione Mazzella, expressed the same idea in regard to Baia. He did so in the following: *Sito et antichità della città di Pozzuolo, e del suo amenissimo distretto, con la Descrizione di tutti i luoghi notabili...* (Naples: Tarquinio Longo, 1606).

⁶³ Capaccio, *La vera antichità*, preface.

site, with tranquil and bountiful sea, with benign and happy skies, all laughing and festive.⁶⁴

There was a bit of the old and the new in this vision of Campi Flegrei, principally because antiquarians like Capaccio imagined they could recreate for their readers the pleasures – and reputation – their classical ancestors had once derived from this region. They too had marveled at the Solfatara, delighted in the prized oysters that grew in lake Fusaro, and built splendid villas on the seashore.

Something similar to what was occurring at this point in the Campi Flegrei had happened earlier in the overgrown Roman *disabitato*, beginning in the mid fifteenth century. The ruins of ancient Rome lay mostly outside the focal points of the Renaissance papal city: the old basilica of Saint Peter, castle Sant'Angelo, and the various fortresses of local barons like the Orsini and the Colonna. The Roman forum, the Palatine, the basilica of Constantine, and the great thermal complex built by Caracalla, on the other hand, had essentially gone to nature. They were overgrown, nearly organic shapes whose rotting mortar had long composted the soil. These places already attracted the trickle of nobles, churchmen, artists, and humanists that began to return to the city with Martin V, in the 1420s. The gardens that began to emerge around the ruins of ancient Rome took the name of *vigne*. These suburban plots, places of leisure and retreat from the city, were also suggestive places to reflect on antiquity. The birth of the Renaissance in Rome happened partly under these cool grape arbors that protected

⁶⁴ “Ma quando giunse a Pozzuolo, raccogliendo se medesima in se stessa, si determinò farsi conoscere tanto grande, tanto cortese, anzi tanto prodigia, che aprendo largamente il seno di tutti i suoi beni, lasciando ogni altra parte a dietro, l'ornò non solamente di vago, e dilettevol sito; di tranquillo, e copioso mare; di benigno, e allegro Cielo; ma tutta ridente e festevole.” Ibid.

humanists from the Italian noonday sun. Here they gathered in the pleasant shade to read Latin poetry and reenact the customs and rites of Augustan Rome.⁶⁵

A century later, the Campi Flegrei also evoked this sentiment of antiquity recovered in an amenable natural setting – a Neapolitan expression of trends elsewhere in Italy. Capaccio described how Pedro Toledo chose to build his suburban villa near the presumed location of Cicero's. Modern historians have demonstrated that the viceroy had more than leisure and the recovery of antiquity in mind. Controlling Naples was always a problem, and Toledo often had to employ strong-arm tactics to bring the kingdom's restive baronage under control. As recently as 1528, only two decades or so before Toledo, these nobles had nearly handed Naples over to the French. The viceroy was ever conscious of the need to rule his restive city with an iron fist, but at the same time never give the suggestion of tyranny. Investing in the renovation of Campi Flegrei sites was part of an elaborate strategy meant to suggest that his rule came in the best Roman tradition. So, like the consuls and emperors before him, Toledo widened and improved the tunnel that connected Naples to Pozzuoli, allocated funds for the reconstruction of sites damaged in 1538, and invested in a number of other projects.⁶⁶

Most notable in Capaccio's mind was Toledo's garden. He wrote fondly, "worthy of him is the garden that he made near Pozzuoli, where the statues are of incredible beauty, the citrus fruits surpassing of all others in flavor and beauty, and the water so salubrious

⁶⁵ Ingrid D. Rowland, *The Culture of the High Renaissance* (Cambridge: Cambridge University Press, 1998), 9-20.

⁶⁶ Sánchez, *Castilla y Nápoles en el siglo XVI. El virrey Pedro de Toledo. Linaje, Estado y Cultura (1532-1553)*. See also his earlier work: Carlos José Hernando Sánchez, "Poder y cultura en el Renacimiento napolitano: la biblioteca del virrey Pedro de Toledo.," *Cuadernos e Historia Moderna* 9 (1988, 1988): 13-33.

that some Viceroys of the Kingdom customarily have had it brought to Naples in barrels, drinking it as most conducive to human life.”⁶⁷ Capaccio’s praise of the viceroy’s garden reflected the humanist sensibility of nature as ideal when cultivated and agricultural, and at the same time capable of provoking *meraviglia* – combining a sort of Ciceronian *amoenitas* with a sense of wonder and spectacle.

Like Loffredo, Capaccio tramped about the whole area. He sought the tomb of Virgil on Posillipo, visited the ruins of the Flavian Colosseum, which he judged lugubrious and depressing, and explored the tunnel connecting Naples to Pozzuoli. He also went to see the Solfatara crater, where he witnessed a cruel experiment . It involved placing a dog in one of the sulfur gas vents of a fumarole until it fell unconscious. The animal would then be revived by being dropped in a nearby thermal pool, much to the delight of observers. He descended into the Astroni, an ancient depression left by an extinct tuff cone once similar to Monte Nuovo. In the Aragonese period it was the site of royal boar hunts and pageants, and a place particularly attractive to the late Renaissance and early Baroque sense of theatricality. He wrote, “one most pleasant valley lies as an Amphitheatre. There are forests within that contain deer, boar, and birds of all sorts.”⁶⁸

Aristotle had been the first to comment on the noxious nature of fumes emitted by nearby lake Avernus, according to Capaccio. Regarding the condition of Avernus in his day, Capaccio noted that, “the hills around it bear the road to Cuma, were there are many

⁶⁷ “Quivi sotto la rupe, è quella gran Villa di Don Pietro di Toledo, che’l volgo chiama Starza, Villa veramente di Principe, tutta dalla parte del mare cinta di muro. Come degno di lui è il giardino, che fe nel borgo di Pozzuolo, ove le statue sono d’incredibile bellezza, gli agrumi di sapore e di bellezza tutti gli altri sopravanzano, l’acque sono di tanta salubrità, che han costumato alcuni Signori Vicere del Regno farle condurre a Napoli a barrili, e quelle bere come utilissime alla vita humana.” Capaccio, *La vera antichità*, 145.

⁶⁸ Capaccio, *La vera antichità*, 30.

ruins of buildings, that demonstrate with certainty that the area was very well inhabited, on account of the many baths, of which numerous remnants are visible.”⁶⁹ The antiquarian’s references to Aristotle’s own descriptions of the region, supported by evidence that the ancients had built many things in it, set up one of Capaccio’s central claims. As expected, it went to the glory of Naples.

The sum of Capaccio’s investigations was of no little importance. The Campi Flegrei surpassed Rome. Capaccio was explicit about this:

If in some regards the edifices of Pozzuoli contend with those of Rome, in the matter of fires, waters, and marvelous things of nature there is no doubt that they are surpassing. What have I said on the Solfatara that does not rouse wonder in the reader? Or what of he who sees it? ... Seeing now vapors exhale and become the cause that level ground rises in mountains of ash, as was the case in the one that covered Tripergole and lake Lucrino in Pozzuolo, is this not something that surpasses all marvel?”

The last reference was of course to Monte Nuovo, the caldera’s little volcano. The sensibilities that had been developing for decades were central to Capaccio’s admittedly exaggerated declaration of superiority over Rome. Doubtless, even many contemporaries would have agreed that this was an inflated claim. There was nothing strange, however, about humanists trumpeting about the superiority of their city.

Even though much of the rhetoric was self-referential – that is, aimed at a readership of Neapolitan elites and their Spanish lords – it was constructed as a conversation with the outside. Local authors commonly employed the device of a *forastiero*, a foreigner, in their guides. This figure was always a traveler whose imagined questions about antiquities and the like provoked the proud and usually long-winded response from the

⁶⁹ Ibid., 169.

author. Capaccio's immense guide to Naples, written decades after *La vera antichità*, was aptly titled *Il Forastiero* (1630).⁷⁰

This rhetorical strategy should not, however, suggest simply a provincial discourse, with inconsequential ideas. The Dutch engraver Joris Hoefnagel, for example, was sure to visit Naples, likely in the company of the great cartographer Abraham Ortelius. In the 1560s, Hoefnagel became engaged in a project with the authors of the *Civitatis Orbis Terrarum*, Georg Braun and Frans Hogenberg, which involved his providing city views for the book.⁷¹ His stunning Campanian landscapes included the image of Naples discussed in the previous chapter, but also views of Baia and the Solfatara in the caldera. Roughly contemporary to the emergence of the first guides to the Campi Flegrei, Hoefnagel's illustrations were similar in many respects.

Hoefnagel's talents encompassed city views and *naturalia*, so this attention to nature was not at all unusual. In the Prague court of that eclectic collector and patron of natural history, the Habsburg emperor Rudolf II, he drew stunning botanical and entomological illuminations.⁷² The Dutch engraver was extraordinarily accomplished in portraying nature, but he also had marked classical and historical sensibilities. This was evident in the way he kept the Roman poets in mind when he portrayed the Bay of

⁷⁰ Giulio Cesare Capaccio, *Il forastiero* (Naples: Giovanni Roncagliolo, 1630).

⁷¹ Georg and Frans Hogenberg Braun, "Civitates Orbis Terrarum," in *Braun and Hogenberg's The City Maps of Europe: a Selection of Sixteenth-Century Town Plans*, ed. John Goss (London: Studio Editions, 1991, 1615). This modern facsimile contains a useful introduction. See also: John Oliver and J. Richard Judson Hand, William W. Robinson, and Martha Wolf, *The Age of Bruegel: Netherlandish Drawings in the Sixteenth Century* (Cambridge: Cambridge University Press, 1986), 198-202.

⁷² Hendrix Lee and Thea Vignau-Wilberg, *Mira Calligraphiae monumenta: A Sixteenth-Century Calligraphic Manuscript Inscribed by Georg Bocskay and Illuminated by Joris Hoefnagel* (Malibu: The J. Paul Getty Museum, 1992).

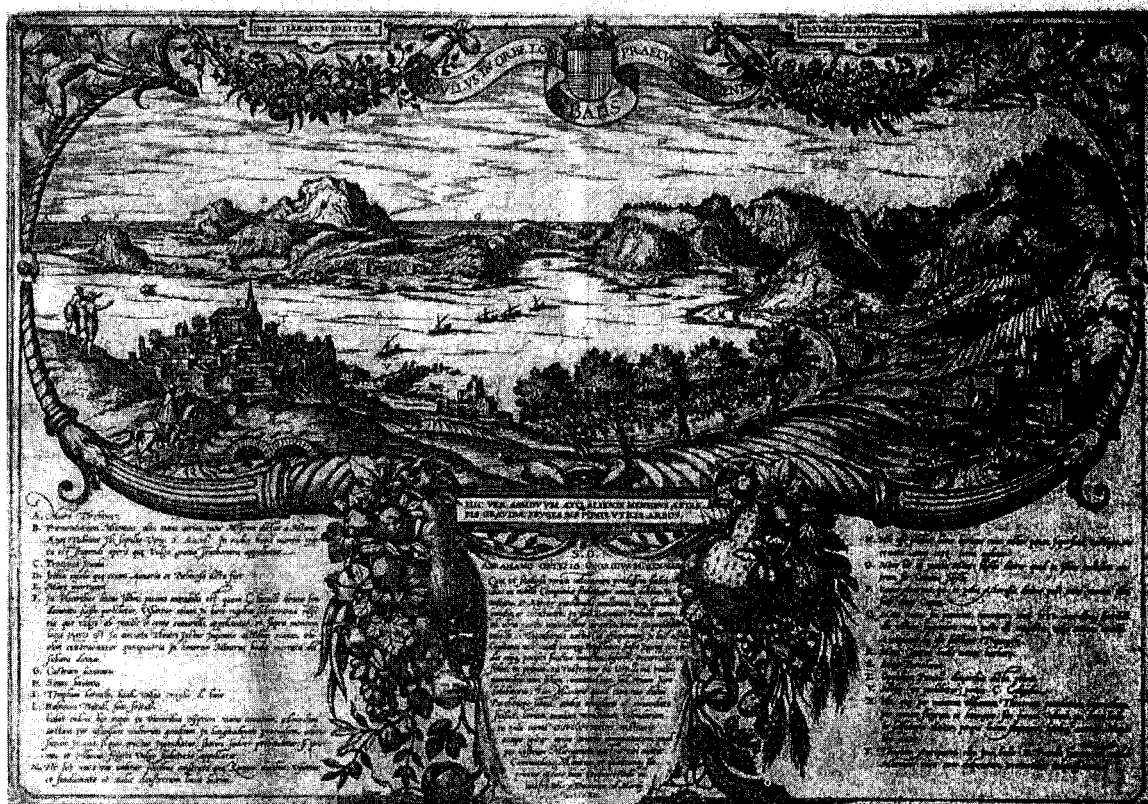


Figure 2.4 Joris Hoefnagel, *Nullus in orbe locus Baiis praelucet amoenis* (1578)

Naples. Horace wrote that no bay on earth outshined lovely Baia and its resplendent natural setting.⁷³ The first century poet had echoed the sensibilities of the Augustan age, during which the region had become a favorite haunt of Roman elites seeking *otium*, the idleness and privacy removed from the bustle of Rome. It was exactly this bucolic vision of the Campi Flegrei that the sixteenth century engraver sought to capture. (Figure 2.4)

Hoefnagel's illustration encompassed all of the most important places in the Campi Flegrei. There was the cave of the Cumaean Sibyl, and beyond this the Solfatara or the *forum Vulcani*, along with mysterious Avernus. Two objects, however, were a

⁷³ Horace, *Epistula*, I.

particularly symbolic pairing. One was of nature and the other man-made: Monte Nuovo, the troubling new arrival of 1538, and the ancient dock that protruded from Pozzuoli. In some way the volcano was responsible for part of the appreciation the Roman ruin received, since a good portion came out of the sea because of the terrain rise. Volcanic marvels and antiquities both inhabited an unstable terrain that seemed to rise and fall at the mercy of subterranean forces. The sea could retreat hundreds of meters nearly overnight. Like the authors of Campi Flegrei guides, Hoefnagel captured this relationship admirably. Volcanism could aid the recovery of antiquity, but it was also capable of erasing the past.

Antiquarians drew a sum of the pros and cons of the Campi Flegrei, in the end. The subterranean fires that were imagined to burn beneath the region heated the waters and cured the infirm. They also created fertility and a garden-like landscape. More importantly, volcanic activity had attracted and fascinated the ancients. Neapolitans were worthy heirs, went the suggestion. It was mostly the splendors that stood out for the duration of the 1500s and the first third of the 1600s. Speaking of Monte Nuovo, Capaccio wrote, “now in the crater in the middle of this mount from which came the smoke one sees the richest gardens, as in the middle of Vesuvius where there is a continual spring of the greenest grass.”⁷⁴ He did not know what hugely powerful natural forces were building gradually deep inside this volcano. They would show themselves on December 16, 1631.

⁷⁴ Capaccio, *La vera antichità*, 163.

Chapter 3

Vesuvius, 1631

Like the ancient paroxysm that devastated Pompeii and Herculaneum in the first century, the later eruption of Vesuvius in 1631 became a historical event. It was recorded in letters, diaries, hurriedly printed pamphlets, scientific treatises, illustrations and paintings, all part of an unrivaled burst of interest in volcanoes. As the previous chapter demonstrated, Neapolitan learned culture began a prolonged meditation on volcanoes and other geological phenomena in the 1530s. Volcanism in the caldera of the Campi Flegrei provoked a number of sixteenth-century scholars to ask why the earth belched fire in certain places and, at the same time, made them concerned that the region's classical sites would be swallowed by the earth or engulfed in flame. The shocking transformation of Vesuvius, however, threatened the obliteration of Naples itself. Accordingly, the city lived the mountain's awakening as a great catastrophe.

The great majority of Neapolitans came to see the volcano as the face of God's mounting anger with their city. Its eruption had three principal lasting effects, each meriting focus. First, it intensified the cult of San Gennaro, patron saint of the city, because his intercession was understood to have spared the population from a terrible fate. Second, the volcano appeared to be reacting to the worsening fortunes of Naples. In the decades that followed, many felt that 1631 was the unfortunate beginning of an ever-worsening cycle of disasters, both natural and man-made. Finally, Vesuvius became

an object of scientific inquiry. Natural philosophers were most concerned with these questions: what were volcanoes exactly, and why did they erupt?

The following is the story of the disaster itself and of the miracle of San Gennaro that was understood to have brought it to an end. A connection had existed between the saint and the volcano since the fifth century, when Naples had weathered one of the mountain's paroxysms thanks to the protection of this celestial intercessor, something that helps explain his centrality again in 1631. Humanists, of course, remembered an even earlier catastrophe, the one that terrified the Roman world. The pagan and early Christian precedents were both recognized, playing an important part in constructing the image of Vesuvius. A few observers made the point of comparing Pliny the Younger's first-century volcano descriptions with their own accounts, imagining themselves as a 'second Pliny' reliving the cataclysm of antiquity, but they and the vast majority found the saint's miracle to be the central part of the story. Overwhelmingly, Neapolitans felt that the eruption was fraught with a religious significance they knew all too well how to decipher.

Most of all, the miracle that saved the city reflected its spiritual condition. Naples was threatened with damnation, but ultimately spared. Chronicle accounts and paintings of the eruption, with the support of secular and ecclesiastical elites that patronized both, conspired to create this particular memory. Besides the dozens of scholars and churchmen who authored chronicles about the eruption, the most prominent painters working in Naples – Domenichino, Battistello Caracciolo, and Ribera – painted the theme of San Gennaro staving off Vesuvius. The saint and volcano became very quickly an

established iconographic pairing represented in the city's most prominent churches and even abroad, with representations commissioned by the Spanish viceroy, among others.

Catastrophe

Observers were shocked by the change in the mountain's nature and what seemed to be its catastrophic transformation from Arcadia to the face of Hell. Two fundamental approaches to the mountain would vie with each other for the rest of the 1600s. In the *Descrittione di tutta Italia*, the sixteenth-century humanist Leandro Alberti remarked that Vesuvius was "fruitful on all sides," and that the mountain's natural fertility made "the earth perform miracles in producing."¹ Alberti summed up the humanist perception of the volcano as a place where nature yielded its bounty easily with little labor, and most importantly without danger. Conversely, the darker image of Vesuvius, the apocalyptic landscape of the sort humanists knew Pliny the Younger had described, seemed scarcely to matter. The volcano's horrors belonged to antiquity, and were of little immediate concern to the representations of the late Renaissance. Even after the considerable surprise and consternation caused by the Campi Flegrei eruption, the first decades of the seventeenth century offered no reason to frame the much larger and far more dangerous Vesuvius as anything but a wonderfully fertile place, where fires had once burned long ago.

We can get a sense of how Vesuvius appeared toward the end of its long slumber partly through the recollections of the most important chronicler of the 1631 eruption,

¹ Leandro Alberti, *Descrittione di tutta Italia* (Venice: Lodovico degli Avanzi, 1568), 180-191.

Giulio Cesare Braccini. Because he climbed the volcano as a young man in 1612, Braccini knew its pleasant side well. He would come to know it differently as an older man. Recalling his first climb twenty years later, he wrote that eruptions had been the furthest thing from his mind. That day, the thrill of climbing in the company of friends and the prospect of a sweeping view of his own city propelled him to the summit without worry. If someone had asked him to speculate about the mountain's nature, he remarked, he would have reminded them that numerous sources recorded its past eruptions, but no more. Never would he have imagined that he would experience its anger in his own lifetime.²

No one could have guessed as much. At least five centuries had passed since Vesuvius had spouted flame, and this was enough time for memory to fade. For Braccini, a glance down into the crater of the dormant volcano was sufficient to satisfy his curiosity and enough to confirm his ideas. As he remembered later, on that occasion he had neither the fancy, nor sufficient daylight for that matter, to descend into the silent volcano's mouth. With him at the top, his friends also declared that dropping into the cavernous opening was apt to be arduous, and little worth the risk of falling. To their knowledge few had tried, as the path down was very steep and covered in a thick forest of trees. The forest was actually an important detail, which Braccini considered in passing: Vesuvius had been silent so long that its very crater was overgrown. He would have known about this aspect of the mountain, however, even before his climb. Weeks before, he had eagerly read a description written by the humanist Stefano Pighio, who had

² G.C. Braccini, *Dell'incendio fattosi nel Vesuvio a XVI di dicembre MDCXXXI e delle sue cause ed effetti* (Naples: Rocagliolo, 1632),

climbed the volcano during the pontificate of Sixtus V, in the late sixteenth century.³

From the rim of the crater, which he described as resembling an amphitheater, Braccini scanned its expanse. Much of what he observed accorded with Pighio's observations. He noted that portions appeared sterile and scorched by past flames, but large sections were covered by dense stands of trees, underbrush and huge stones.⁴

Had he descended, however, Braccini would have been confronted with overwhelming evidence of the passage of the earth's 'humors,' as contemporary natural philosophers liked to explain the heat and fire that came out of certain portions of the earth's surface. On portions of the crater's rim and below, hot vents spouted gas and steam, the result of fumarolic activity produced by the rising magma. He could not have known that they emitted carbon dioxide and sulfur dioxide gas along with water vapor. These were sure signs that the volcano was still alive. Two decades later, Braccini chided himself for not having observed these details. As he sat writing in early 1632, however, he considered himself fortunate that at least a close friend had made the descent into the crater only a few years later, while it was still dormant. Fortunately, his observations were more detailed, and an excellent complement to his own.

Braccini's friend and correspondent was a local *semplicista*, Giovanni Magliocco, who had been on the slopes of the mountain, in 1619. Because he was a doctor and herbalist, Magliocco's principal motivation was the collection of medicinal plants as he ascended the volcano. Climbing from a small town at the volcano's base, he paused to

³ Stephanus Pighius, *Vinandus Campensis. Hercules prodicius seu principis juentutis vita et peregrinatio* (Cologne: 1509).

⁴ Braccini, *Dell'incendio*, 25.

gather his samples in a place commonly called *l'Atrio*. This deeply-cut valley gave Vesuvius its characteristic two-headed shape. It was formed on one side by the crater wall left over from the huge eruption of the first century, and on the other by the cone of Vesuvius proper, built up in the various eruptive cycles of the following fifteen centuries. From the *Atrio*, Magliocco faced a very steep climb up to the peak.⁵

Some of Magliocco's guides had previously explored the crater, so they encouraged him to do the same, guiding the curious *semplicista* to the bottom. Descending, he felt himself to be following a pathway that resembled a great circular staircase that wound its way around the crater, ever deeper. At various points he was forced to squeeze between trees and rocks, crawl, and hug the crater wall. The descent took nearly three hours. By the time Magliocco was at the bottom, it was around one in the afternoon. He remembered that the midday sun helped cut the shadows of this deep place, but immense lava rocks the size of carriages forced him to scramble, not without difficulty. As wind coming from various openings rustled the trees and bushes, Magliocco's curiosity was piqued by the presence of shimmering pools containing various minerals, each of which seemed to manifest different qualities. They were, at a glance, closely reminiscent of the marvels in Pozzuoli. He was familiar with these, possibly through personal experience, and also thanks to the Campi Flegrei guidebooks written by Ferrante Loffredo and Giulio Cesare Capaccio in the previous decades. Magliocco tasted and collected samples, finding some waters very salty, others insipid tasting.⁶

⁵ Ibid., 26.

⁶ Ibid.

These were the observations that the doctor reported to Braccini, as much as twenty years later. The latter queried Magliocco on Vesuvius back in its quiet days, hoping to enrich his own faint recollections with the more detailed notes taken by his friend. Braccini, after all, had come to contemplate Vesuvius seriously only after 1631. It is likely that he consulted his friend at this later point, as he hurriedly wrote his chronicle account.

Upon reflection, these observations confirmed some theories about the nature of the mountain. The cone of Vesuvius had risen through the piling of rocks and ash of each subsequent eruption, Braccini concluded. It was odd, and not a little troubling, however, that this material, once burned and consumed, could combust anew. Powerful subterranean winds were surely the cause, but these had to be hot in order to ignite all the rubble in the crater's base. At this point Braccini's vision resembled that of a giant pyre full of flammable and explosive material. "All marvel ceases," he asserted, "if we believe, as we discuss below, that in all the deepest recesses of the earth there are fires that are never extinguished, and they always launch upward some vestige, some smoke, some vapor, or flicker."⁷ Frankly, he had never considered this in 1612.

Neither had many others, not before dawn of December 16, 1631. Around four in the morning, explosions ripped gigantic cracks in the base of the great cone that formed Vesuvius proper, at about seven hundred meters in altitude on the western side (**Figure 3.1**). Seen from Naples in the dark hours before daybreak, portions of the mountain glowed a terrifying red, then disappeared into darkness again as they were veiled by the

⁷ Ibid., 27

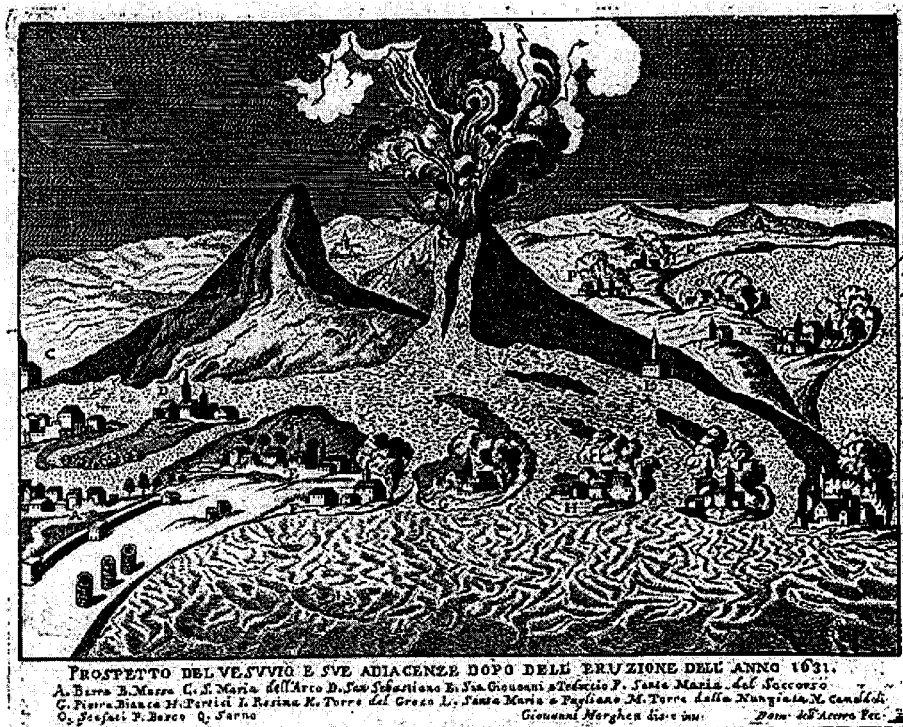


Figure 3.1 Anonymous, *Prospetto del Vesuvio* (1632)

billowing clouds of ash. With daylight, a keen observer would have noticed that the eruption had begun as a tear in the flank of the *Atrio*. Perhaps Magliocco recalled collecting his plants in that valley that now seemed the very mouth of Hell.

In the weeks and days before the eruption, Vesuvius had shown signs of unease, warning the local population of its impending fury. As early as December 10, reports came into Naples of great booms and sighs coming from inside the mountain. “It seemed that Pluto had transferred his reign,” wrote one observer.⁸ Many of the inhabitants of the numerous small towns at the base of the volcano complained that they had not been able

⁸ Nicolo Maria Oliva, *Lettera del Signor Nicolo Maria Oliva scritta all'Illustrissimo Abbate D. Flavio Ruffo. Nella quale la vera e minuta relatione delli Segni, Terremoti, e Incendi del Monte Vessuvio, e cominciando dalli 10 del mese di Dicembre 1631 per infino alli 5 di Gennaro* (Naples: Lazzaro Scorigio, 1632).

to sleep because of the noise and tremors. This conjured up a terrifying image to some: a gathering of demons, come to punish the souls of the damned. “Others,” wrote Braccini, “more dedicated to piety, recalled the stories of Peter Damian, who had written that in that place there was a gate to Hell, and that here were brought the souls of the most inveterate sinners.” Others observed the lowering of wells, and the water’s murkiness. A man who had been to the top of the mountain recently spotted a large bulge in the crater. The most learned would have possibly recalled at this point that Pliny the Younger had written about the frequent earthquakes and similar signs that preceded the eruption of 79 AD.⁹

Another chronicler, Vincenzo Bove, recorded the arrival of a most terrifying dawn, if it could be called such. The glowing volcano, he remembered, “served as aurora for that nefarious sun that was to bring a day darker yet than the blackest night.” After the first round of explosions in the early morning, more followed at nine, noon, and an hour later.¹⁰ Vesuvius, east of the city, always cast a shadow over Naples at dawn, but on that morning the sun was scarcely visible. Even at midday the city appeared to be plunged into darkness. Miles away in Naples, the air felt thick and hard to breathe. By one thirty in the afternoon, a massive eruptive column could be seen rising from gashes in the side of the volcano on the seaward side. Braccini estimated that it reached at least thirty thousand paces into the air and that it resembled a great pine tree, just as Pliny the Younger had described the phenomenon he witnessed. On this matter, a number of

⁹ Braccini, *Dell’incendio fattosi nel Vesuvio*, 28. Pliny the Younger’s account of the phenomena that signaled the eruption is in *Epistulae*, VI, 20.

¹⁰ Vincenzo Bove, *Il Vesuvio Acceso descritto da Vincenzo Bove per l’illustrissimo signore Gio. Battista Valenzuela, Velazquez Primo Regente per la Mesta Cath. nel Conseg. Supremo d’Italia* (Naples: Secondino Roncagliolo, 1632).

contemporaries were in agreement. Giovanni Battista Manso, founder of the Accademia degli Oziosi and an important figure in the culture of Baroque Naples, offered a similar observation in his own eyewitness account.¹¹ The latter felt he was reliving the experience his Roman predecessor, man of letters and science such as he, over fifteen centuries earlier.¹² He was not the only one.

As had been the case with the Romans in antiquity, there were some whose marvel overcame their fear, at least for a while. Curiosity led one observer to the base of the volcano in the early hours, fully in harm's way, to linger at the sight. He fled by sea shortly thereafter, regretting his delay. Others were even more foolhardy. Five men began an ascent at early dawn from the most protected side of the mountain, up the slope and ridge of Somma. On the rim of the semicircular caldera that flanked the cone of Vesuvius proper, they lingered for half an hour, at great risk for their lives. Lava bombs hurtled past them, one nearly descending in their midst and igniting everything around it. One observer remarked that, unlike Pliny the Elder, these foolhardy observers survived despite their curiosity. Equally fortunate was a cowherd camped in the *Atrio* the night of the eruption. Somehow he managed to escape as well, recalling with terror the two great gashes that had opened in the earth before him.¹³

¹¹ Aurelio Musi dedicates a chapter to the Accademia degli Oziosi in the following: Aurelio Musi, *L'Italia dei Viceré. Integrazione e resistenza nel sistema imperiale spagnolo*. (Cava de' Tirreni: Avagliano Editore, 2000), 129-147.

¹² The shape of a pine tree is reported in a number of sources: Braccini, *Dell'incendio*, 29-30; also, Oliva, *Lettera*, 1; and, "Lettera del Signor Giov. Battista Manzo, Marchese di Villa, in materia del Vesuvio," *Archivio Storico per le Provincie Napoletane*, Anno XIV, Fascicolo III e IV (Naples, 1889), lettera I, 489-555.

¹³ Braccini, *Dell'incendio*, 30.

Back in Naples there was mounting fear as the severity of the situation became apparent. Because the eruption was still growing, and the mountain miles off, many people gathered on the balconies and on the rooftops of the tallest buildings simply to stare. The chronicler Braccini was among them. From his balcony, he was able to observe the range of sentiments expressed by Neapolitans in the streets. As the ominous cloud grew immensely, large groups of inhabitants began to panic, while others persevered in their wide-eyed amazement. Later, Braccini proudly counted himself among the few who had calmly assumed a posture of removed scientific interest, neither baffled nor afraid. His *sprezzatura*, or nonchalance, aside, there is no denying his report of hysteria growing in the popular quarters of the city. “The more simple,” he wrote, “ran screaming along the streets.” At some point, the grotesque spectacle offered by Vesuvius, perhaps even more the fearful din of a terrified population, drove him to seek shelter in his palazzo.

Braccini did the only thing he thought reasonable under the circumstances. He retreated into his library, closed the shutters and pulled Pliny’s letters to Tacitus, epistles sixteen and twenty, from the shelf. “Here,” he said to those in his company, “are described one thousand five hundred and fifty years later what, after all, we are witnessing today.” He poured over the texts, noting the great similarities between the paroxysms of Vesuvius then and now. Anxious to compare the height of past and present eruptive clouds, he sent a nimble servant up to the roof to make measurements. From

these data he derived the height of thirty thousand paces – a measurement very similar to Pliny’s estimate.¹⁴

Like Ferrante Loffredo, the sixteenth-century *curioso* who had explored the Campi Flegrei by day and then retreated to his library at night, Braccini confirmed his observations with the authority of the ancients. The younger Pliny, however, had not hidden his terror as he watched the eruption from Cape Miseno. He had been fearful for his own life, but also for that of his illustrious uncle Pliny the Elder who had gone into the maw of the eruption, never to return alive. The Roman described the horrific volcanic crepuscule, scenes of panic, and visions of the world’s end.¹⁵ Ensnared among his books, and comforted by the voices of antiquity, Braccini desperately tried to quiet his own fears in the face of the impending cataclysm.

In the end, Braccini declared himself a “second Pliny” for his scientific observations and Stoic self-control, presumably referring to the uncle in this instance. This was rather an exaggeration, but it’s reasonable that the eruption suggested to him the gestures of both Roman writers, the eminent naturalist and the young nephew who survived.¹⁶ These were important considerations, but as the day of December 16 progressed Braccini could not have escaped the fear suffocating Naples. Nor could he deny the irony that he might suffocate like Pliny. The afternoon had brought no relief, because the sun was scarcely visible and the intensity of the eruption was increasing. The impending darkness brought

¹⁴ Ibid., 31.

¹⁵ Pliny the Younger recorded the eruption in two letters to Tacitus. Pliny the Younger, *Epistularum*, VI, 16; and VI, 20.

¹⁶ Braccini, *Dell’incendio*, 31.

the awful fear that there would be no new dawn. It seemed that the city was in the grips of an apocalypse.

As night fell, the signs from the mountain only continued to suggest the worst. For five hundred years, no event of this magnitude had shaken Vesuvius. In the months that preceded the eruption, subsurface magma had risen buoyantly closer and closer toward the surface, since it was less dense than the surrounding rock. It had permeated through the surrounding volcanic edifice, exploiting and filling fracture systems that included the vertical conduit that led up to the mouth of the cone. As the magma rose, the attendant decrease in pressure increased the release of dissolved gases, building pressure even further. This drove the eruption vertically. When the pressure of the magma surpassed the load of the rock above it, it exploded out the western side of Vesuvius.

What Neapolitans saw on the morning of the sixteenth, and what continued into the night, was the mass of pyroclastic ejecta rising into the atmosphere under the impetus of the explosion. Inside the crater walls, magma came into contact with aquifers. The interaction between molten rock and water added a phreatic component to the eruption, as magma was essentially pulverized when it came into contact with the cooler water. The resulting ash began to cover the city in a spectral gray. Propelled into the upper reaches of the atmosphere, it reached Constantinople in a few days.¹⁷

While Braccini consulted Pliny's letters in the relative safety of his library, and as panic mounted in the streets, the archbishop of Naples undertook a perilous return to his

¹⁷ Antonio Nazzaro, *Il Vesuvio. Storia eruttiva e teorie vulcanologiche* (Naples: Liguori Editore, 2001), 20-32. The most significant eruption before 1631 occurred in 1139; a very minor event occurred in 1500. See: Haraldur Sigurdsson, ed., *Encyclopedia of Volcanoes* (San Diego: Academic Press, 2000).

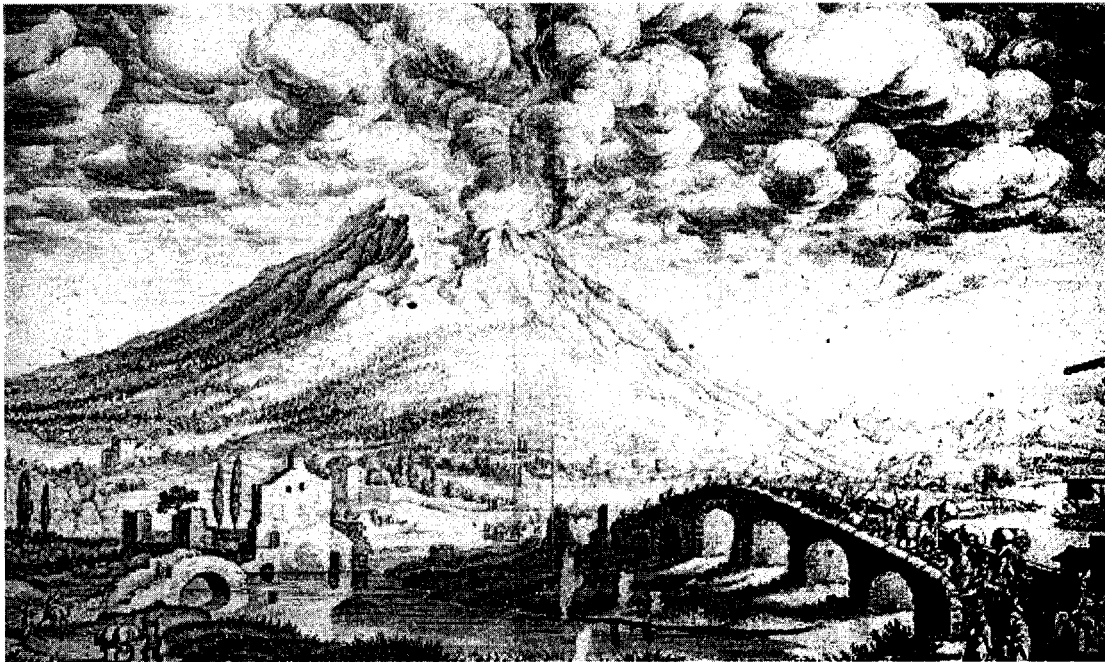


Figure 3.2 Joachim Standaert, *Inhabitants Fleeing over the Maddalena Bridge* (1632)

city. On the evening before the eruption, Cardinal Francesco Buoncompagno had the supreme bad luck of finding himself at Torre del Greco, at the very base of the mountain. He had endured a terrible night, full of ominous sounds that ushered in a dawn of horrors. With day, some of his entourage fled inland toward Salerno, but Buoncompagno and others commandeered an abandoned fishing boat and rowed across the bay, using portions of their own clothing to keep the oars in place. By the time he reached Naples, the archbishop was in the grip of exhaustion and sudden illness, brought on by fatigue and fear. Reportedly, the cries and invocations that surely reached him as he raced for the cathedral strengthened his resolve, reminding him that it was his duty to organize the spiritual defense of the population. He ordered that all the churches in the city immediately expose their most holy relics. Naples could rely on a considerable spiritual

arsenal, foremost the relics of San Gennaro – two phials of the martyr's blood, along with his severed skull. Neapolitans turned their appeals to him, as he had saved Naples from the volcano on past occasions.¹⁸

In the first hours of the eruption, inhabitants from the countryside had begun to stream in through the Porta Nola, entry point from the eastern littoral road that led from Vesuvius (**Figure 3.2**). The city walls offered some physical protection, but the refugees came in droves primarily to be under the aegis of San Gennaro. By late afternoon, more than three hundred thousand anxious people awaited the coming night, as preparations were made for a penitential procession ordered by Cardinal Buoncompagno. The viceroy, Manuel de Guzmán Zuñiga y Fonseca, Count of Monterrey, had his hands full as well.

He and the members of the governing *Collaterale* council were aware that they would face the problem of public order, looting, impending food shortages, and the threat of disease. Heeding the archbishop's appeal, the various ecclesiastical authorities, religious orders, the viceroy and his ministers, the nobility, and a great mass of people began to assemble near the relics of San Gennaro. The saint's skull and the phials of his blood had been hurriedly removed from the *Cappella del Tesoro* in the Duomo, site of their habitual safekeeping. Sometime in the late afternoon, after most of the preparations for an initial procession had been made, the cardinal felt ill and withdrew to his residence. This left the viceroy and his council of ministers to lead the procession. Manso recalled a moment gripped with a sense of tragedy and hope, as Neapolitans

¹⁸ Giulio Cesare Recupito, *De Vesuviano Incendio Nuntius* (Naples: Longhi, 1632), 40-45.

prepared to march, “in tight ranks and late into the night.”¹⁹ Only repentance could help the city endure the *flagellum Dei* visited upon it, and San Gennaro was invoked as the most likely intercessor to stay God’s anger.

San Gennaro’s Miracle

The lengthy passage of time renders the thing novel, and unusual, though knowledge of the aforesaid mountain’s fires is transmitted through tradition even among the most ignorant peoples. It caused every time great ruin, but the city of Naples was always spared through the miracle of San Gennaro protector.²⁰

Some awareness of the volcano’s fierce power resided in collective memory, as Vincenzo Bove suggested. Granted, Bove belonged to that category of humanists, like Manso and Braccini, who could consult ancient sources. Recalling the great classical eruption of Roman times must have given the current event, for all its unexpectedness, an unusual and exciting familiarity. For Braccini, this sort of recognition had been immediate, and he had rushed to read the ancient account by Pliny the Younger as the eruption was underway. But Bove’s assertion that even the most “ignorant people” conserved knowledge of the volcano had a decisively elitist ring to it, meant to distinguish the sophisticated historical knowledge of the humanist with the superstition and excessive emotion of the masses. Was there, however, a more widely shared source of memory than that offered in the works of classical authors? Indeed there was. Bove

¹⁹ “Lettera del Signor Giov. Battista Manzo,” *ASPN*, 503.

²⁰ Vincenzo Bove, *Novissima Relatione dell'Incendio successo nel Monte di Somma a 16 Dicembre 1631 Con un' avviso di quello è successo nell'istesso dì nella Città di Cattaro, nelle parti d'Albania*. (Venice and Naples, 1632).

had to acknowledge that the most simple and unlearned knew that Vesuvius had once ignited.

If the people of Naples could be said to share a common recollection of past volcanic eruptions centuries distant, they came to it through the legends of the city's patron saint. December 1631 was undeniably one of San Gennaro's finest hours, but it was not the first time his miraculous agency had spared the city from fire and ash. The fourth-century bishop of Benevento, saint after his martyrdom in Pozzuoli, had a unique relationship with Vesuvius that had evolved as the result of the volcano's activity in late antiquity. The seventeenth-century event, however, was directly responsible for the enormous diffusion of his image in the decades to come, magnifying it beyond what it had been since the late Roman period.

From the 1630s on, he was represented in paintings, drawings, sculptures, and engravings as celestial protector who stopped the lava and the mountain's threatening cloud. His miracles, it must be noted, had been celebrated on a twice-yearly basis in Naples itself at least since the late fourteenth century: on the date of his martyrdom on September 19, and the date of the first miraculous liquefaction of his blood, May 1. A third occasion, with the appropriate date of December 16, was added to the liturgical calendar in the seventeenth century, though Vesuvius had given Naples occasion to invoke him on numerous times since the fifth century. These past disasters enabled seventeenth-century Neapolitans to gauge their current condition and predicament.

Ever since the Middle Ages, the miracle whereby San Gennaro's congealed blood liquefied (it being contained in two glass phials) occasioned the city's most significant

religious festivals. This miracle of liquefaction, closely scrutinized for how quickly it occurred, was said to portend the fortunes of the coming year. Understandably, it was greeted with tremendous anxiety. Naples' most humble and aristocratic inhabitants alike recognized that the saint's goodwill ensured safety from calamity, social disorder, invasion, plague, and any other number of horrible things. With explosions of passion, Neapolitans would even resort to violently invoking the miracle, threatening the saint.²¹ Ecclesiastical and secular authorities, for their part, feared the consequences of failing to deliver. In the eighteenth-century – when the saint's cult was still very intense – Grand Tour travelers from northern Europe commented negatively on what seemed to be the excessively orchestrated and theatrical aspects of the ritual, but it was undoubtedly one in which all Neapolitans were deeply invested. They certainly sought his intercession desperately in 1631, and exalted him thereafter.²²

San Gennaro was a favored saint among Neapolitans even before Vesuvius' latest episode. Some proof lies in the fact that his hagiography featured prominently in an important work published in the early 1620s. Cesare d'Engenio Caracciolo's *Napoli Sacra* (1624) was a guide similar to the books written on the Campi Flegrei by Benedetto di Falco, Ferrante Loffredo and Giulio Cesare Capaccio in the preceding decades. Its object was not, however, the antiquities and natural marvels of the area, but rather the most significant religious shrines, relics, and cults of Naples and environs. D'Engenio's

²¹ On the tradition of threatening saints, see: Robert Hertz, "Saint Besse: a Study of an Alpine Cult," in Stephen Wilson, ed., *Saints and their Cults* (1983), 55-100.

²² Nino Leone, *La vita quotidiana a Napoli ai tempi di Masaniello* (Naples: Biblioteca Universale Rizzoli, 1994), 244-255. Typical of northern European scorn for the frenzy and emotion surrounding the miracle of liquefaction was one Irishman's definition of the whole thing as a "ludicrous scene." See: Desmond Seward, *Naples: A Travellers' Companion* (New York: Atheneum, 1986), 132.

hagiography of the saint and the sacred places associated with him revealed a cult that was enduring and widely embraced.

The saint's story, as reconstructed by D'Engenio went as follows. Januarius came to Pozzuoli in 305, in order to console the city's Christians, who were suffering under a particularly fierce round of persecutions instigated by the emperor Diocletian. In this time, he was arrested and sentenced to be devoured by lions in the Flavian amphitheater at Pozzuoli. When the wild felines refused to devour him, the Romans resorted to beheading. According to d'Engenio, Januarius' execution was carried out in the wildly suggestive place of the *forum Vulcani*, amid the boiling mud and fumaroles of the Solfatara. The faithful present at his martyrdom gathered his severed head and placed his blood into two glass phials. For much of late antiquity and the centuries that followed his remains were kept outside the city walls, in the catacombs dug into the side of the Capodimonte hill.²³

San Gennaro developed into the protector of Naples largely in proportion to the protection he offered against the volcano. His most spectacular miracles before 1631 were connected to the eruptions of late antiquity, in 472, 512, and 685. As the English hagiographer Alban Butler noted in the 1750s, "the intercession of St. Januarius was implored at Naples on these occasions, and divine mercy so wonderfully interposed in

²³ D. Cesare d'Engenio Caracciolo, *Napoli sacra di D. Cesare d'Engenio Caracciolo, Gentiluomo Napolitano. Ove oltre le vere origini, e fundationi di tutte le Chiese, Monasteri, Cappelle, Spedali, e d'altri luoghi sacri della Città di Napoli, e de'suoi Borghi si tratta di tutti i Corpi, e Relique de' Santi e Beati, che vi si ritrovano, con un brieve compendio delle loro vite, e dell' opere pie, ch'in detti luoghi sacri si fanno.* (Naples: Ottavio Beltrano, 1624).

causing these dreadful evils to cease thereupon, especially in 685.”²⁴ According to d’Engenio, the eruption that first consolidated the saint’s fame occurred in 472. Working from two late antique sources, Procopius and Marcellinus Comes, he confirmed that the local population had fervently prayed for San Gennaro’s help, though they had called upon numerous other saints and holy relics. On this occasion, Vesuvius caused devastating flows of volcanic clasts, mud, and debris – known as *lahar* – that reached outlying portions of the fifth-century city.

Fleeing the devastation, the Christians of late antique Naples repaired to the catacombs of San Gennaro clustered beneath the saint’s tomb, on the slope of the Capodimonte hill, site of early Christian burials and sites of worship. The subsequent association of the saint with the volcano sprang directly from this occurrence. Actually, the saint received credit for protecting not only Naples, but also distant Constantinople and portions of the Greek mainland. The latter, presumably, received much of the ash expelled from Vesuvius, though it also appears that Greece was prey to severe earthquakes that occurred almost contemporaneously.²⁵

Napoli Sacra offers a good sense of San Gennaro’s stature in the 1620s. Although the annual miracles of liquefaction confirmed the saint’s continuing protection of Naples, the connection with Vesuvius had faded during the volcano’s dormant centuries. In 1631, this long-standing link to the saint was reconfirmed. The clergy was largely instrumental in doing this, since ecclesiastical writers went to great length to tie the last miracle with

²⁴ Alban Butler, *The Lives of the Fathers, Martyrs and other Principal Saints* (Dublin, 1759); cited in Seward, *Naples: A Travellers' Companion*, 125-126.

²⁵ D’Engenio Caracciolo, *Napoli Sacra*, 633. On the eruption of 472 see Nazzaro, *Il Vesuvio*, 131.

those of the late Roman period, closer to the saint's martyrdom. The specific references to already established stories became an effective way to control interpretations, most important of all.

Ecclesiastical writers identified 472 as the year of San Gennaro's first miraculous intercession on Naples' behalf. This transformed the eruption of 1631 into an official parallel example, a useful thing considering the religious sentiment that came in the wake of the cataclysm. Most importantly, an official record helped alleviate concerns that the Neapolitan establishment might have. The channeling of popular expressions of piety into the formal cult of San Gennaro was a step toward preventing any potentially troubling interpretations of Vesuvius from gaining currency. The most dangerous suggestion of all that could emerge from the popular mood was that God's anger manifested through Vesuvius targeted the city's bad government – its *malgoverno*. Both the clergy and the city magistrates had reason to be concerned about this subversive idea, which eventually did emerge in the 1640s.²⁶

Firmly establishing the saint's previous intercessions helped transform the most recent eruption into an example of God's habitual anger with the city, but also one of the saint's repeated miraculous intercessions, and most important, of the enduring orthodoxy of Naples. Giulio Cesare Recupito's *De Vesuviano Incendio Nuntius*, published in April of 1632, presented the official Jesuit version of the eruption along these lines. Recupito's reconstruction of the ancient eruption in 472 was identical to d'Engenio Caracciolo's in

²⁶ The notion that potentially dangerous and subversive readings of the eruption were to a large extent 'managed' by cultural and political elites is central to chapter four. For an introduction to these issues as they pertain to the culture of baroque Naples see: Giancarlo Alfano, ed., *Tre catastrofi. Eruzioni, rivolta, e la peste nella poesia del Seicento napoletano* (Naples: Cronopio, 2001), 7-31

Napoli Sacra, as it was based on the same late antique sources, Procopius and Marcellinus Comes. Unlike his predecessor, however, Recupito had to address the recent event, and he did so by explicitly linking the miracle of 472 with that of 1631. In his narrative he noted how one hundred and sixty-seven years after the saint's martyrdom, dated to 305, he performed his first miracle that saved the fifth-century city. Jumping across the centuries, he lauded cardinal Buoncompagno's rapid return to the city and his efforts to organize its spiritual defense around the relics of San Gennaro. For this Jesuit author, the present cardinal's actions replicated those of the early Christian leaders who had gathered the faithful in the saint's catacombs for protection. The devotion and repentance shown by all Neapolitans, for its part, evoked similar parallels with the early Christian community.²⁷

The burst of religious sentiment that accompanied the eruption of Vesuvius sprang from deep-seated fears, since the threat of God's anger with Naples dominated the spiritual lives of its seventeenth-century inhabitants. Their anxiety was distinguished by a profound pessimism regarding the city's future, something that shaped the response to Vesuvius and the attitude toward San Gennaro for decades. The eruption of 1631 only magnified this general pessimism in lasting ways, on the one hand. The seventeenth century was terribly grim, as it was marked by the eruption, the bloody Masaniello revolt of 1647, and the appalling plague of 1656 that took two hundred thousand lives. Natural disaster was a horror added to a long list of grim prospects that always seemed to be on

²⁷ Recupito, *Vesuviano Incendio Nuntius*, 38-45.

the horizon: war, rebellion, Turkish attack, starvation, and disease. In a century of such anxiety, a fiery volcano created fears that persevered and commingled with others.

Fortunately, San Gennaro was ever poised to stay the wrathful hand. The Neapolitan political and religious elites exploited the opposition between the saint's benevolence and the volcano's anger to make sense of calamity, soothing the people's fears and their own. They suggested a correspondence between Neapolitans' contrition, and the intercession of San Gennaro.²⁸ The saint was among the city's most important protectors, and unique in his power over the volcano.

Not surprisingly, Braccini identified a specific connection between this contrition, the miracle of the liquefied blood and the saint's intercession, and the hope that Naples would be spared from the flames of Vesuvius. In his chronicle, he described how the act of exposing the two phials and the saint's skull generally occasioned the miracle of liquefaction. A failed miracle was a terrifying sign, showing to him "that it is not the will of the Lord that we be on that occasion rescued, [that blood] almost frozen without working for us at all, hardened its phials." Liquefaction, on the other hand, was a visible sign of the saint's intercession, favored by God's will, but no indication that Naples did not deserve castigation. When Cardinal Buoncompagno returned to Naples and exposed

²⁸ This is essentially what the Romeo De Maio argues: "Lo storico puo rilevare che il napoletano del Sei e Settecento derivava dalle pratiche della religione piacere, paura, e meraviglia, anziché – come sarebbe stato nella convenienza religiosa – gioia tristezza e riflessione. Ne conseguiva una grande precarietà del sentimento religioso, che si manifestò prevalentemente nell'impazienza a stare al quia quotidiano e nel terrore dell'avvenire. Ne furono conseguenza anche il frequente ricorso alla divinazione e al sortilegio, o alle anime del purgatorio da una parte, e dall'altra la concezione di Dio come vindice implacabile, e dei santi intesi a tenerne la terribile mano saettante. Quando poi accadevano, numerosissime, le calamita cittadine, i predicatori -- perfino quelli illuminati della Congregazione delle Apostoliche Missioni -- tenevano il popolo nella persuasione che neppure i santi avevano potuto placare l'iraconda divinità. Poi, cessata la calamità, si diceva che il merito andava ai santi ch'erano riusciti a riprendere la terrificante mano." See: Romeo De Maio, *Società e vita religiosa a Napoli nell'età moderna (1656-1799)* (Naples: Edizioni Scientifiche Italiane, 1971), 141-142.

the holy relics, the miraculous liquefaction occurred, much to everyone's relief. This demonstrated that God wanted to punish Naples but not destroy it:

In the second instance [of liquefaction] we recognize by this way that God, to placate his ire, and because He does not want the ruin, but the conservation of his beloved people – He does not wish for the death of the sinner, but that he live and be converted to him – works to promise us emendation, and instill in us a spirit of contrition, and devotion, now for love, now for happiness, [so] without any other incentive [the blood] liquefies.²⁹

The progression from fear, to contrition, to the miracle, and finally hope, Braccini argued, was central to grasping the significance of the eruption. Obviously, God was speaking to Naples through Vesuvius. He was doing so, however, to make Naples afraid, aware of its sin, and contrite. “And maybe,” he wrote, “it was for this reason that everyone felt they were in mortal danger, and at the same time there formed a hope that we would be liberated by the Saint, and from this hope faith and devotion grew in everyone.”³⁰

At this point, it is worth resuming the narrative of two very difficult days – December 16 and 17 – when Naples was prey to Vesuvius. By some accounts, San Gennaro was seen hovering over the penitential procession held on the morning of the second day; this was when the great threatening cloud of ash and fire finally appeared to recede from the city. This, at least, was how these dark days appeared to chroniclers like Braccini. They were a long night of despair before the miracle. It was a space of time that changed the face of Vesuvius and magnified the significance of San Gennaro. Over

²⁹ Braccini's prose in this passage is difficult to translate: “Ma nel secondo conoscendo per la sudetta, che per Iddio e per placarsi, e che non vuole la ruina, ma la conservatione del suo diletto popolo: *qui non vult mortem peccatoris, sed ut vivat, et convertatur ad eum*; affaticandosi in promettere per noi emendazione, e in impetrarci spirito di contrizione, e divozione or per amore, ed or per allegrezza senz'altro incentivo si liquefaccia.” Braccini, *Dell'incendio*, 33.

³⁰ Ibid.

the coming decades, the memory of the saint sparing the city would assume a central place in seventeenth-century Neapolitan culture.

As dusk began to fall on December 16, the first procession bearing the saint's sacred relics began to snake its way toward the church of the Madonna del Carmine, near one of the city's eastern gates (Porta Nola) in the direction of Vesuvius. Cardinal Buoncompagno, exhausted by his perilous escape from the base of the mountain, was not present. He would muster his strength on the second day, to lead the climactic ceremony that resulted in the much hoped-for miracle. Many members of the nobility were also initially absent, as a number had been trapped in the surrounding countryside. According to one account, they spent the first night roaming in their carriages, under the volcano's frightful glow. The eruption continued unabated, its intensity increasing greatly in the early evening. As the procession advanced, it encountered the stream of refugees coming from the outlying towns. It trudged on gloomily late into the night. One estimate put the number of people entering the city at forty thousand.³¹

The inhabitants of Vesuvius flocked in like desperate souls fleeing the apocalypse, or so it seemed to contemporary observers. This moment haunted Naples for the duration of the seventeenth century. As the city's first mass catastrophe of the 1600s, it confirmed deep-seated fears about its condition. Many cited the fact that the eruption intensified after the procession of the first evening as proof of how close to the brink Naples had come. The night of the 16th was undoubtedly the worst period before the miracle of San Gennaro. Darkness fell on a day that had scarcely seen the sun, while Vesuvius shook,

³¹ "Lettere del P. Ascanio Capece di Napoli," *ASPN*, 495-501.

burned and roared unabated. The horrors described by refugees were almost beyond imagining. “It seemed to be Judgment Day,” recalled one observer. He continued:

You needed to have a heart of stone to witness such a spectacle. You could see a mother with her child embraced in flight, a son tied to his father so as to be almost united, a brother in his brother’s arms, a husband chained to his wife, heads severed from the bust, arms separated, members dispersed, and in the end a universal massacre.³²

Already on the first day, however, there was a sense that Naples would be spared the worst of the disaster. The scene described above by Nicolò Oliva contrasted the unspeakable scenes of the countryside with a city in the grip of panic, but not devastated. “Death,” Oliva wrote, “roamed the countryside pompous and glorious,” but could not, “with her sickle reach the city.”³³

The notion that Naples enjoyed a measure of immunity was widely shared by chroniclers of the 1631 eruption. That the volcanic disaster came so close to completely obliterating it simply indicated how desperately the city needed to account for its sins. On the other hand, Vesuvius could be credited for sparking a new level of devotion. “You would have thought,” concluded Vincenzo Bove, “that, with those tongues of fire, with that murmur, and booming, the Mountain had announced a glorious triumph of devotion and piety.”³⁴ Sentiments such as these helped cope with the catastrophe, and derive some degree of optimism in the face of contrasting feelings of gloom.

As evening fell on December 16th, the mood was still deeply grim and almost hysterical. Striking the Bay of Naples from a low angle, the last fading rays of light

³² Oliva, *Lettera*, 3.

³³ Ibid.

³⁴ Bove, *Novissima relatione dell’incendio*, 9.

coming from the west pierced the ash-filled air, illuminating the huge eruptive cloud in a strange glow. It was an effect that struck observers as particularly ominous, as they watched the sun set. “Everyone took into account that this would be the final, and eternal night, without any hope of ever seeing the dawn anew,” wrote Braccini.³⁵ Refugees from the devastated hinterland of Naples crowded into the city’s churches, as Cardinal Buoncompagno had called on these to be opened to house the refugees. Priests heard confession, while in the streets flagellants lashed themselves bloody, women tore at their hair, friends and family embraced, and sworn enemies made peace. Franciscans, Dominicans, and the members of other religious orders held vigil throughout the long night, bearing relics and sacred images.³⁶

The next day, December 17, brought new horrors, as Vesuvius entered a second, even more violent phase of its eruption. According to Braccini, the collapse of the cone occurred around the eighth hour of morning. He heard an unimaginable roar and felt an immense tremor. Then he watched in horror as the flanks of the volcano turned to liquid. According to another source, “a huge quantity of water mixed with ash, clay, liquefied bitumen, sulfur and alum, having formed, in the blink of an eye – this is beyond human imagining – into five large torrents, with such fury ... poured down in waves.” Geologists refer to these flows as *lahar*: a liquefied mass of eruptive clasts, ash, mud, and debris that sweeps everything before it. At the base of the volcano, Torre del Greco

³⁵ Braccini, *Dell’incendio*, 38.

³⁶ “Lettere del P. Ascanio Capece,” *ASPN*, 497.

was completely destroyed. Braccini estimated that six thousand people died, while others put the figure at ten thousand.³⁷

These effects were typical of what volcanologists call a Plinian eruption, a highly explosive occurrence comparable to the one of 79 AD. Ejected with great force, light ash and the heated gas rose quickly into the atmosphere, assuming the pine-like shape described by Manso and Braccini. As the eruption progressed on December 17, the large quantities of gas and ash particles ejected into the atmosphere created violent rainstorms. These occurred when water vapor from the volcano and from the atmosphere was nucleated by the fine ash particles to form rain clouds. The deluges of rain upon the volcano slopes, mobilized the ash, clasts, and debris into devastating flows of lahar.

A similar effect had occurred in the Roman eruption, burying Herculaneum in nearly twenty meters of mud. In 1631, the violent release of magma weakened the edifice of the crater, and it collapsed as well. This destroyed the entire cone of Vesuvius, causing the volcano to be lowered an astounding four hundred and fifty meters. Sources before 1631 had described the mountain as *bicipite*: two heads formed by the rim of the caldera from 79 AD, and the cone of Vesuvius that had formed over fifteen centuries. By midmorning,

³⁷ Concerning the time of the collapse see: Braccini, *Dell'incendio*, 39. Regarding the *lahar*: “Per la grande bocca dell’antica voragine, con violenza maggiore, si mise tosto ad uscire; seco insieme traendo, senza le molte grosse, ed infocate pitre, ate a fracassar l’universo tutto, tanta copia d’acqua mischiata di cenere, di rena, e di liquefatto bitume, solfo e allume, che d’essa fattisi in un batter d’occhio, oltre ogni credere umano, cinque ben grossi torrenti, con tanta furia, a veduta etiandio di nò altri che si lontano stavamo, giù del Monte per altrettante, benché contrarie vie, ondegianti calarono.” Gianbernadino Giuliani, *Trattato del Monte Vesuvio* (Naples: Egidio Longo, 1632), 86-97.

the latter was gone, washed and crumbled into the sea, having taken everything before it.³⁸

The second climactic procession carrying the relics of San Gennaro began under a fierce deluge, early on the seventeenth. This time, Cardinal Buoncompagno took charge. The Cardinal led “a great procession of all the religions, carrying the Head and Blood of the glorious San Gennaro, followed by the count of Monterrey, by all the Royal Ministers, and the Lords of Naples, with the infinite People of one, and the other, sex, imploring divine aid.”³⁹ It was slow and grim going at first. The hard rains had turned the ash-strewn streets into a quagmire. The *scirocco*, a strong south-easterly wind that had actually spared Naples more damage by pushing the eruptive plume east, now whipped up flurries that stung the face and made it difficult to breathe.

Finally, the first positive signs met the city’s hopes for a miraculous deliverance. First, the weather began to change. Cracks opened in the dark and menacing clouds. Observers noted that the beams of sunlight provoked huge cheers on the part of the crowd. Then, San Gennaro himself seemed to appear. The saint was in his full bishop’s regalia, poised over Naples. One hand staved off the clouds of fire and ash, the other gestured to the city in an act of benediction.⁴⁰

San Gennaro saving and protecting Naples would become a commonplace in the seventeenth century. During the Masaniello revolt of 1647, that man-made disaster was compared to the flames of Vesuvius, and once again chroniclers described how the saint’s

³⁸ Nazzaro, *Il Vesuvio*, 20-32; also: Paul L. Hancock and Brian J. Skinner, ed., *The Oxford Companion to the Earth* (Oxford: Oxford University Press, 2000), 1088-1092.

³⁹ Antonio Lanelfi, *Incendio del Visuvio del Lanelfi* (Naples: Ottavio Beltrano, 1632).

⁴⁰ The saint’s appearance in this moment of climax was narrated by different sources essentially in the same fashion. See: Bove, *L’incendii del Vesuvio*, 9; Braccini, *Dell’incendio*, 44; Oliva, *Lettera*, 3.

protection saved the city, though they pointed to no single miracle. Even in the eighteenth century, the historian Pietro Giannone (1676-1748) identified the eruption as the first in a chain of calamities – the Masaniello revolt being the second, and the plague of 1656 being the third – that would leave an indelible print on the city's fortunes.

Giannone's *Civil History of the Kingdom of Naples* (published in London) established him one of the most influential figures of the early Italian Enlightenment. Writing as an exile in the 1720s, he noted that the eruption had struck Naples at a particularly bad time, when it was suffering the effects of the Thirty Years' War. The loss of life, property, and cultivation caused by Vesuvius contributed to a general spiral of decline already initiated by heavy taxes, shortages, and the depletion of manpower by Spanish levies. Giannone measured the fiscal and human costs of the eruption, but he found them comparable to others disasters. It was the symbolism of Vesuvius in flames that persevered, he noted, long after Naples had recovered from the physical destruction the volcano inflicted. In good measure, this had to do with the miracle of San Gennaro.⁴¹

The climax reached on December 17 contributed to Naples' story of divine castigation and then miraculous redemption. Giovanni Battista Manso conveyed all the drama of this long-recalled moment in his account, which described, along with his sentiments on Pliny, also his participation in the procession of the seventeenth. His narrative of the miraculous event highlighted his presence as an eyewitness and his

⁴¹ Pietro Giannone, *The Civil History of the Kingdom of Naples* (London, 1729). Giannone's reading of the eruption is not easy to decipher. While he was clearly aware of Vesuvius' importance as a symbol of calamity that went beyond great physical damage it could cause, he may have been skeptical about the miracle of San Gennaro. Romeo De Maio notes that the charge of atheism was among those levied against the historian when he was exiled from Naples. See: Romeo De Maio, *Società e vita religiosa a Napoli nell'età moderna (1656-1799)* (Bari: Laterza, 1983), 154.

important role in the ceremony as a high-ranking noble. In sum, Manso concluded that San Gennaro looked favorably upon Naples' communal display of penitence and sorrow, and worked to placate God's fury as it was being belched out of the mouth of Vesuvius.

A great crowd carried the relics of the saint past one of Naples' eastern gates – Porta Capuana – and probably paused in a large piazza just outside the city walls.⁴² Manso described what happened next, as the huge cloud of ash still loomed over the bay, and the torrential downpours were beginning to wane:

I was the closest to the Cardinal, since he had asked me to find a place where we could best do this, which I did on a high platform, perhaps an arquebus shot from the gate, where the Cardinal, once he had arrived, had the Holy blood drawn from the baldachin and raised before the sight of the fire and cloud, but nothing happened. Then the Cardinal took the glorious blood from the tabernacle in which it was transported, and holding it in his hands raised it toward the fire, making the sign of the most holy Cross. Then that huge unrestrained and very high cloud lowered itself, almost bowing its head to the Holy relic, and right away began to recede.⁴³

Historians are familiar with responses to crisis in a number of Italian cities like Florence and Venice, something that can help put the Neapolitan case into perspective. In general, group crisis rites attempted to stress the ties that bound a community together as a whole. The procession Manso described took a similar form. Here, the response to the eruption

⁴² Porta Capuana was one of the city's principal gates and site of a fortress built by Charles V. This was the location of the *Vicaria*, Naples' court and tribunal, and the city's principal prison. It was an imposing, and feared symbol of authority well into the modern period.

⁴³ "Ero io il più vicino al Cardinale, come m'impose che dovessi andare a riconoscere un luogo ove acconciamente s'havesse potuto ciò fare, il che feci in un alto pogetto, forse un archibugiata lungi dall Porta, dove giunto il Cardinale fe uscire quel sacro sangue di sotto al baldacchino e alzarlo alquanto a vista della nube e dell'incendio, ma non perciò fecero motivo alcuno. All'ora il Cardinale prese il glorioso sangue dal tabernacolo entro cui are portato, e tenendolo nelle mani l'alzò verso il fuoco facendo il segno della santissima Croce. Ecco questa smisurata e altissima nubola incontinente calò la cima quasi chinando il capo alla santa reliqua in un subito si diede dietro." "Lettera del Signor Giov. Battista Manzo," *ASPN*, 503.

was centered on the city's religious icons. The highest civil and ecclesiastical authorities orchestrated the procession as a great display of common faith.⁴⁴

After the fact, Naples' piety and the saint's miracle became the right story to tell about the eruption. Braccini recalled that San Gennaro's apparition and the blood's liquefaction had an immediate effect on the processional crowd and the eruption itself. In Manso's fashion, he described how the fierce cloud appeared to bow and recede, taking an easterly course away from the city. He also reckoned that the earthquakes ceased and the torrents of *lahar* slowed. This change in the nature of the eruption was accompanied by a shift in Naples' mood. From despair, the city passed to cautious hope. For both Braccini and Manso, however, Vesuvius continued to smolder as a reminder that the city's penitence was a long-term matter.⁴⁵ As the closing section of this chapter will demonstrate, this very important notion had a long life. It found, strikingly, a significant place in contemporary painting.

Representations of San Gennaro and Vesuvius in Seventeenth-Century Painting

Between 1656 and 1660, the Neapolitan artist Domenico Gargiulo (1609-1675) finished a painting depicting the eruption of Vesuvius for his patron, Antonio Piscelli. Its primary focus was the procession of December 17 that carried San Gennaro's holy relics outside Porta Capuana – exactly the event Manso and Braccini described with such

⁴⁴ There are numerous studies on civic rituals and crisis responses in Italian cities. See two in particular: Richard Trexler, *Public Life in Renaissance Florence* (Ithaca: 1980); and, Edward Muir, *Civic Ritual in Renaissance Venice* (Princeton: Princeton University Press, 1981). In Italy, earthquakes were a more frequent form of natural disaster than volcanic eruptions; see: Emanuela Guidoboni, "Riti di calamità: terremoti a Ferrara nel 1570-74." *Quaderni Storici* 55 (1984).

⁴⁵ Braccini, *Dell'incendio*, 44.

emotion.⁴⁶ Gargiulo often chronicled important historical events in his paintings, including two paintings of the Masaniello revolt and the 1656 plague.

Some art historians interpret his depictions of the three catastrophes as forming a single thematic set containing a grand narrative of seventeenth-century Neapolitan history. Others have argued that the revolt canvas was completed considerably earlier than the other two. Because of this, and also because it also lacks the element of divine intervention depicted in the renderings of the eruption and the plague, it is possible that the painter never imagined a single unified theme for his three works. There is a general consensus, however, that commemorations of the eruption like Gargiulo's were instrumental in establishing the image of San Gennaro as celestial protector of Naples. Gargiulo's painting was one of the most notable demonstrations of how, decades later, the story Manso and Braccini had told about the eruption was confirmed in visual culture.⁴⁷

The painting told the same story as the chronicles. Gargiulo was well informed of the details of this climactic moment, scarcely omitting anything of importance (**Figure 3.3**). Because the painting was commissioned and completed decades after the event, one

⁴⁶ Domenico Gargiulo, *Eruption of Vesuvius*, oil on canvas, Naples, Carelli Collection (1656-1660).

⁴⁷ For an introductory survey of Neapolitan painting in the 1600s see: Raffaello Causa, "La pittura a Napoli da Caravaggio a Luca Giordano," in *Civiltà del Seicento a Napoli* (Naples: Electa, 1984), 99-114. Gargiulo's historical paintings are the subject of two important essays: Wendy Wassyng Roworth, "The Evolution of History Painting: Masaniello's Revolt and Other Disasters in Seventeenth-Century Naples," *Art Bulletin* 75 (1993); more recently, Christopher R. Marshall, "Causa di Stravaganze: Order and Anarchy in Domenico Gargiulo's Revolt of Masaniello," *The Art Bulletin* 80 (1998): 478-521.. Marshall argues that it is an error to see the three depictions of eruption, revolt, and plague as a narrative set, because archival evidence suggests an earlier completion for the Masaniello painting. Furthermore, he contrasts the negative visions of popular anarchy with the "propriety, unity, and stability displayed by the establishment," visible in Gargiulo's other pictures of contemporary events. It appears that a second painting of the eruption, besides the one commissioned by Antonio Piscelli, once existed. It was sent to Spain and subsequently lost.

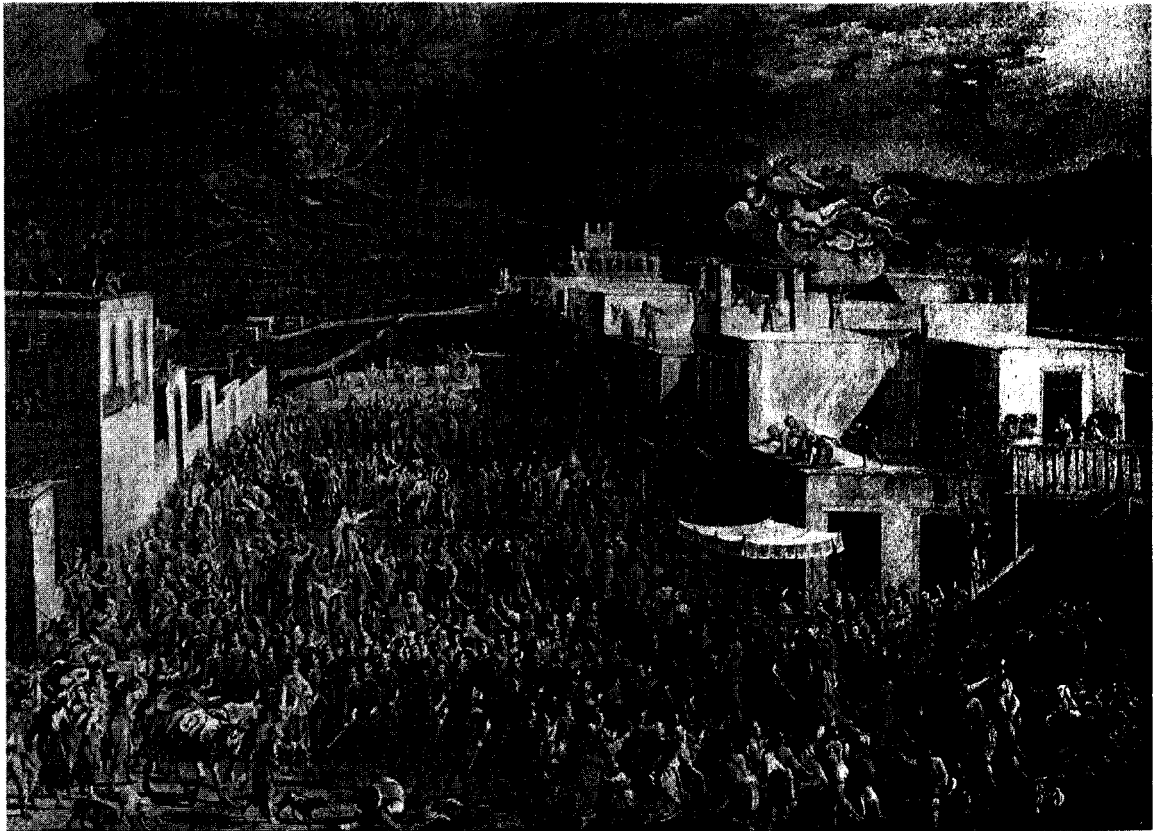


Figure 3.3 Domenico Gargiulo, *The Eruption of Vesuvius* (1656-60)

can only assume that he relied on official published accounts like Braccini's to condense the event into a single commemorative representation. It was the myth of 1631 in visual form. The procession and the throng of people filling the square dominated the perspective of the canvas, as Vesuvius menaced in the background. A long line of people marched in the volcanic crepuscule, lighting their way with torches. The procession formed a rough circle, where the leading elements had completed the motion and were rejoined with those that followed. Exactly at this point, Gargiulo painted the viceroy and the archbishop Buoncompagno, as they marched behind the baldachin bearing the saint's

relics. Floating directly above was San Gennaro, poised straight at the ferocious ash cloud.

One of the painting's most salient features was the contrast between the composure of the city elites, the clergy and the nobility, and the panicked contortions of the ragged masses that flailed about the procession. The *lazzaroni* (Naples' poor) were depicted with outstretched arms, collapsing, fleeing, or scrambling up ladders for a better view. Within and without the circle formed by the procession, they pressed in a frenzy of emotion. The poise of the nobility, clergy, and city officials who had come together as Vesuvius threatened stood in clear contrast to the emotion of the people who touched San Gennaro's with their pleas for mercy.

Gargiulo's painting encapsulated the Neapolitan elite's own sense of itself and its role in that moment of crisis. If the *lazzaroni*'s behavior mirrored nature's apparent delirium, the elite's role in the procession was about order and control. These were themes that chroniclers had stressed from the beginning. Giulio Braccini, for example, made a stark distinction between his own composure, and the fact that "the more simple ran screaming in the streets."⁴⁸ Giovanni Battista Manso, for his part, stressed his personal participation in the procession, noting how the archbishop had relied on him to locate a good place for clergy to expose the relics in the surrounding panic.

Both visual and literary descriptions of the eruption, therefore, worked to emphasize the elite's pivotal role in maintaining order and channeling the pious zeal of the lower classes, while the miracle occurred overhead. As for the miracle itself, the retreat of the

⁴⁸ Braccini, *Dell'incendio*, 31.

ash cloud focalized the set of images that would give San Gennaro life in contemporary art. Gargiulo's rendering depicted the saint flying above the processional crowd. The figure was small, making the saint part of a vast panoramic view, rather than the center of a devotional image. For Gargiulo, the focus was probably the people of Naples, the actors in what he, and obviously his patron, perceived to be a historical drama worth recounting.⁴⁹ His painting was completed two decades after the fact, but other prominent artists working in Naples picked up the theme of San Gennaro protecting the city very shortly after the eruption. Two of the most notable early representations of the saint and Vesuvius were the frescoes of Battistello Caracciolo (1578-1635) and Domenichino (1581-1641).⁵⁰

According to the seventeenth-century critic and biographer of artists Giovanni Bellori, Domenichino witnessed the eruption *al vivo*. The Bolognese artist had only recently arrived in Naples, and had been engaged by a commission to decorate the Cappella del Tesoro (containing San Gennaro's relics) in the Duomo. Between 1631 and 1636, he worked on a fresco that rendered the cataclysm, as part of his larger effort to decorate the chapel treasury. In his *Le vite de' pittori, scultori et architetti moderni* (1672), Bellori wrote that, "there are represented the horrendous effects of the terrible conflagration of Vesuvius and the fear of the people, but also its penitence and confidence in the protection of the Saint."⁵¹ The lurid details in the fresco – including the

⁴⁹ Wassyng Roworth, "Evolution of History Painting," in *Art Bulletin*, 227-230.

⁵⁰ Domenichino, *San Gennaro stops the lava during the eruption of Vesuvius in 1631*, Naples, Duomo, Cappella del Tesoro di San Gennaro (1633). Battistello Caracciolo, *San Gennaro stops the lava during the eruption of Vesuvius in 1631*, Naples, Certosa of San Martino (1633).

⁵¹ Giovanni Bellori, *Le vite de' pittori, scultori et architetti moderni* (Rome, 1672); cited in Di Mauro, "L'eruzione del Vesuvio," *Civiltà del Seicento*, 41.

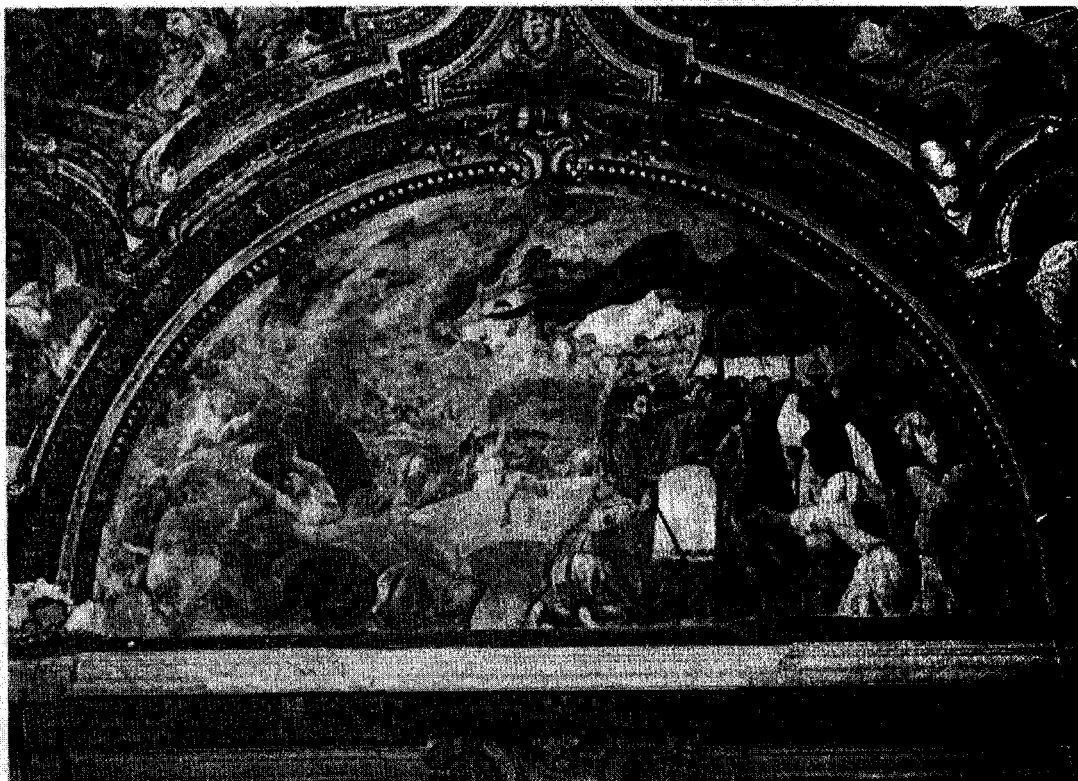


Figure 3.4 Battistello Caracciolo, *San Gennaro Stops the Lava* (1633)

roasted cadavers of a man and a baby – seemed taken right out of contemporary accounts. In the same years, Battistello painted a series of frescoes for the monks of the Carthusian monastery of San Martino, in their chapel of San Gennaro. One of the lunettes portrayed the miracle as a clash between the saint and the flames of Vesuvius (**figure 3.4**). The Neapolitan artist made sure that the two most important human participants in the drama that unfolded on December 17 were recognizable. The viceroy, the Count of Monterey, had his aquiline face turned toward the viewer. Beneath the baldachin, Cardinal Buoncompagno faced the volcano, and next to him were the phials of San Gennaro's blood.

Domenichino and Battistello established an important iconographic element in seventeenth-century Neapolitan painting: the saint aloft over Naples, with Vesuvius erupting. The ‘San Gennaro in the sky’ motif, as it has come to be called, became central to the pictorial representations not only of the eruption, but of the city as a whole. The iconography reinforced the version of events told in the narrative accounts, as I argued above. The saint and the volcano had engaged in a mighty clash above and beyond any possible intervention of Naples itself, while the city below could only pray and supplicate. One art historian has noted that, beyond meditations on disaster, these representations highlighted “the apotheosis of a celestial Hercules, who was San Gennaro.”⁵² Battistello’s version of the saint, in particular, was highly dramatic. He seemed caught in a blast of ferociously hot wind, his vestments trailing behind him. Gargiulo’s saint, painted decades later, was dwarfed by the voluminous expanse of burning ash, but his gestures of control over nature gone wild were identical. Beyond this, the battle between the volcano and San Gennaro assumed the dimensions of an absolute struggle between infernal and celestial forces, between the fires of Hell and salvation.⁵³

For learned observers like Braccini and Manso, there was no denying the fact that the eruption of Vesuvius was partly a natural event they could explain accordingly. The miraculous appearance of San Gennaro, however, could not be explained in relation to natural causes, nor could the comparison between the flames of Vesuvius and the fires of Hell be disregarded. On an important and competing level, the significance of the

⁵² Romeo De Maio, *Pittura e Controriforma a Napoli* (Bari: Laterza, 1983), 193.

⁵³ Alfano, ed., *Tre catastrofi. Eruzioni, rivolta, e la peste nella poesia del Seicento napoletano*, 20-27.

eruption revolved around the celestial drama that had played out between the saint and the threatening ash cloud. As a result, one lasting effect of the mountain's paroxysm was to confirm two interconnected truths. One was that Naples had, in the very least a reminder of its possible damnation smoldering nearby. Conversely, the second was that Naples had a mighty protector high above the city, powerful in his mercy. This too was reflected in paintings of the saint and the city after 1631.

In addition to San Gennaro in the sky, some artists employed the perspective of the city seen from above with the volcano nearby. A canvas by Jusepe Ribera (1591-1652), painted for the Count of Monterrey during his tenure as viceroy of Naples (1631-1637), showed this 'top-down' view of the saint and the volcano (**figure 3.5**). The painting depicted San Gennaro from his vantage point as celestial intercessor. Far below, Naples huddled in the shadow of Vesuvius; the volcano smoldered visibly in the lower right corner.⁵⁴ The *Apotheosis of San Gennaro* was not one of Ribera's most renowned canvases, but it was an important example of this kind of association, not least because it was commissioned by the viceroy only a few years after he had weathered the crisis of 1631. It was a painting addressed directly to the patron. Second only to God and Philip IV of Spain as the highest authority in the Kingdom of Naples, the viceroy had fully embraced the elements of the emerging seventeenth-century story of Vesuvius and the city. The volcano was the castigator, San Gennaro was the protector, and the people of Naples were unified with their secular and ecclesiastical leaders in a common expression of penitence, orthodoxy, and loyalty.

⁵⁴ Jusepe Ribera, *Apotheosis of Saint Januarius* (1635), Convent Church of Las Agustinas Descalzas, Salamanca, Spain.



Figure 3.5 Jusepe Ribera, *Apotheosis of San Gennaro* (1635)

The circumstances around the painting and its commissioning tell something of the resonance of the eruption. The painter Ribera, a Spaniard by birth, had established himself in Naples early in his career. He moved to the city permanently in 1616, after a sojourn in Rome, and established himself as a favored artist of powerful patrons. The viceroys of Naples and Sicily were among them. In 1630, Ribera began a long affiliation with the Count of Monterrey, while the latter was still ambassador to Rome. By 1631 he

was working for the Duke of Alcalá, when the latter was in his last months as viceroy of Naples. His contacts with Alcalá continued even when the duke left for a new post as viceroy of Sicily. In his later years, the artist also served the viceroy Medina de Las Torres, but his greatest patron was, arguably, the Count of Monterrey. Don Manuel de Fonseca y Zúñiga's family had its hereditary lands in Salamanca, and was closely allied with that of Don Gaspar de Guzmán, the future Count Duke Olivares and prime minister of Philip IV.⁵⁵ In the course of their careers, the Count of Monterrey and Olivares offered each other mutual support, as the latter was influential in helping the former gain his diplomatic posts first in Rome and then in Naples. The Count of Monterrey returned the favor, by assisting Olivares in acquiring works of art for Philip IV's new Buen Retiro palace.⁵⁶

The Count of Monterrey commissioned the *Apotheosis of San Gennaro* from Ribera in the mid 1630s, at the peak of his involvement in artistic patronage. Don Manuel de Fonseca y Zúñiga began his diplomatic career in Italy as the Spanish ambassador in Rome, in 1628. By 1631, he had replaced the Duke of Alcalá, as the latter moved on to Sicily. His rule of Naples lasted until 1637, and was characterized by lavish spending on art, building programs, and festivals. His most significant artistic project, which included Ribera's *Apotheosis of San Gennaro*, but also the much more celebrated canvas entitled the *Virgin of the Immaculate Conception*, was not in Naples, but in Spain. This was the

⁵⁵ The relationship between art and power during the reign of Philip the IV, and the careers of the count duke of Olivares and the count of Monterrey are the focus of an admirable study: Jonathan Brown and J.H. Elliot, *A Palace for a King, the Buen Retiro and the Court of Philip IV* (New Haven: Yale University Press, 1980). A good general introduction to the Spanish viceroys in Italy is Aurelio Musi's, *L'Italia dei viceré*, cited above.

⁵⁶ Craig Felton and William B. Jordan, ed., *Jusepe de Ribera: Lo Spagnoletto (1591-1652)* (Fort Worth: Kimbell Art Museum, 1982), 167-175.

church and convent of Las Agustinas Descalzas, in his native Salamanca. Along with Ribera, a number of other artists were involved in the construction of the new church, including the sculptors Cosimo Fanzago and Giuliano Finelli. Fanzago's contract, dated 1636, to make some marble altars for the count included a reference to Ribera's painting of the saint.⁵⁷

From the start, the *Apotheosis of San Gennaro* was intended to hang in the convent of Las Agustinas Descalzas, in what amounted to a family church. The Count of Monterrey's daughter was appointed Mother Superior of the convent in the same years. Basically, the canvas decorated one of the viceroy's most intimately personal sites of patronage, not far from his tomb and that of his wife Donna Lenora de Alba.⁵⁸ The viceroy's nearly seven-year tenure in Naples, and, more important, the fact that the natural disaster was the most dangerous crisis to occur under his rule, both help explain his attachment to San Gennaro. By commissioning the painting from Ribera, he was promoting his connection to the popular saint, but also a particular image of Naples under his tenure. Ultimately, the *Apotheosis* suggests that the viceroy and the artist Ribera participated in constructing the seventeenth-century legend of San Gennaro and Vesuvius. In short, visual representations such as these thus told the same story as contemporary chronicles.

⁵⁷ The contract reads: "El Cav.ro Cosme Fanzago escultor ... se obligó de hazer por servicio de Su Ex.a el Sr. Conde de Monte Rey la ynfrascrita obra: Dos Altares de Colateral de marmol enbutidos por ornamento de un S.to Genaro á propocion del echo por mano de Jusepe Rivera, el qual está en poder su Su Ex.a." Archivo di Stato di Napoli, Notai del Seicento, Andrea Fasano, Scheda 87, Protocollo 13, f. 33v; cited in Alfonso E. Pérez and Nicola Spinosa Sánchez, *Jusepe de Ribera, 1591-1652* (New York: Metropolitan Museum of Art, 1992), 245.

⁵⁸ Felton and Jordan, *Jusepe de Ribera*, 170-175.

The saint and Vesuvius were ultimately positioned at the polarized extremes of a vision that located the city between Heaven and Hell. Considering contemporary Neapolitan literature, one scholar detects a tendency to “polarize the infernal depths and the sky, making of the median point, earth, the location of a struggle between forces beyond it.”⁵⁹ These, it seems, were the extremes inhabited by saint and volcano in Ribera’s work, but Naples’ troubled political climate was a very real thing. Lurking behind the moralizing – and in some way comforting – myth cultivated at the highest levels of power and patronage, there was a deep unease about what the eruption had meant.

⁵⁹ Alfano, Barbato, and Mazzucchi, *Tre Catastrofi*, 25.

Chapter 4

Prodigious Portents and Patriotic Outrage

Gioseffe Mormile's *L'incendii del Monte Vesuvio* (1632) concluded with a moralizing question that Naples' viceroy and cardinal archbishop surely appreciated. Mormile wrote that, "the mountain will smoke for some time ... so that from the sight of these fires, everyone might learn to root out vice and sin, to live well, and heed conscience, for is man's intellect so stubborn that he cannot grasp that the fires of Hell will be minister and castigator of his crimes?"¹ He was encouraged by the fact that Neapolitans might now behave differently because of the volcano smoking nearby. The Count of Monterrey, Cardinal Buoncompagno, and the city's secular and religious authorities largely shared the same sentiments. They had orchestrated the religious procession of December 17 1631, culminating in the miracle of San Gennaro. They subsequently managed the moral and religious implications of a threatening volcano by encouraging the publication of chronicles like Mormile's. These highlighted church and civic officials' role in bringing about the saint's intervention.²

¹ D. Gioseffo Mormile, *L'Incendii del Monte Vesuvio e delle straggi e rovine che ha fatto ne'tempi antichi, e moderni infino a 3 Marzo 1632* (Naples: Egidio Longo, 1632), 27.

² Strict Spanish and ecclesiastical controls on Naples' printers effectively censored anything but accounts that stressed the Count of Monterey and Cardinal Buoncompagno's pivotal roles. See: Giancarlo Alfano, ed., *Tre catastrofi. Eruzioni, rivolta, e la peste nella poesia del Seicento napoletano* (Naples: Cronopio, 2001). Besides the chronicles cited in the previous chapter, of which Braccini's was the most important, there were numerous others that reinforced this version of events. They included: Giacomo Milesio, *Vera relatione del miserabile, e memorando caso successo nella falda della nominatissima Montagna di Somma ...* (Naples: Ottavio Beltramo, 1631); Giovanni Orlandi, *Nuova, e Gompita Relatione del spaventevole incendio del Monte di Somma detto il Vesuvio* (Naples: Lazzaro Scoriggio, 1632); and Antonio Lanelfi, *Incendio del Visuvio del Lanelfi* (Naples: Ottavio Beltramo, 1632).

Despite their efforts, the impression of communal repentance, piety, and loyalty to Spain suggested by the prevailing myth of Vesuvius was not much more than a thin veneer concealing a complex matrix of tensions and conflicts. These would come to a head sixteen years later, in the awful events of the 1647-48 rebellion. In 1649, only months after the revolt, the volcano erupted again. This fostered the belief that it was reacting directly to the dismal and precarious political situation in Naples. It should also be noted that not everyone drew the same lesson from the mountain's apparent reactivity to the state of affairs. Throughout seventeenth-century Europe, it was widely imagined that natural disasters or revolts originated from God's anger. When disaster occurred, however, there were inevitably varying ideas about who bore the brunt of divine retribution. In the case of Naples, there were a number of possible culprits: the brutish masses, their popular leaders, a corrupt clergy and nobility, or the impious viceroy and the bloody Spanish in general.³

Unfortunately, the accounts and representations of the 1631 eruption leave behind little hint as to what the dissenting voices and opinions might have been, though they might have existed. The chronicles that made it past the censors overwhelmingly stressed that Naples had deserved the catastrophe. San Gennaro's protection was correspondingly imagined as having extended to the entire community. One has to look later, when the political situation reached its absolute nadir, for substantial evidence of direct finger pointing. In some rebel circles of the late 1640s, there was an imagined convergence

³ Camillo Tutini and Marino Verde, *Racconto della sollevazione di Napoli accaduta nell'Anno MDCXLVII*, ed. Pietro Messina (Rome: Istituto Storico Italiano per l'Età Moderna e Contemporanea, 1997), XXX-XXXI.

between volcanism, vengeance, and the liberation of the Neapolitan *Patria*.⁴ This, I would argue, was a unique contribution to the rhetoric of revolt in the early modern period.

A number of ideas converged in a very turbulent period. Seventeenth-century Naples was a deeply troubled city, and easily the largest and most volatile concentration of people in all of Italy. No one knew this better than the city's Spanish viceroys, sent to govern a crowded capital and squeeze it for what it was worth. The viceroys scarcely enjoyed the support of the city's powerful nobility, so as a result they constantly curried its favor by conferring significant privileges and advantages, which in turn easily led to corruption and abuses. Both Spanish rulers and urban barons, brought together in this partnership of sorts, contended in turn with a large poor population frequently on the edge of desperation. Between these social extremes there existed an increasingly disgruntled *popolo civile*, a professional non-noble class capable of articulating a radical agenda for reforming civic life. In 1647, these jurists, notaries, lawyers, and civic officials formed a fractious alliance with Naples' dispossessed masses, the *lazzaroni*.

Sixteen years after Vesuvius erupted, Naples was consumed by the Masaniello revolt, arguably the fiercest and most important urban rising of the seventeenth century. This chapter is not a history of this event, which already possesses a substantial historiographical tradition. It aims instead to explain how and why, in the context of this later man-made crisis, Vesuvius' volcanism lent itself to other interpretations besides

⁴ In classical Latin, the word denoted something like "fatherland," "homeland," or "nation." The seventeenth-century Italian word was essentially similar. As this chapter argues, it denoted a Neapolitan concept of nation rooted in continuous history with antiquity, Greek and Roman.

those elaborated in the official chronicles and works of art that enjoyed the patronage of the city's elite. To some – shadowy and controversial figures writing in anonymity and exile after the revolt – the anger of the volcano was aimed directly at Spanish tyranny.⁵

Understanding how and why certain ways of describing volcanic activity paralleled and participated in the discourse of political resistance against Spain necessitates at least some introduction to a very complicated historical situation. Neapolitan attitudes toward Spain were deeply ambivalent, and had been so since the Spanish conquest of southern Italy in 1503. This ambivalence was essentially built into the system of domination, privileges, and legal autonomy leveraged on the Kingdom of Naples and its elites. The sources of both support and resistance sprang directly from the *Regno's* twofold relation to the Spanish imperial system. On one hand, Spain required Naples' subordination to the demands of the crown, especially after the late stages of Philip II's reign at the close of the sixteenth century. This meant political control and the power to extract whatever fiscal, material, and human resources the empire required. On the other hand, Spain guaranteed a high degree of institutional and legal autonomy, much to the benefit of the Neapolitan baronage. Domination and aristocratic consensus are thus the operative terms.⁶

Spanish Italy also included Milan and Lombardy, after 1559. As a complex whole, governance and administration of the peninsula was structured around a backbone of Castilian and local Italian elites. Their imperative was to maintain the territorial integrity

⁵ A good introductory survey of the Masaniello revolt is Aurelio Musi, *La rivolta di Masaniello nella scena politica barocca* (Naples: Guida, 1989).

⁶ Aurelio Musi, *L'Italia dei Viceré. Integrazione e resistenza nel sistema imperiale spagnolo*. (Cava de' Tirreni: Avagliano Editore, 2000), 41-42. See also: Giuseppe Galasso, *Alla periferia dell'Impero. Il Regno di Napoli nel periodo spagnolo (secoli XVI-XVII)* (Turin: Einaudi 1994).

and defense of Spain's Italian possessions. For the Neapolitan baronage and Italian aristocrats in general, integration into the Spanish system often meant campaigning with imperial armies and navies, in the Mediterranean, on the contested borders with the Ottomans, and in the Netherlands. Service for Spain thus guaranteed participation in a system of common interests with the accompanying interchange of favors and influences at home and abroad.⁷

These complex relationships were concentrated in Naples, but so were the tensions. A demographic surge beginning in the late sixteenth century meant that by the first third of the seventeenth century the city had around three hundred thousand inhabitants, many of them destitute poor fleeing an agrarian crisis in the countryside.⁸ Because of its size, monarchical dynastic tradition, and numerous other reasons, it presented a massive challenge to govern. Naples claimed traditional fiscal immunities and possessed a strong tradition of communal government dominated by the nobility. These upper orders were co-opted by the viceroys over the course of the sixteenth century, with varying degrees of success. As the Neapolitan nobility was drawn to the seat of Spanish administration in southern Italy, the viceroys ably pitted an increasingly urban baronage against the professional classes. The latter would in time become the intellectual makers of the

⁷ Musi, *L'Italia dei Viceré*, 43. See also: Rivero Rogriquez, "La fundación del Consejo de Italia: Corte, grupos de poder y periferia (1536-1559), in Juan Martinez Millan, ed., *Instituciones y elites de poder en la Monarquía Hispánica durante el siglo XVI* (Madrid, 1992), 199-221. For a general survey of Italian aristocrats and military service see: Gregory Hanlon, *The Twilight of a Military Tradition: Italian Aristocrats and European Conflicts, 1560-1800* (New York: Holmes and Meyer, 1998).

⁸ For a demographic study of early modern Naples see: Claudia Petraccone, *Napoli dal Cinquecento all'Ottocento: Problemi di storia demografica e sociale* (Naples: Guida, 1975).

Masaniello revolt. As one historian has put it, “it was the only subject city possessing real contractual power with the Spanish Crown.”⁹

By the first third of the seventeenth century, a number of long-term political, social, and economic forces were working to determine the downward slide of Naples and the *Regno*. The tensions that would contribute to the critical juncture in 1647 persisted both in Naples and throughout the greater kingdom. A central feature was the pronounced slippage of wealth and power into the hands of an entrenched landed aristocracy, who were increasingly able to assert their own legal and economic prerogatives over peasants, and at the same time dominate the political life of the capital.¹⁰

During the early period of Spanish domination, the viceroy Pedro Toledo (1532-1553) managed to curb the political power of Naples’ nobility somewhat, but in general the Spanish government acquiesced to the baronage’s long-standing, and still growing, predominance over the kingdom’s rural and urban populations. The alliance between the Neapolitan elite and the kings of Spain was, after all, one of mutual interest, but it worked to worsen the basic social and economic conditions of most of the *Regno*’s inhabitants.

Over the course of the late sixteenth and early seventeenth centuries, Neapolitan landlords expanded their judicial and administrative powers, largely because the cash-strapped Spanish government sold off villages and towns formerly part of the royal demesne. These sales were made to both the native aristocracy and to a growing number

⁹ Musi, *L'Italia dei Viceré*, 62.

¹⁰ Ibid., 68. Wealth, power, and the Neapolitan aristocracy have been studied closely both in the urban and rural context. See: Gérard Delille, *Famille et propriété dans le Royaume de Naples, XVe-XIXe siècle* (Rome: Ecole française de Rome, 1985); also, Gérard Labrot, *Quand l'histoire murmure : villages et campagnes du royaume de Naples (XVIe-XVIIIe siècle)* (Rome: Ecole française de Rome, 1995).

of parvenus Tuscan and Genovese financiers who were interested in consolidating the fortunes they had made in loans to the viceregal government. The Thirty Years' war only intensified these pressures, further complicating the downturn of the southern Italian economy already underway by the 1580s.¹¹

As might be expected, conflict between the orders was most exacerbated in the capital, where the local baronage dominated the city councils. The latter was composed of six *Seggi*, of which only one was representative of the people. It was inevitably outvoted. The masses of Naples had, however, grown dramatically over the course of the late 1500s and 1600s, a demographic explosion partly explainable by the fact that the city's residents were exempt from direct taxation. The fiscal burden, therefore, weighed on merchants, peasants in the countryside, and the city's poorest consumers. Historians generally agree that the Spanish government, by so markedly favoring the nobility, and by increasing fiscal pressures, systematically worked to greatly accentuate already present injustices and inequities.¹²

On July 7, 1647, as the intense summer sun pounded down on Naples' crowded Piazza del Mercato, the poor rose in revolt against the viceroy. The immediate sparks were familiar to every urban uprising: higher prices, taxes, food shortages and overcrowding. The rebels were led initially by Tommaso Aniello – known commonly as Masaniello – a young fish vendor whose short, brutal, and tragic interval of power would

¹¹ John M. Headley, *Tommaso Campanella and the Transformation of the World* (Princeton, 1997), 1-13. See also, Antonio Calabria, *The Cost of Empire: The Finances of the Kingdom of Naples in the Time of Spanish Rule* (Cambridge: Cambridge University Press, 1991), 130-132.

¹² Headley, *Tommaso Campanella*, 12-13. Cf. Tommaso Astarita, *The Continuity of Feudal Power: The Caracciolo di Brienza in Spanish Naples* (Cambridge: Cambridge University Press, 1992).; also Rosario Villari, *La rivolta antispagnola a Napoli: Le origini 1585-1647* (Rome-Bari: Gius. Laterza e Figli, 1967).

make him a figure of renown all over Europe. As rumors spread that a new tax was to be levied on fruit, a city official was spotted in the market inspecting a pile of melons. The various varieties of peaches, apricots, figs, and melons grown around the Bay of Naples were rarely lacking. They were also one of the few delights in the otherwise stark gastronomic world of the poor, and a general object of city pride.¹³ On this occasion, they responded with unprecedented ferocity to its impending scarcity and high pricing.

In the fracas that followed in Piazza del Mercato, stands were tipped over, fruit smashed, and weapons drawn. Elsewhere, or on another occasion, this might have remained a typical rising of the hungry and dispossessed, suppressed with the usual violence and exemplary execution of those responsible. Rebellions of this sort had erupted in Naples back in 1547 and, more significantly, in 1585. On both occasions, they had not amounted to much beyond the brutal lynching of city officials, as was the case when the mob tore apart and cannibalized the body of Vincenzo Starace in the latter of these rising.¹⁴ In 1647, however, popular rebellion assumed far greater proportions.

The Masaniello revolt was atypical in some very important respects. There was its obvious magnitude and initial violence, first of all. In the initial frenzy of arms, the Neapolitan mob expelled the viceroy, the Duke of Arcos, and temporarily confined the Spanish to one quarter of the city. Second, and more importantly, the rebellion quickly

¹³ This Neapolitan claim to have the best fruit in the world persists today. It was, and is, I believe, a long-standing and deeply seated source of urban identity. This is possibly because the richness of fruit – its taste, its abundance, and all the associated metaphors – contrasts with the city's pronounced poverty, even now.

¹⁴ Vincenzo Starace was the *eletto del popolo*, representative of the popular assembly in the city's government. Rosario Villari makes much of his lynching in his seminal study on the background to the Masaniello revolt: *La rivolta anti-Spagnola a Napoli. Le origini, 1585-1647* (Bari: Laterza, 1967). See also: Perez Zagorin, *Rebels and rulers, 1500-1660* (New York: Cambridge University Press, 1982).

became an alliance between the *lazzaroni* and Naples' non-noble urban elites, the *popolo civile*, which included a core of disgruntled (and underpaid) lawyers and lesser officials who helped the rebels articulate the ideological substance of the revolt. This troubled union resulted in the revolt's most remarkable feature of all, the attempted creation of an independent republic.¹⁵

The ideological architects of the short-lived experiment came to the realization that they were compelled to seek French support, marking a historic attempt to break definitively with Spain.¹⁶ Largely inspired by the Venetian model, rebel leaders offered supreme command of the republic's military forces to the French Duc de Guise, in a move meant to equate their new protector's powers with those of the Venetian Doges. Guise accepted, motivated by personal ambition and the possibility of finally restoring the Angevin claim to Naples. The result was ultimately a catastrophic failure for the rebels. By April 1648 – after considerable resistance, nonetheless – the Spanish controlled the city and undertook a brutal repression. Punishment was exemplary and merciless, since the rebellion had in some measure shocked all the monarchs of the continent for its intensity and initial success. One of the largest and most sophisticated cities in Europe had, however briefly, seriously challenged the might of Spain.¹⁷

¹⁵ Anthony Pagden, *Spanish Imperialism and the Political Imagination: Studies In European and Spanish-American Social and Political Theory 1513-1830* (New Haven: Yale University Press, 1990), 65-68.

¹⁶ This historic rupture, during which the rebels articulated an ideology of republicanism and independence from Spain, took shape as the rebels progressed from imagining themselves as Naples' 'most faithful' servants of the Spanish crown making their grievances heard, to the agents of a new republic on the Venetian model. See: Rosario Villari, *Per il re o per la patria. La fedeltà nel Seicento* (Bari: Laterza, 1994).

¹⁷ Pagden, *Spanish Imperialism and the Political Imagination*, 67.

The Kingdom of Naples' changing role in the Spanish imperial system, from strategic Mediterranean bulwark to overtaxed periphery, was already a pronounced fact in 1631, but it would not reach its most critical moment until sixteen years later. The year 1647 was one of acute conflict, and the suppression of resistance that followed marked a definitive moment in the history of Baroque Naples. Tensions that had been building at least since the 1590s – witness Tommaso Campanella's abortive attempt to initiate a rebellion in Calabria in 1599 – had largely played themselves out by the middle of the seventeenth century. The avenues for serious reform in the city and the kingdom led basically nowhere.

The volcano's first explosive activity in centuries coincided very closely with the most turbulent moment of the 1600s, a fact that did not pass unobserved. This chapter picks up the story after both natural and man-made catastrophes had unfolded, at a moment of extreme pessimism. In 1631, Neapolitan secular and ecclesiastical authorities had been able to manage the meaning of volcanism to their ends. Strict control of the printing industry, as well as major artistic projects that celebrated San Gennaro's protection of a repentant Naples, worked a good measure of control over the disaster.¹⁸

At the close of the 1640s, however, failed ambitions, resentments, *and* the volcano smoldered in ways that had been only distantly conceivable at the moment of Vesuvius' first seventeenth-century paroxysm. A number of disturbing things appeared to coincide in the Neapolitan imagination, especially in the calamitous picture created

¹⁸ Strict control on the part of both Spanish and ecclesiastical authorities made Naples's printing industry one of the most tightly regulated in Italy. This had been the case at least since the 1540s. Decrees and rulings against the city's printers were carefully collected. They show that many of the latter occasionally flirted with heavy penalties and jail time. This included Costantino Vitale, who printed books by Della Porta, Imperato, and Capaccio; see: BNN Ms I Aa11.

retrospectively: the fact that the rebellion had occurred less than twenty years after the eruption, but more importantly that another eruption occurred just after the Masaniello rising had been suppressed. Something had to be deeply wrong for the volcano to erupt again so soon.¹⁹

The eruption in 1649, following the bloodbath of the rebellion, thus came as an extremely important sign. From the perspective of the rebels, it was an indication that the struggle against Spain would continue despite initial failure. Especially in this instance, Vesuvius' intensified volcanic cycle figured in a broader debate where claims to Neapolitan nationhood, autonomy, and resistance to tyranny continued to be expressed despite crushing repression.

Tantalizing evidence of this comes from an unusual manuscript pamphlet that circulated in the months after the revolt, in a few copies that were possibly passed around rebel circles exiled in Rome. It was highly distinct in the way the author made use of Vesuvius, but it was at the same time part of an existing rhetoric. This had grown as Neapolitan rebels passed from simply resisting an unjust fiscal burden to articulating a sense of independence and of belonging to an ancient nation – a *patria* as they called it. This chapter will consider the development of these ideas in the decades preceding the rising, and also note the shape they took in proclamations printed in Naples at the height of the revolt. It will also consider how the same themes were echoed in the seditious and politically charged description of Vesuvius' 1649 eruption.

¹⁹ As was also discussed in the previous chapter, the connections between the eruption of 1631 and the revolt of 1647 became commonplace by the late 1600s. Domenico Gargiulo's paintings of the eruption, the revolt, and the plague of 1656 can be interpreted, for example, as representing the city's calamitous seventeenth-century history.

The pamphlet in question was entitled *Prodigiosi portenti del monte Vesuvio*.²⁰ Its author was Camillo Tutini, a figure very closely associated with the rebels of 1647. Tutini was primarily a jurist, historian, and antiquarian who authored numerous treatises on Naples' institutions, history, religious cults, and antiquities. He was undoubtedly one of the ideological architects of the Masaniello revolt, and one of its most vociferous defenders after it was crushed. The inflammatory piece he composed anonymously shortly after he had fled the city, passing copies among sympathizers, is compelling evidence of how volcanism figured in the rebel imaginary. Since the author's life paralleled the fortunes of the anti-Spanish movement in Naples, his attitudes toward the volcano are all the more revealing.²¹

Tutini made a name for himself in the early 1640s as a forceful proponent of reforming the city's fiscal and governing institutions, which he found to be disproportionately tilted in favor of the nobility. He later took a prominent role in the Masaniello revolt, largely as an advisor to one of the republican leaders, Vincenzo D'Andrea. In the spring of 1648, after having first fallen out with his fellow rebels, and then hounded by Spanish agents, he barely made it out of Naples alive. For the remainder of his life, he scratched out a miserable and tenuous existence as an exile in Rome, where he nonetheless continued to write profusely. Lucky enough to find protection in certain Roman ecclesiastical circles, he remained a dedicated enemy of Spanish rule and one of the most articulate members of the Neapolitan intelligentsia who

²⁰ BNN Manoscritti Brancacciani V F 3, carteggio167

²¹ E.M. Martini, *La vita e opere di Camillo Tutini*, vol. LIII, Archivio Storico per le Provincie Napoletane (Naples, 1928).

had dreamed that the anti-fiscal revolt of 1647 would lead to the autonomy of Naples.²²

Tutini's most notable work on the events of 1647-1648 was his *Racconto della sollevazione di Napoli*, a lengthy chronicle based on an earlier manuscript by another author and fellow rebel, Marino Verde. Tutini subsequently picked it up, edited it, rewrote large portions, and circulated numerous unedited copies. This reckoning of the revolt was a day-by-day account of six months in which the anti-fiscal popular rising developed into a movement for the autonomy and independence. His chronicle highlighted the volatility and unbridled ferocity of the Neapolitan mob with a mixture of revulsion and fascination. Tutini felt strongly that the revolt was at its core a justified expression of popular rage caused by the staggering fiscal pressures exerted by the Spanish monarchy on the city, but this secular causation cohabited with his sense that the violence was also God's punishment. Like many of the rebels, these sentiments matured and evolved into the desire to make a complete break with Spain.²³

What the *Prodigiosi portenti* shared with Tutini's other works, and more generally with the propaganda of the most dedicated rebel faction, was the sense that a rupture with Spain was necessary and, furthermore, that Naples had the full right to claim independence. What was unique about it, however, was the fact he used Vesuvius to make his point. The pamphlet was a singular example of how political ideologies that matured at the critical juncture of the late 1640s could appropriate images of volcanism to express a sense of outraged Neapolitan nationhood.

²² Walter Pinto, *Racconti di opere e racconti di uomini. La storiografia artistica a Napoli tra periegesi e biografia 1685-1700*. (Naples: Paparo Edizioni, 1997), 117-120.

²³ Camillo Tutini and Marino Verde, *Racconto della sollevazione di Napoli accaduta nell'anno MDCXLVII*, ed. Pietro Messina (Rome: Istituto storico italiano per l'età moderna e contemporanea, 1997)

Before exploring the significance of Tutini and his inflammatory vision of Vesuvius, it is necessary to understand the intellectual context in which he wrote. This involves considering the development of first reformist and then more radical political circles in Naples in the early seventeenth century, and finally how the 1647 rebels got to the point of formulating their ideology of a Neapolitan *patria* free of Habsburg control. The initial section that follows below attempts to develop this background.

Intellectual Background: Moving Toward Rupture with Spain

The radical vision of an independent and republican Naples that motivated the more ardent intellectual leaders of 1647 only developed slowly in the early decades of the seventeenth century, as the Kingdom of Naples passed through an important cultural and political phase. The establishment in 1611 of the Accademia degli Oziosi was one important step in the evolution of these later ideas. The Oziosi came together with the support of the viceroy, the Count of Lemos, in a moment of unusual consensus between the Spanish and the Neapolitan aristocratic and cultural establishment. Lemos, however, is also widely remembered for his failed attempts to reform the finances of the kingdom in the first decade of the seventeenth century, causing one historian to note that this period was one “of reformist illusions in the political and cultural life of Naples.”²⁴

²⁴ Girolamo de Miranda, *Una quiete operosa. Forma e pratiche dell'Accademia Napoletana degli Oziosi, 1611-1645* (Napoli: Fridericiana Editrice Universitaria, 2000), 41. On Lemos see: Giuseppe Galasso, "Le riforme del conte di Lemos e le finanze napoletane nella prima metà del Seicento," in *Mezzogiorno medievale e moderno* (Turin: Einaudi, 1965). Some historians have stressed the close connection between the early Oziosi literati and the viceroy's court, suggesting that the society was an important place of contact between Spaniards and Neapolitan elites. See: O.H. Green, "The Literary Court of the Conde de Lemos at Naples, 1610-1616," *Hispanic Review* I (1933, 1933): 292-296.

The Oziosi were presided over by the Marquis of Villa, who was none other than the 1631 eruption eyewitness Giovanni Battista Manso. This influential and powerful figure would give this academic society its stamp until his death in 1645. Beyond prominent nobles like Manso, however, the intellectual circle of the Oziosi also embraced Naples' most important cultural figures, like the father and son Della Porta naturalists, the architect and astronomer Nicolò Antonio Stelliola (who figures in the last chapter), as well as the poet and dramatist Giovanni Battista Marino.²⁵

The Oziosi, or “leisured ones,” were anything but political radicals. Its members were either influential barons or literati closely connected to the viceroy's court. Because of its “complementary function with respect to the civic and religious power,” the society tended to promote a vision where the nobility and the *popolo civile* were harmoniously cooperative.²⁶ Thus, even at its most inclusive extreme, the Oziosi vision at best suggested a favorable dialectic and alliance between the nobility and the professional and cultural class tied to the viceroy's administration.²⁷

It was largely thanks to some of the society's members, however, that the idea of an ancient republican Naples enjoying a privileged relationship with Rome took shape. This would have political repercussions, despite an outwardly conservative posture taken by the academic society. The Oziosi's motto of *non pigra quies*, a “quiet labor,” was meant to suggest a cultural space where establishment figures could pursue philosophy, historical studies, and poetry. The concept rested on the classical notion of *otium* – the

²⁵ Vittorio Ivo Comparato, “Società civile e società letteraria nel primo Seicento: l'accademia degli Oziosi,” *Quaderni Storici* 23 (1973), 360.

²⁶ Ibid., 369.

²⁷ De Miranda, *Una quiete operosa*, 43-44.

disengagement from mundane affairs that was required for the proper pursuit of such disciplines. Historical and antiquarian studies that stressed, among other things, Naples' ancient Greek origins had, however long-term implications for the development of political ideologies favorable to reform and eventually independence.²⁸

The myth of a glorious ancient Naples was particularly strong among the Oziosi. Significantly, this historical linkage to an idealized classical past was connected to a tendency to imagine that the city's "republic of letters" – composed at least in part by a cultural but non-noble elite – could through its academic discourse shape political reform in the city.²⁹

Notably, one of the most important Oziosi, Francesco De Pietri, argued for a direct line of continuity between republican Athens, Rome, and Naples. In the introduction to his *Problemi accademici* (1642), he declared that Rome had received laws and learning from the Athenians, and that Naples alone had preserved these institutions intact after Roman authority in the West collapsed, being "a republic free from that barbarity." It was a notion that he took to the extreme. Considering the greatest military victories in history, he announced that none surpassed the Athenian defeat of Xerxes, and therefore, "all the more glory to our Neapolitans, sons of the Athenians."³⁰

²⁸ To place the Oziosi in a broader context see: Antonella Ambrosio, *L'erudizione storica a Napoli nel Seicento: manoscritti d'interesse medievalistico del Fondo Brancacciani della Biblioteca Nazionale di Napoli*, Iter Campanum (Salerno: Carlone, 1996). Nicola Badaloni, "Fermenti di vita intellettuale a Napoli dal 1500 alla metà del 600," in *Il vicereame*, Storia di Napoli (Naples: Società Editrice Storia di Napoli, 1975), 643-689.

²⁹ De Miranda, *Una quiete operosa*, 45.

³⁰ Francesco De Pietri, *Problemi accademici* (Naples: F. Savio, 1642); cited in Musi, *L'Italia dei viceré*, 134-135.

Claims of this type were not unique to Naples, even though the Athenian pedigree received understandable emphasis in this city. Roots in classical antiquity were a fundamental part of the Italian humanist discourse on the origins and sovereignty of the city-state, but also part of the rhetorical strategies adopted by European monarchies in the sixteenth century. One notable example of the former that surely influenced De Pietri was the Florentine humanist Leonardo Bruni's fifteenth-century *Laudatio florentiae urbis* (1403-1404). Composed shortly after the death of Milan's despotic ruler, Giangaleazzo Visconti, the *Laudatio* was a panegyric in praise of the Florentine republic, and one of the Renaissance's best pieces of propaganda. Referencing the speeches of the second century AD Greek orator Aristides, who had described Athens as a bulwark that withstood the despotic Persian empire because of its political superiority, Bruni equated Florence to the savior of republican Italy in the face of tyrannical Milan. Republics, he argued, were by nature better suited to cultivating the talents of citizens. Furthermore, since Florence had been founded during the Roman republic – unlike Milan (Mediolanum), an imperial city – it had inherited the full historical greatness of antiquity.³¹

More importantly, however, the rhetoric of this sort that claimed a place of precedence for Naples in antiquity found another parallel in the vocabulary Spanish

³¹ The canonical introduction to civic humanism and the notion of "republican liberty" remains Hans Baron's, *The Crisis of the Early Italian Renaissance: Civic Humanism and Republican Liberty in an Age of Classicism and Tyranny* (Princeton: Princeton University Press, 1966). The "Baron thesis" suggests that Florentine civic humanism, with its assertion of Florence's republican uniqueness, sprang out of the threat posed by despotic Visconti Milan in the 1390s and early 1400s. For these themes in relation to Venice see: William J. Bouwsma, *Venice and the Defense of Republican Liberty: Renaissance Values in the Age of the Counter Reformation* (Berkeley: University of California Press, 1968). For Renaissance Naples see: Jerry H. Bentley, *Politics and Culture in Renaissance Naples* (Princeton: Princeton University Press, 1987).

imperial apologists employed in the first half of the sixteenth century. During the reign of Charles V, Spanish historians became increasingly concerned with the place of ancient Rome in Spain's past. At the same time, they turned their rhetoric toward explaining and legitimizing increasing Iberian dominance of Italy. For example, Florián de Ocampo and Ambrosio Morales collectively authored a widely circulated and officially sanctioned history entitled the *Crónica de España* (published ten times between 1541 and 1604), seeking to establish Spain's place in the classical past in distinctly Iberian terms.³²

The *Crónica* went so far as to make Greek and Roman culture dependent on Spanish precedents. This was in contrast with Italian rhetoric of this sort that tended to just establish some kind of lineage with Rome or earlier Greek roots, such as the Neapolitan claim to descend from Athens. As the Spanish historians saw it, however, even the story of Romulus and Remus could be dismissed as a senseless myth. More reasonably, they believed, the name of Rome derived from Romi, daughter of a native Spanish king. This far-fetched assertion and the "evidence" presented in its support did two things: it made Rome dependent on Spain, but more importantly it justified Spanish control and interference in Italy.³³

The language of historical connection and conquest between Spain and Rome became more intense in the 1530s and 1540s because of the Habsburg's deepening economic ties and political control of Italy. After the failed French effort to take Naples in 1528, and certainly after the treaty of Chateau-Cambrésis of 1559 effectively ceded

³² These paragraphs are indebted to Thomas Dandelelet's *Spanish Rome, 1500-1700* (New Haven and London: Yale University Press, 2001), especially chapters two and three.

³³ Dandelelet, *Spanish Rome*, 43. Cf.: Florián and Ambrosio Morales De Ocampo, *La Crónica de España* (Zamora 1541; Alcalá, 1574), 134.

that nation's claims to the peninsula, Spanish hegemony was increasingly entrenched. This was true in areas under outright control, like Milan and Naples, but also in Rome, where Spain began a period of influence that would not be seriously challenged until the papacy of Urban VIII (1623-1644). The Habsburg monarchs, beginning with Charles V, and increasingly with Philip II, became the de facto military protectors of the Papal State and the pope's most powerful patrons.³⁴

Spanish and Neapolitan rhetorical strategies were ultimately headed for conflict, because they reflected political realities and aspirations. The collision, however, took time. Just as imperial apologists intensified their explorations of Roman antiquity in the period of Spanish ascendancy over Italy – in the mid sixteenth century – Neapolitan historians developed their own distinct rhetoric as the *Regno* was sliding toward crisis in the late 1500s and early 1600s. As a whole, they tended to suggest Naples' greater age than Rome, the city's Greek origins, and its continuous traditions of civic government and autonomy. This is where the historical works of the Oziosi contributed to an evolution of ideas that would eventually inform the radical political stances taken by Tutini and others during the Masaniello revolt.

At the founding of the academy in the early seventeenth century, the historical and antiquarian studies of a number of scholars working in the city had a number of aims. Besides enhancing Naples' prestige, they sought to uncover the continuities between the

³⁴ Dandele, *Spanish Rome*, 57-108.

city past and present. In this earlier phase, however, much of the rhetoric continued to bolster the image of *Napoli fedelissima*, a loyal partner with the Spanish monarchs.³⁵

There are a number of examples that present these tensions and the movement toward rupture with Spain. Giulio Cesare Capaccio, author of the Campi Flegrei guide *La vera antichità di Pozzuolo* (originally *Historia Puteolana*) already discussed in the second chapter, was undoubtedly at the conservative end of the spectrum. A member of the Oziosi, Capaccio (1552-1634) studied with important humanists in Bologna, and by the early 1600s he was deeply involved in local antiquarian studies, especially in the Campi Flegrei. As a member of the Neapolitan nobility seated in one of the city's governing district counsels (*seggi*), he saw the masses as existing outside of political enfranchisement, but he also expressed reformist ideas in arguing for a broader participation of the *popolo civile* in city government. Importantly, he was one of the most methodical local scholars interested in reconstructing Naples' past from antiquity to his day, and he used his historical studies to bolster the case that the city's orders should relate in accordance to ancient prerogatives and privileges.³⁶

These were ideas that matured throughout his life and culminated in the *Forastiero* (1630), a huge narrative description of the city modeled after the conversation between a foreigner and a local sage, imagined as taking place over the course of ten days. His work was part of the historical and geographic genre that became popular in the later

³⁵ The best analysis of Naples' place in the Spanish imperial system remains Galasso's *Alla periferia dell'impero*, cited above. See especially: Ibid., 9-21. See also: Giuseppe Galasso, "Da Napoli gentile a Napoli fedelissima," *Annali dell'Istituto Suor Orsola Benincasa* (1996): 47-121.

³⁶ Ambrosio, *L'erudizione storica a Napoli*, 32-35. Capaccio's early works included the following: Giulio Cesare Capaccio, *Historia Puteolana* (Naples: Costantino Vitale, 1604).; Giulio Cesare Capaccio, *La vera antichità di Pozzuolo descritta da Giulio Cesare Capaccio* (Giacomo Carlino and Costantino Vitale, 1607).

sixteenth century. It was, in fact, just the type of book he had helped establish with his earlier guides on the antiquities and natural marvels of the Campi Flegrei. It was also akin to D'Engenio Caracciolo's *Napoli Sacra* (1624) in its historical treatment of Naples' sacred sites, martyrs, and saints' cults.³⁷ Capaccio's detailed descriptions and historical narrative embraced both the pagan and the early Christian period, from which the city's present political institutions and religious traditions were thought to have originated. Throughout, he paid considerable attention to the social and political life of Naples, highlighting the central role of the city's most "useful" classes: the nobility, the magistrates, and the merchants.³⁸

The writings of another historian associated with the Oziosi, Giovanni Summonte, exercised a more direct influence on the rebels of 1647 than Capaccio, who was ultimately an entrenched representative of the Neapolitan establishment allied with the Spanish viceroys. Summonte's *Historia della città e regno di Napoli* (first edition in 1601) was more markedly anti-aristocratic in tone and an explicit critique of those who exercised power in Naples. It ended with an account of the infamous lynching in 1585 of the city official Vincenzo Starace, an episode recounted to highlight both the brutality of the lower classes, but also their justified rage at abuses.³⁹

Summonte and a group of collaborators that included the naturalist circle of Ferrante Imperato and Nicolò Stelliola sought to articulate a program for reforming civic

³⁷ For Capaccio's study of the Campi Flegrei see chapter two. D'Engenio Caracciolo's work is discussed in chapter three.

³⁸ Giulio Cesare Capaccio, *Il forastiero* (Naples: Giovanni Roncagliolo, 1630).

³⁹ G.A. Summonte, *Historia della città e regno di Napoli* (G.G. Carlino and A. Pace: Naples, 1601). The *Historia* would be revised and republished in the following decades. For a late edition see: Giovanni Summonte, *Historia della Città e Regno di Napoli di Giovanni Antonio Summonte Napolitano*, Second ed. (Naples: Antonio Bulifon, 1675).

government in a way that would allow for a greater parity between the nobility and the *popolo civile*.⁴⁰ When he was not pursuing his studies in natural history, Imperato took an active part in this discussion, publishing a piece entitled *Discorso politico intorno al Reggimento delle Piazze e della Citta di Napoli* in 1604. In it, he asserted that, “if the people intervened in government, its Republic would be more secure and would do, in sum, more good than harm.” He never intended the *lazzaroni*, of course, but rather a strengthening of the *popolo civile*’s clout – limited because the five noble *Seggi* could always outvote the single popular one. The masses, in fact, were, “the excrement of the Republic, and for this reason inclined to sedition, revolution, and to disturb the laws, customs, and obedience of superiors.”⁴¹ Clearly, there was still a ways to go to the extremes reached in 1647, but as one important historian of the revolt has noted, the foundations for a “popular movement” were being laid.⁴²

Most reformist arguments targeted the viceroy’s abuses but never suggested a rupture with Spain. Still, the notion of a distinct Neapolitan *patria* was undoubtedly evolving as local antiquarians and historians worked to recover, and in many cases to invent, Naples’ history. Crucial was the fact that this notion came to be linked to another: *fedeltà*, or loyalty. From the beginnings of Spanish occupation in the early sixteenth century, the Neapolitan baronage had given its loyalty to the Habsburgs monarchs, bandying about the notion of a *Napoli fedele*. Importantly, it had also steadily refused to acknowledge the parity of proclamations of similar fidelity offered by the city’s other

⁴⁰ Ferrante and Stelliola’s significance as naturalists is considered in chapter five.

⁴¹ Ferrante Imperato, *Discorso politico intorno al Regimento delle Piazze e della Citta di Napoli* (1604, 1604), 247. Cited in Ambrosio, *L’erudizione storica a Napoli*, 30.

⁴² Villari, *La rivolta antispagnola*, 107.

lesser orders. Suspicious of popular motives, the nobility was openly contemptuous of their inferior's proclamations of *fedeltà*, a posture meant to negate the latter's very political identity and existence. The word, however, never ceased to circulate even in popular circles, and it was here that it would eventually undergo a radical shift in direction toward a Neapolitan *patria* continuous with the Greek and Roman periods, and away from Philip IV of Spain. It is with this type of rhetoric that the radical vision of Vesuvius discussed below should be situated.⁴³

The historical circles of the Oziosi placed a very high value on juridical studies, and so much of the fodder for later assaults on the legitimacy of Spanish domination came from the latter. Scholars like De Pietri, and later Camillo Tutini, proclaimed both Naples' ancient and independent legal tradition, and also the fundamental importance of the professional class — lawyers, notaries, and advisors — to good government. A recurring theme in De Pietri's work was the notion that jurists were fundamental executors of rationality in government. For this reason, they were as essential as kings and emperors. This was an argument that had important consequences, because it identified the legal professional class as mediators between two poles in Neapolitan political life: the institutions of the *Regno* (with its established laws, or *patria leges*) and those imposed by the Spanish monarchy. The Oziosi emphasized that ideally this was meant to be a partnership of sorts that involved mutual recognition and respect. Along

⁴³ Villari, *Per il re o per la patria*, 3-36.

these lines, De Pietri suggested that, “the greatest King and Monarch of the world,” was the “king of Naples and Spain.”⁴⁴

The notion proposed by certain members of the Oziosi like De Pietri identified the Neapolitan *patria* as existing in the mosaic of the Spanish imperial system, with its own sovereignty intact but participating fully in the defense of Habsburg interests in Italy and abroad. Significantly, civic and social life in Naples itself, the capital of the kingdom, was supposed to reflect this consensus and partnership by allowing a greater place for the professional class in political life – as guarantors of reason and legality. In the 1620, however, significant tensions emerged within the city, as well as between it and Madrid, as the Duke of Ossuna appeared to acknowledge some of the demands made by reformist intellectuals. This viceroy’s efforts to open avenues to the *popolo civile* eventually caused his recall to Spain on charges of sedition.⁴⁵

The Oziosi were inevitably caught up in these debates, nearly thirty years before the revolt. In May of 1620, the popular representative (the *eletto del popolo*) Giulio Genoino wrote the members of the academic society, articulating his complaints with the existing political situation.⁴⁶ Genoino was one of the most vociferous and active leaders of the popular faction, although his position would always be one to seek compromise with the Spanish monarchs. Even though he was in his eighties by 1647, he would lead the early phases of the revolt, only to be marginalized as it became more radical. Earlier, during the Duke of Ossuna’s short reign (1619-1620), Genoino worked closely with the viceroy

⁴⁴ De Pietri, *Dell'istoria Napoletana* (Naples, 1634), 30; cited in Musi, *L'Italia dei viceré*, 141. Cf. Vittorio Ivo Comparato, *Uffici e società a Napoli (1600-1647). Aspetti dell'ideologia del magistrato dell'età moderna* (Florence, 1974).

⁴⁵ The details of this episode are recounted in the first chapter.

⁴⁶ Biblioteca della Società Napoletana di Storia Patria, MS XXVII A5, cc. 403-403.

to promote a number of reforms aimed at limiting the nobility's power over Naples' governing institutions – a power exercised most effectively in a five-man counsel (the *Collaterale*) which often checked the power of the viceroy himself.⁴⁷

Historians are uncertain as to Genoino's specific audience within the Oziosi.⁴⁸ Whether he was trying to convince enemies, or perhaps also gain favor among supporters in the society, his contact with it suggests very strongly that the "quiet labor" of its members was directly participating in currents of political reform. The episode surrounding the Duke of Ossuna's and Genoino's attempts to limit the baronage was one of the most tense before the Masaniello revolt, but it must also be stressed that the latter's conversation with the Oziosi never suggested anything but absolute loyalty to Spain. In fact, Genoino would protest even after the revolt that he had always had the best interests of Philip IV in mind, and that he had simply tried to guide the uprising to constructive ends. All the same, his sense of *patria* and *fedeltà* sprang very much from the myth of an ancient Neapolitan nation founded in antiquity. In particular, he aspired to strengthen popular representation in government by giving the popular *Seggio del popolo* greater parity with the noble *Seggi*. Importantly, this was an argument rooted at least in part in the reconstructions of Neapolitan historians in the first decades of the seventeenth century. The rhetoric of ancient nationhood and republicanism was very much their creation.⁴⁹

⁴⁷ Musi, *La rivolta di Masaniello*, 122-123.

⁴⁸ De Miranda, *Una quiete operosa*, 190-191.

⁴⁹ Villari, *Per il re o per la patria*, 3-18.

Both Genoino and De Pietri, for example, idealized a senatorial model of government. The former suggested that the representatives of the popular assembly wear the garb of Roman senators, while the latter hugely exaggerated by claiming that “the Senate of Neapolitan Magistrates – direct heir of that senate that governed ancient Naples – has with its authority caused marvel and stupor among all others in the world.”⁵⁰ It is in this context that one should consider Camillo Tutini, and why he wrote the *Prodigiosi portenti del Monte Vesuvio* in the aftermath of the revolt and the 1649 eruption. Tutini, like Genoino, Capaccio, Imperato and De Pietri, contributed to the historiographical tradition that made the ideologies of 1647 possible.

While the others imagined a sort of *Real Repubblica Napoletana* partner with the Habsburgs, it is evident, however, that Tutini had more radical ideas. He was such a loose cannon, in fact, that he was accused of directly fomenting the rising through his writings. Tutini himself reported that supporters of the viceroy went “about Naples with [my] book on the *Seggi* in hand, saying that I was the cause with this book that the people had revolted.”⁵¹ The book in question, *Dell'origine e fundation de' Seggi di Napoli*, was published in 1644, in a period when Tutini had also been contributing to revisions and expansions of Summonte's *Historia*. Both works were historical exercises meant to put their author's erudition to the service of civic and political reform, making it evident that

⁵⁰ Cited in Musi, *L'Italia dei viceré*, 146.

⁵¹ Tutini's letter appears in a manuscript version of the *Racconto della sollevatione di Napoli*: British Library, Ms. Egerton 885, folio 40. See Tutini and Verde, *Racconto*, XLIII.

by the early 1640s, the Neapolitan historiographical tradition had clearly converged with the latter.⁵²

Tutini's central argument in his history was the ancient and continuous nature of Naples' *reggimento* – a comprehensive term used to describe both the institutions and the social orders that governed the city. The five noble *Seggi* and the lone popular one were the organizing structure and source of identity of the urban ruling class. There was serious debate as to the origin of these district assemblies, and on this matter he disagreed with Summonte. While the latter dated their foundation to the Angevin period, Tutini aimed to prove that they were directly continuous with the ancient Greek city. If this had the effect of stressing the pedigree of the nobility inscribed in the rolls of the various *Seggi*, Tutini also meant to suggest a measure of parity between the popular elements in government and the baronage.⁵³

In Tutini's reconstruction, the ancient institutions of Naples had given a certain non-aristocratic population a role in government, even though this relationship had been severely corrupted over time. Tutini, of course, was not speaking of the lowest orders, but rather of an intermediate one, elevated by virtue of its cultural sophistication and wealth – the humanists, lawyers, notaries, and merchants of the *popolo civile*. Ideally, Tutini imagined an alliance between the ancient nobility and this other order of society, an alliance based on an imagined two thousand years of partnership and mutual respect.

⁵² Camillo Tutini, *Dell'origine e fundation de' Seggi di Napoli, del tempo in cui furonono istituiti, e della separation de' nobili dal popolo* (Naples: Ottavio Beltrano, 1644).

⁵³ Tutini and Verde, *Racconto*, XL

This is where he located his notion of a Neapolitan republic that had continuously existed in praxis, even when no longer in name.⁵⁴

Some of the vehemence Tutini later showed toward the nobility in the *Prodigiosi portenti del Vesuvio* – they were the objects of the volcano's anger along with the Spanish – arose from his sense of betrayal after 1647, when he felt that the Spanish had succeeded in keeping the traitorous baronage and popular classes divided. In this earlier work, however, Tutini recognized both the ancient and democratic aspects of the nobility's role in government. He wrote:

The existing Neapolitan nobility is presently divided in five *Seggi*, or *piazze*, the Capuana, Montagna, Nido, Porto, and Portanova ... today there is no majority or prerogative one has over the other, so that in the city tribunal, where the noble *eletti* assemble, each representing a *Seggio*, there is no precedence, and the first to arrive has precedence and takes the bell. This Nobility is very conspicuous for its antiquity, for its lordship over vassals, for its titles, its honors, its family ties to great lords, for its high magistrates, for its ecclesiastical titles. It competes with all the noble families of Italy, and even if it is not a free nobility, but has been subject to the highest crowns of Europe, it glories nonetheless to have ties of parentage with the Kings that have lorded over it. In this brief narrative we will show – even though many writers have written about it – something of its magnificence.⁵⁵

⁵⁴ This thesis is considered in detail in Giuseppe Galasso, "Una ipotesi di blocco storico oligarchico-borghese nella Napoli del '600": I Seggi di Camillo Tutini fra politica e storiografia," *Rivista Storica Italiana* XC (1978): 507-530.

⁵⁵ "La Nobiltà Napolitana al presente sta divisa in cinque seggi, o pur cinque Piazze come Capuana, Montagna, Nido, Porto, e Portanova, lasciando a dietro la divisione in 24 piazze conforme i tempi andati ella era distinta; hoggi solo in questi cinque, et è unita e separata e tra di loro non vi è maggioranza ne prerogativa, onde nel Tribunale della Città, ove assidono gli eletti Nobili che ogniuno d'essi rapresenta un seggio non vi è precedenza, ma il primo che giunge ha il primo luogo, et tiene il Campanello. Questa Nobiltà è molto cospicua per la antichità della sua nobiltà, per lo dominio de Vassalli, per i tituli, per i lustroni, per le parentele de grandi, per gli supremi Magistrati, et per le dignità Ecclesiastiche, onde gareggia con tutte le famiglie nobili dell'Italia e sebbene non è nobiltà libera ma è stata soggetta alle prime Corone dell'europa si gloria bensì d'haver contratta parentela coi propri Re che l'hanno signoreggiata, come in questa breve narratione dimostraremo e benche ne sia stato di essa da molti scrittori parlato, Io dirò qualche cosa delle loro magnificenze quali ho trascurate da dotti autori non osservate da essi, che da pubblici Archivi, et da buoni Originali l'havemo raccolte, risultandomi poi in altro ragionamento di parlare dell'altri seggi." This is from an earlier manuscript draft (one of many) of the *Della origine e fundation de' seggi*: BNN Ms. Brancacciani II F1, cc. 13.

At this point, only a few years before the Masaniello revolt, Tutini still felt that the *popolo civile*'s natural ally was Naples' oldest nobility. His suspicion and resentment fell, on the other hand, on Spanish intruders, and the parvenus who had risen to title and prestige thanks to the abuses allowed by these foreign overlords.

The historiography of the previous forty years – including the works of Imperato, De Pietri, Capaccio, and Summonte – had created a myth of ancient and modern Naples where the nobility and certain elite elements of the popular orders had a shared two millennia of collaboration, joint responsibility and honor. A few years later, this myth had run its course, becoming in 1647-48 one of the battle cries for an independent Naples.⁵⁶ Even when the attempt to create a Neapolitan republic free of Spain failed miserably, its supporters scattered or killed, Tutini still entertained the idea. When Vesuvius erupted in 1649, the volcano seemed to speak to these things.

The Prodigiosi portenti del monte Vesuvio

As Spanish agents hunted down rebel instigators hiding throughout the *Regno*, and as the few lucky enough to escape into exile peered anxiously over their shoulders, Tutini composed a short pamphlet. He was in Rome under the protection of Cardinal Francesco Maria Brancaccio and other churchmen of the French faction.⁵⁷ One copy of the political

⁵⁶ Galasso, "Ipotesi di blocco storico," *Rivista Storica Italiana*, 515-525.

⁵⁷ Francesco Maria Brancaccio (1592-1675) was born in Canneto di Bari, studied with the Jesuits, and became bishop of Capaccio in 1627. He was subsequently accused of conspiracy and murder and forced to flee Naples. In the Rome of Urban VIII, he enjoyed favor and protection and was likely made cardinal to provoke the papal city's Spanish faction. It is possible that he was in contact with anti-Spanish elements in Naples even before the Masaniello revolt. He also corresponded throughout his career with Cardinal Mazarin, who was always willing to meddle in Italy. Spanish veto prevented him from being a viable

piece, to which Tutini wisely chose to attach no name, can be found in Naples' National Library, and at least one other copy exists in the Vatican.⁵⁸ In gratitude for the protection he had been offered by Brancaccio, Tutini donated most of his manuscripts to the Cardinal, whose extensive library was eventually transferred back to Naples in the late seventeenth century. The jumble of missives and manuscripts where this copy of the *Prodigiosi portent*i ended up suggests a climate of anger and recriminations, as the rebels and their supporters tried to make sense of failure and attempted to galvanize new energies and allies for yet another effort. Along with the pamphlet, there are letters from the republic's supposed protector, the Duc de Guise, and his officers, mostly making excuses for the French failure to aid the rebels in 1647-48. The piece itself is a hurriedly scribbled thing, outraged, vehement, and conspiratorial.⁵⁹

Some time earlier, in May of 1648, the papal nuncio in Naples wrote back to Rome that the new restoration viceroy, the Count of Oñate, "took a great pleasure in seeing that the city was free of people who might cause tumults." Oñate undoubtedly counted Tutini among these men. He was a *fuoruscito* – a rebel – who sooner or later should be brought to justice. This threat made life for the exiles in Rome very difficult, but as the nuncio

candidate for the papacy, but he continued to be a powerful protector of intellectuals forced to flee the *Regno*. See: Ambrosio, *L'erudizione storica a Napoli*, 25.

⁵⁸ The Vatican copy is the following: BAV, Ms. Chigiani, V.136, ff. 272-279.

⁵⁹ This substantial library was absorbed by Naples' Biblioteca Nazionale in 1924, and is cataloged as a distinct archive, the Manoscritti Brancacciani section. For any scholar working on the political and cultural climate of seventeenth-century Naples, it is a valuable collection. It has been cataloged and inventoried since the eighteenth century. For more recent, relatively speaking, inventories see: G. La Cava, *La R. Biblioteca Brancacciana* (Naples, 1905); Antonio Miola, *Catalogo topografico-descrittivo dei manoscritti della R. Biblioteca Brancacciana* (Naples, 1918).

reported, many of them were not willing to accept failure, even after a wave of arrests and executions in May, June, and November.⁶⁰

Instead they continued to plot, and more importantly to write their own accounts of the events that had transpired since July 1647, a process they had begun at the height of the rebellion. In February of 1648, less than two months before Oñate triumphantly entered Naples on April 6th, an anonymous *Relazioni e riflessioni politiche sul reame di Napoli* was circulating in Rome. Its author identified all the usual Spanish crimes: onerous fiscal burdens, and the complicity of the baronage in consuming the wealth extracted from the kingdom. He described the revolt as a glorious enterprise shared between the lowest orders, or *popolo meschino*, and the *popolo civile*, aimed at “freeing the *Patria* from noble and Spanish tyranny.”⁶¹ Another similar work exalted the Neapolitan republic, appealed to the baronage, asked that they come to its support, and simultaneously accused them of betrayal. Polemically, its author asked “to support war in the *patria*, to be tyrannical in the *patria*, to bloody your hands with Neapolitan blood, does this make you Neapolitan?”⁶² This was very much Tutini’s vocabulary.

The *Prodigiosi portenti* was likely written in the last weeks of 1649, as news reached Rome of a strong eruption of Vesuvius. It was the first significant eruption since 1631, lasting from November 28 to January 14, 1650. Tutini seized the occasion to write and circulate his first commentary on the revolt, even as he was beginning his collaboration with Marino Verde to write the much longer *Racconto della sollevatione di Napoli*. The

⁶⁰ ASV, Nunziatura Napoli, 43, f. 101r. Cf. Tutini and Verde, *Racconto*, XXVI.

⁶¹ BAV, Ms. Chigiani, N.III.70, ff. 364-378, cited in Tutini and Verde, *Racconto*, XXVIII.

⁶² Giuseppe Maiani, *Relatione della Rivoluzione popolare seguita nella Città et Regno di Napoli*, BAV, Ms. Barb. Lat. 5253, ff. 223-228; cited in Marino and Verde, *Racconto*, XXVIII.

pamphlet did two things. It identified Vesuvius' reactivity to Spanish tyranny, and then went a step further. It restated the declaration of independence made by the rebels in 1648, and called for a second revolt.

"The eruption of Vesuvius was judged a prodigious thing," Tutini began. In the opening paragraph, he continued:

We saw recently, considering the horrible and terrifying fire that occurred the 16th of December 1631, that after sixteen years Naples rose in rebellion chasing the Spanish from government, the *Popolari* of that city having chosen leaders and received obedience from the entire Kingdom and lorded over all affairs. All the more prodigious does this new evaporation of this year 1649 present itself, since after a mere eighteen years from this episode Vesuvius has made ash, fire and earthquakes, and it is not at all usual for eruptions to occur, because the burnable matter that the volcano hurtles outward requires the passage of many centuries to generate in its bowels. But if these clamors and shakings of the mountain reflect a higher principle, we would see them almost as natural signs that the earth in shaking speaks that it suffers not any longer tyrannical Spanish Domination.⁶³

A number of things are apparent in the vehement and impassioned first lines of the *Prodigiosi portenti*. One is Tutini's obvious commitment to political ideas that had taken shape in the previous years. For the brief and ultimately tragic duration of the revolt, Naples' *popolari* had become the lords of Naples. If the immediate causes of the rising were surely connected to plebeian anger – something Tutini recognized elsewhere – we can also say that it was the most extreme repercussion and endpoint of the myth of ancient republican Naples fostered by Neapolitan historians. What should also be

⁶³ The transcription is my own: "S'è veduto ultimamente nell'orribile e spaventevole incendio accaduto a 16 Dicembre del 1631, che dopo sedici anni si sollevò Napoli nel cacciando i Spagnoli, del governo per [illegible word] havendo i Popolari di quella città fatti capi, [illegible word] ricevuta ubidienta dal Regno tutto e signoreggiava ogni cosa l'maggiormente, si vende prodigiosa questa nuova evaporatione in quest'anno 1649, poiché in tanto poco tempo dopo 18 anni dalla sopra narrata habbia e cenere e fuoco e tremuoti prodotti il Vesuvio, mentre non capita spesso sogliono accadere delle eruttioni, dovendosi la materia accendibile, che deve poi il monte mandar fuori col progresso di molti secoli generarsi nelle sue viscere. Ma se questi clamori del Monte e se questi scuotimenti della terra a più alto principio dimostransi, vederemo esser segni quasi segna naturali e che la terra col scuotersi favellasse dicendo non poter più soffrire il tiranno Dominio Spagnuolo." BNN, Ms. Brancacciani V F3, f. 167.

stressed is how centrally Vesuvius figured in Tutini's causation and sense of Neapolitan identity. Why so?

First of all, he felt that it was no coincidence that the Masaniello revolt occurred a mere sixteen years after that first "horrible and terrifying fire." As significant for the purpose of the *Prodigiosi portenti*, which was to call for a second rising, was the fact that yet another eruption had occurred less than two decades after the first, when presumably it took volcanoes a long time to build up their store of combustibles. Natural causes aside – how seventeenth-century natural philosophers explained the "burning" of volcanoes is considered in the next chapter – Tutini was pointing to a different sort of causation. All the catastrophes, eruptions past and present, the failed and future revolt, were divine castigation operating through different agents: the wild burning volcano and the uncontrollable rage of the masses. Both, after all, were a sort of *delirium tremens*, caused principally by the betrayal and impiety of the nobility and the Spanish.

Tutini never ceased to find the masses contemptible, terrifying and quite literally wild. They were a force of nature the popular leaders needed to use, check, and control to the right ends. In a letter that was one of his earliest comments on the revolt, he wrote, "in 1647, on the 7th of July, Naples rose and the excrement of the city, barefoot and vile men, from the Lavinaro, Mercato, and Conciara districts, caused a great tumult."⁶⁴ Giulio Genoino, the main popular leader in the early phases of the revolt, felt the same way. He

⁶⁴ BNN, Ms. Brancacciani, IV B15, f. 414.

also compared the plebeian mob to a natural disaster, unleashed on Naples as God's punishment.⁶⁵

These sentiments that equated the urban masses to the destructive forces of volcanism also surfaced in the *Racconto della sollevatione di Napoli*, a work Tutini wrote later in collaboration, and with considerably more care and reflection than the *Prodigiosi portenti*. This is how that work began:

I needed to make a reckoning of some of the particulars which occurred during the rising of Naples in 1647, collected not only for my recollection, but also to show to those who read this work how unstable the operations of men are, and with how many lies, deceits, and betrayals they operated in these tumults. What happened was clearly God's castigation for the little reverence the nobles, the people, and the Spanish showed to the archbishop cardinal Filomarino, with their behavior provoking Divine Justice, which quickly sought revenge (as you will discover) against those who vilipended the reputation of the Church, so that there were violent deaths, the burning of homes, people ripped apart, and irreparable ruin and damage.⁶⁶

Disaster, in other words, was the habitual condition of a city prey to impiety and tyranny.

Even in his old age, Tutini continued to reflect on Vesuvius and rebellion.

"Habitually," he wrote in 1660, "Mount Vesuvius travails Naples and the Kingdom with its eruptions ... and thus it is that after this mountain's fires there occur novelties, ruin, and new dominions in the Kingdom of Naples, which we will show on another occasion." He never went on to treat the topic explicitly in another treatise, but he had certainly made the point back in 1649, and continued to do so a decade later. In another passage of

⁶⁵ Villari, *Per il re o per la patria*, 20.

⁶⁶ "Dovendo far racconto d'alcuni particolari accaduti nella sollevatione di Napoli nel 1647, non solo da me raccolti per mia ricordanza, ma per dimostrare a coloro che leggeranno questa scrittura l'instabil operatione degli huomini e con quante versutie, inganni, e tradimenti habbiano operato in sifatti tumulti; e quante avvenne fu evidente castigo di Dio per la poca riverenza portarono i nobili, popolari e spagnoli all'arcivescovo cardinal Filimarino, e con questi portamenti stuzzicarono in modo la Divina Giustitia che subito si diede alla vendetta (come sentirete) contra di quei che la riputatione della Chiesa vilipesero, perloché ne nacquero morti violenti, bruggiamenti di case, strapazzamenti di persone, rovine e danni irreparabili." Tutini and Verde, *Racconto*, 1.

the same work, he addressed the eruption of 1631. “The eleventh fire of Mount Somma in 1631,” he announced, “was so awful and sad that it ruined and consumed everything nearby ... and we were spectators to this great eruption that presaged risings and pestilence, not without great pain.”⁶⁷

If Tutini’s collaboration with Marino Verde in the *Racconto della sollevatione di Napoli* produced a lengthy analysis and apologia for the Masaniello revolt, his earlier pamphlet on Vesuvius was meant simply to inflame. It was an expression of rage and despair solicited in large part by the volcano’s newest eruption. Very tellingly, the Neapolitan exile began each new paragraph with the heading: *Terra Clamat* (“The Earth shouts”). His first target was the Count of Oñate, the new viceroy who entered Naples in early April 1648 and began a fierce repression. He also identified “the false oaths of the Spanish ... as they promised to forgive the Neapolitans who were forced to tear apart these Barbarians, who have bled, impoverished, and reduced to misery Naples and the Kingdom together.”⁶⁸

Vesuvius raged for “the blood of so many innocents that this Diocletian of a Count of Oñate has spilled for various excuses ... seeming these poor souls so many Abel.” The volcano wanted to “take revenge on these Moors, these Barbarians, revenge our injuries and martyrdoms, and the Mountain seems to say to the Count of Oñate, do you

⁶⁷ BNN Ms. Brancacciani, II A8.

⁶⁸ “Terra clamat – i falsi giuramenti fatti dai spagnoli e la fede violata a Dio et alle genti promettendo e giurando di perdonare a Napoletani li quali forzati di strapazzare tanto questi Barbari, che hanno esanguato, impoverito, e ridotto in miseria Napoli e il Regno insieme.” BNN, Ms. Brancacciani V F3, f. 167.

think to root Spanish Domination in the kingdom by spilling so much innocent blood?”⁶⁹

The reference to the fourth-century Roman emperor deliberately evoked the martyrdom of San Gennaro, who was executed in Pozzuoli during a round of pagan persecutions of Christians. The suggestion that Neapolitans had been massacred like Abel pointed a finger to fratricide and betrayal at the hands of Spanish supporters.

The triangulation of saint protector, volcanic punisher, and the impious tyrannical viceroy was central to Tutini's understanding of the moral and religious causation of the Masaniello rising. It is also why the volcano's newest eruption seemed to him to be both further castigation and the opportune moment for yet another unleashing of Neapolitan rage. The catastrophe of 1631 had been a portent of the 1647 revolt; this was clear to Tutini. The viceroy's brutal treatment in the spring of 1648 of a city that had risen in justified rebellion – its martyrdom under a new Diocletian – would only continue the cycle of punishment.

Worst of all, the blood of San Gennaro failed to liquefy during the mass of December 16, 1649, on the eighteenth anniversary of the saint's miraculous intercession on Naples' behalf, and nearly one month into that year's protracted eruption. Unlike the Count of Monterey back in 1631, Oñate and the Spanish presided over a miserable failure of a ceremony, with no miracle and continuing discord. Really, it was only the

⁶⁹ “Terra clamat – Il sangue di tanti innocenti, che questo Diocletiano Del Conte d'Ognat ha fatto spargere sotto varii colori Di ribellione e figurate lettere, sembrando quei poverelli Tanti Abel, il cui sangue esclama dalla terra ai Napoletani *Vindica sanguinem nostrum qui effusus est*: fate vendetta contro questi mori, contro questi Barbari vendicate le nostre ingiurie et li nostri martiri et, il Monte pare che dichi al Conte d'Ognat; che pensi radicare il Dominio Spagnolo in regno col spargere tanto sangue innocente?” Ibid. The whole exclamation has a liturgical ring to it.

exhaustion and fear of the mob that saved the viceroy, the clergy, and the nobility from yet another outburst of popular violence. Under the usual heading Tutini declared:

The Earth shouts – to the Neapolitans almost as if God and all the protectors of this city wished to show their anger against the barbarian Spaniards and they already give sign of this, since the blood of San Gennaro protector of Naples, which when placed before his [severed] head right away liquefies to the marvel of all. In this year 1649, celebrating the anniversary of the eruption of Vesuvius that occurred on the 16th of December, having brought [the relic blood] in ceremony it did not liquefy, propagating in this way grave catastrophes and coming war in the city and the kingdom. In the past it has been observed that in the ceremonies of this saint, which bring together his head and blood, when it does not liquefy miserable things and war occur in the city and the kingdom.⁷⁰

At the beginning of his Roman exile, Tutini was desperately trying to further inflame an ongoing struggle against the hated Spanish. From the perspective of his outraged patriotism, the reasons for both the saint's refusal and the volcano's anger sprang from common causes.

Tutini inveighed against the baronage, "infinite traitors, who to be rewarded by the Spanish and receive their favor have carried out infinite betrayals against the *patria* and themselves." He then continued, "don't these villains know that one loves the betrayal and not the betrayer?"⁷¹ His accusations, however, were also aimed at the leaders of the popular faction, who had been unable to form an alliance with the nobility in the most

⁷⁰ "Terra clamat – ai Napoletani quasi che dir volesse che Dio et i tanti protettori di questa città sono adirati contro de barbari Spagnoli e di già ne mostrano il segno, perché il sangue di San Gennaro protettore di Napoli stando inanti la sua testa di subito si rende liquido con maraviglioso stupore di tutti: in questo anno 1649, celebrandosi l'annuale memoria dell'eruttione del Vesuvio che fu a 16 Decembre, essendosi solennemente portato non si è altrimenti liquefatto propagando con queste sciagure gravi e prossima guerra nella città e Regno; mentre per l'addietro si è osservato, che ogni volta che nelle solennità di questo santo che suolsi far congresso del suo capo col sangue, non si è reso liquido sono acceduti accidenti miserabili e guerre nella città e Regno." Ibid.

⁷¹ "Terra clamat – contro infiniti traditori, li quali per esser premiati da Spagnoli et ottenere la loro gratia infiniti tradimenti hanno orditi contro la patria e contro loro stessi, poiché dopo che i Spagnoli conseguirono quello che bramavano furono mal veduti, perseguitati e molti fatti morire e ci vorrebbe lungo diceria a raccontare tanti! Ma non sanno questi scellerati che si amano i tradimenti ma non i traditori?" Ibid.

delicate phases of the revolt. This was made evident when the fleet of Don Juan of Austria, son of Philip IV, entered the Bay of Naples to restore order on October 1, 1648.

Recalling the betrayals and mutual accusations between the popular faction and the baronage that began almost immediately upon Don Juan's arrival, Tutini added this inability to unite to his list of failures that led the Neapolitans to suffer like the Indians of New Spain:

The Earth shouts – against the Nobility and the *Popolari* of Naples who are unjust and do not realized their ruin in being disunited, because the Spanish foment discord to keep them divided, so that they may more easily exterminate the nobility and keep the *Popolari* enslaved ... and if you do not abandon your particular interests and embrace the public good you will be treated worse than Indians by these inhuman people...⁷²

When he discussed the backstabbing between social orders in his later *Racconto sulla sollevazione di Napoli*, Tutini recalled that upon the fleet's arrival the nobility had gone about the city "all sparkling and threatening." He also remembered that on this occasion he exchanged words with someone he disparagingly called "a certain little knight, who said, 'you'll see now that the armada has arrived, what will happen.'" Tutini's had let the noble know that "this is a very beastly mob," and that was not going to be easily suppressed.⁷³

Inevitably, the rising was crushed six months after Don Juan sailed into Naples. Part of Tutini's reasoning behind the *Prodigiosi portenti* was to respond to the accusations

⁷² "Terra clamat – contro a Nobili a Popolari di Napoli li quali sono senza giustitia e non s'accorgano della loro rovina col star disuniti, poicch  i Spagnoli fromentano dette discordie per tenerli divisi, acci  agiatamente possan estermiare la nobilt  e tenere come schiavi i Popolari, pero unione, unione a scacciare dal nostro seno il comune nemico, e se non lasciate l'interessi particolari at abbracciate il bene pubblico sarete da questa inhumana gente peggio degl'Indiani trattati, essendo essi di natura si infame, e quanti piu benefici da noi ricorrono, tanto piu crudeli si rendono contro di noi." Ibid.

⁷³ Tutini and Verde, *Racconto della sollevazione*, 170.

being voiced in Naples that San Gennaro's absent miracle and the eruption at the end of 1649 were the fault of the past rebellion. It turns out that the forces of the restoration were equally willing to appropriate both saint and volcano for their own moralizing. Tutini was especially infuriated that the Spanish and their supporters were continuing a propaganda campaign in Naples and in Rome.

His pamphlet was obviously meant to counter the broadsheets that "the Spanish allow to be posted on the pulpits of their preachers, saying that Mount Vesuvius with these bellows and trembling threatens to sink Naples that is not faithful to neither King nor Spanish." This was nothing short "of deceit," he fulminated, "since Vesuvius shouts to Neapolitans that they shed the yoke of these wicked, atheist men, whom the earth can no longer bear as they are without God, religion, and peace."⁷⁴ Tutini's battle to reclaim uniquely Neapolitan symbols – its volcano and its saints – for the cause of the failed republic must have also been fueled by what he saw in Rome.

Between July of 1647 and April of 1648, the events to the south were followed very closely in the papal city. Rome was the only European capital able to get near "real time" reports of the rising, and as it was home to a powerful Spanish faction, representations of seditious Naples were not difficult to find. One very important example was a well-known 1648 map by the Burgundian engraver Pierre Miotte, showing a bird's eye view of Naples. Drawn at the end of the revolt, it was for sale in the shop of Giovanni Battista Rossi in Rome's Piazza Navona, right in the heart of the Spanish part of town.

⁷⁴ "Terra clamat – Non già quello che publicar fanno i Spagnoli sui pulpiti de predicatori loro interessati, che il Monte Vesuvio con questi mugiti e tremuoti minaccia voler abbissar Napoli che non è fedele al Re ne alli Spagnuoli, ma costoro l'ingannano, perché il Vesuvio esclama ai Napoletani che si levino d'adesso gioco di homini scelerati et ateisti non potendo sopportar horamai piu la terra le loro crudeltà, essendo essi senza Dio, senza Religione e senza pace." BNN, Ms. Brancacciani V F3, f. 167.

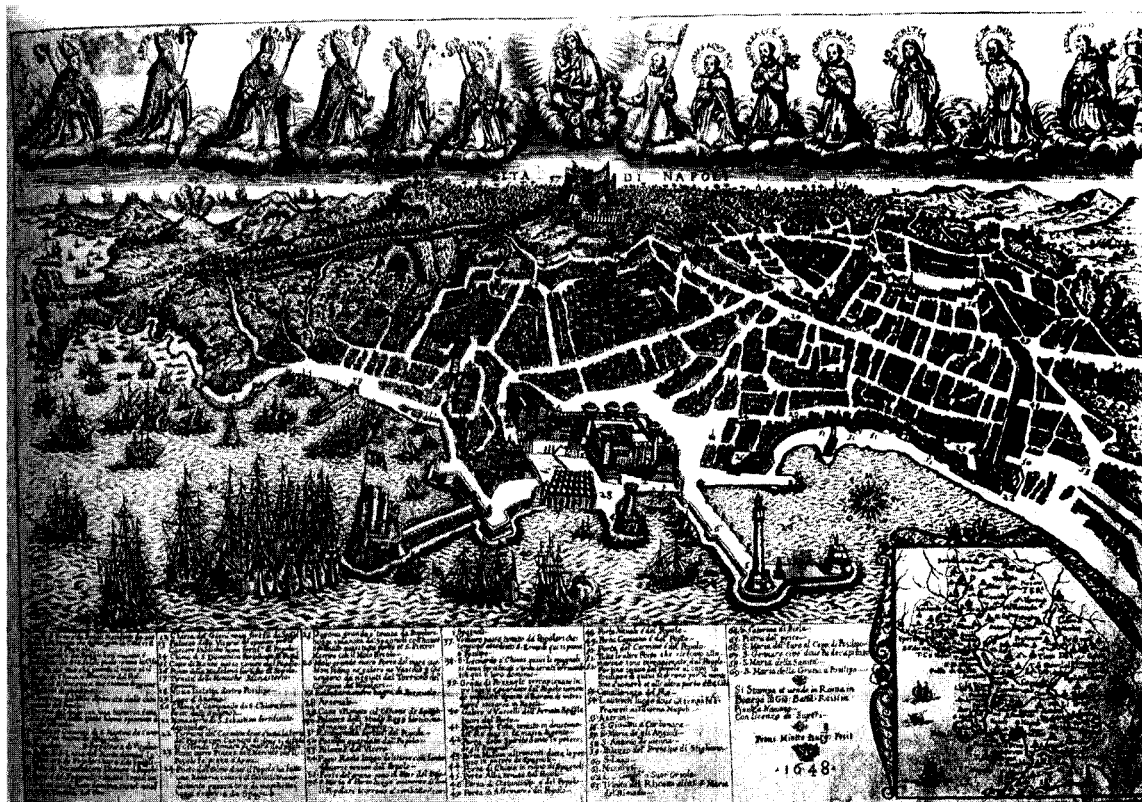


Figure 4.1 Pierre Miotte (1648)

This aerial prospect of Naples showed both the contested urban geography of the rebellion and the spiritual aid offered by the city saints to the Spanish (**Figure 4.1**). Miotte's top-down view of the city was crowned by the Virgin Mary and thirteen Neapolitan saints, including San Gennaro. Miotte's didascalia at the bottom of the map, on the other hand, located the city's sedition in specific places and retraced its suppression.

The map was an important piece of propaganda favorable to the Spanish cause. For example, Miotte identified the city's Castel dell'Ovo as "overseeing the sea and the Chiaia district devoted to the King," but the Vomero hill was "held by the *Popolari* from where they besiege the monastery of Saint Elmo." From one location, the people "had

pointed a cannon battery a musket shot's distance from the Castel Nuovo, but it is now retaken by the Spanish." Other rebel strongholds were marked as completely destroyed by bombardment. San Gennaro was on the Virgin's right hand side (left from the viewer's perspective), blessing and watching over the reconquest of Naples.

Both the tone and content of the *Prodigiosi portenti* make it clear that Tutin was responding to representations like Miotte's map. Rome's Neapolitan exiles were desperate to counter the appropriation of symbols intrinsic to their own identity and sense of nationhood, which they wanted to preserve despite the revolt's failure. For Tutini, it was crucial that the right words be put in Vesuvius' mouth. As he drew toward the conclusion of his pamphlet, he became even more explicit. "I chase out the King and the Spanish," Tutini's volcano declared, "and this must be done because the people make the King, and not the King the people, and God places princes in kingdoms so that they may govern as fathers and not as tyrants."⁷⁵ This was a clear attempt to continue the discourse of the rebellion.

In the final lines of the *Prodigiosi portenti*, Tutini concluded by promising the Spanish "greater extermination of their flesh than in the past, and the same for the betrayers of the *patria*." He justified Naples' independence from Spain in terms of severed vassalage, a bond of mutual responsibilities the foreign occupiers had treated with utter contempt. This justified the rupture between the two nations:

A vassal of a King is therefore a vase in which there is a plant, which emits pleasant odors and brings enjoyment to the Prince with its fruits. He picks the flowers and fruit that it produces when they are owed, and the Prince with the wing of his diligence and protection defends it from snow, frost, and any sinister accident: this

⁷⁵ Ibid.

is what it means to be a vassal. But if the Prince were to continually prune that plant it would certainly wither ... so have the Spanish done to the poor city of Naples, with their daily taxes on the vassals they have stripped them of bark and desiccated them so they can no longer live. In fact, by having given the reins to the Baronage they have thus stunned their vassals with their cruelties so that they can no longer stand upright or give fruit. Naples – you have the example of so many foreign Peoples and Kingdoms, knowing well what they have done to free themselves of oppression. Do not fear these impious men, this is what the Mountain exclaims.⁷⁶

Importantly, there were significant commonalities between the sense of nationhood expressed here and the proclamations made by the rebel leadership in the fall of 1647, as any hope that Philip IV would really negotiate with Naples faded. One of the most ardent rebels back then, Tutini had been strongly in favor of severing all ties with the Habsburgs and seeking no compromise, even if others like Genoino sought to curry the favor of Philip, by arguing that they had only taken up arms against corrupt ministers and nobles.⁷⁷

The most clear sign back in 1647 that the Spanish had no intention of heeding the demands of the rebels was fierce naval bombardment – its targets marked on Pierre Miotte's map for the news hungry in Rome. On October 5, 1647, Don Juan's fleet began to fire upon the city, joined by fusillades from the city's main castles, still in Spanish

⁷⁶ "Sarebbe appunto un vassallo appresso del Re un vaso nel quale vi sia una pianta, la quale con i fiori apporta odore, et con i frutti reca gusto al Principe mentre ne'tempi debiti coglie i fiori et poi i frutti che essa produce, et il Principe con l'ala della sua diligente e protetione la difende dall neve, dalla rugiada e da qualsivoglia sinistro accidente: questo vuol dire vassalo, cioè *vas olla*. Ma se il Principe di continuo andasse putando quella pianta certamente si seccarebbe, perché li lascerebbe l'humore che la fa crescere, ne fiorir, ne frutti potrebbe piu produrre. In tal guisa han fatto i Spagnoli alla povera città e Regno, mentre colle cotidiane gravezze imposte ai vassali li hanno scorticati e essiccati che non possono piu vivere. Anzi con haver data la briglia in mano ai Baroni hanno in si fatta maniera agghiacciati i loro vassali con le loro crudelta che non si possono reggere in piedi, ne si puo da cosi cavar frutto alcuno. Napoli hai l'esempio di tanti Popoli e Regni stranieri che per levarsi dell'oppressioni sai bene che hanno fatto. Non piu temi tu di questi empi, che questo esclama il Monte..." Ibid.

⁷⁷ Villari, *Per il re o per la patria*, 19-20.

hands. This barrage was followed by sorties of the viceroy's soldiers into the popular quarters. Among many Neapolitans, the Duke of Arcos and Don Juan's aggression was widely read as a great betrayal, and the single event that pushed the rebels over the edge. Less than a week later, with both sides entrenched and fortified, the attack of early October was turned into the tragic symbol of how the bonds of vassalage and *fedeltà* had been permanently severed. At this juncture, more moderate voices lost sway. In their *Racconto*, Tutini and Verde recalled that one defender of the king had declared, "I protest before God and the world that I cannot agree with this, and I am certain that this violence will lead this king to lose the kingdom."⁷⁸

On October 17, 1647 all portraits of Philip IV were torn down in the portions of the city held by the popular faction. At the same time, its leaders issued a proclamation that accused Philip of grave injustices and declared Naples' intent to seek protection from the papacy and other European monarchs. Entitled the *Manifesto del Fedelissimo Popolo di Napoli*, it repeated the notion of a once "most faithful" populace in an accusatorial fashion. From the perspective of its authors the damage was permanent.⁷⁹

Tutini recorded the entirety of the declaration in the *Racconto*. It is very apparent that he considered it to be supreme evidence of the extremes necessitated by Spanish outrages. "It gave them something to think about," he wrote in his long history, "and gave the people heart to pursue their designs." The central passage in the *Manifesto* of 1647 came at the end, when the rebels declared the following:

⁷⁸ Tutini and Verde, *Racconto*, 178.

⁷⁹ Villari, *Per il re o per la patria*, 25. *Fedele* could be translated alternately as "loyal." Clearly the sense here is one of fidelity – the sort of loyalty and faith the subject bestowed to the sovereign – now transferred to the independent nation.

The Most Faithful People have been forced to make natural recourse in their defense and conservation ... It was thus deemed necessary to turn towards first to the Divine Majesty of God, to the most glorious Virgin Mother of God and to Glorious San Gennaro and all the saints of this city and kingdom ... it supplicates, demands, and asks with all its affection for his Holiness ... and the Majesty of the emperor, and of kings, republics, princes, dukes, marquises, counts, barons, and those of whatever dignity, title, and rank endowed, all faithful Christians, that they give us aid and favor, in words and by whatever means they can and recognize as necessary.⁸⁰

As modern historians have noted, a very important shift had occurred in the rebel consciousness by this late stage of the revolt. Even before Don Juan's bombardment precipitated the final break, their sense of *fedeltà* had moved away from the Spanish sovereign – where it had been projected since the conquest of Naples in the early sixteenth century – to the *Patria* itself.⁸¹

The transfer of loyalty and fidelity was already evident before Don Juan's fleet dropped anchor off Naples. In September 1647, three months into the revolt, an anonymous pamphlet entitled *Il Cittadino Fedele* was making the rounds of the city. As a precursor to the *Manifesto* of the following month, it picked up the themes of ancient Neapolitan republicanism – exactly the kind of myth Tutini had constructed in his earlier

⁸⁰ “Il che esso Fedelissimo Popolo è stato constretto ricorrere al natural remedio della sua difesa et in quella conservarsi, senza haver speranza di quiete, né sicurtà delle persone e beni di esso Fedelissimo Popolo, né prestar fede all promesse di detti regi ministri. Onde ha giudicato per bene e necessario ricorrer prima alla Divina M.tà, alla gloriosissima Vergine Madre di Dio et al glorioso S. Gennaro et a tutti altri santi protettori di detta città e regno, e quelli invocando e supplicando ad assistere alla detta sua difesa, aiuto e protezione. Con pregare anco, sicome supplica, dimanda, chiede, con ogni interno affetto la Santità del Sommo Pontefice, suo Collegio e prelati tutti di S. Chiesa, M.tà dell'imperatore e di re, repubbliche, prencipi, duchi, marchesi, conti, baroni, et altri di qualsivogliano dignità, titoli e gradi costituiti, e ciascun fedele christiano, che tanto con l'oratione quanto in tutti gli altri modi che potranno e conosceranno necessario, si compiacciano dare il loro aiuto e favore.” Tutini and Verde, *Racconto*, 239-240.

⁸¹ Villari, *Per il re o per la patria*, 32-35.

historical works – and stressed the word “citizen” over “subject.”⁸² Tutini’s impassioned pamphlet of 1649 undoubtedly borrowed from these earlier works. The language was similar, and so were the justifications. In his Roman exile, Tutini wrote to encourage his cause by drawing implicit parallels between the Spanish betrayal in October 1647 – Don Juan’s attack – and the ongoing violence of the Count of Oñate in 1648-49. The Spanish thirst for blood had been proven back then, he implied, and it was being proven again.

Conclusion

Accusations of tyranny and grave injustices were all part of the early modern vocabulary of revolt. Other rebellions against the Spanish in the 1640s and 50s, in Catalonia and Portugal, for example, saw rebel leaders use similar attitudes and justifications to link explosions of popular fury with the objectives of political reform and independence.⁸³ The role Tutini imagined for himself in the bigger scheme – as did the rebel authors of the *Manifesto* – was to channel and direct the masses’ rage and political incompetence by showing that the models of justice and social and political equilibrium that the Spanish monarchy was supposed to embody were a tragic failure. Unfortunately, the alternative was a murky concept at best – some kind of republic governed in conformity with ancient institutions. In this regard, however, Neapolitan patriots were more effective at temporarily demolishing old ties than they were in erecting a viable alternative.

⁸² There is a single printed version of the *Cittadino Fedele* that survives – the rest were systematically destroyed by censors. It is in the Bibliothèque Mazarin, Paris: Ms. 5772. 26e. It is reprinted in full, with critical comments, in Villari, *Per il re o per la patria*, 39-57.

⁸³ Rosario Villari, “The Rebel,” in Villari ed., *Baroque Personae*, Lydia Cochrane trans. (Chicago and London: University of Chicago Press, 1991). 100-125.

The *Prodigiosi portenti del monte Vesuvio* offered no constructive advice, practical or more broadly theoretical, on how to form a new independent polity. It was simply an outraged expression of patriotic sentiment that appropriated Vesuvius as a distinct symbol of Neapolitan identity. More to the point, it grabbed the volcano back from those who would misuse it to suggest that volcanic fire was punishing the people of Naples for their sedition. Unlike the moralizing that occurred in 1631, when the viceroy was unanimously celebrated as an essential figure in evoking San Gennaro's aid, the terrible strife of the late 1640s had opened up a permanent rift between the Spanish and the most radical Neapolitan patriots. For them, Vesuvius had simply had enough, once and for all, of the foreign occupier.

Tutini, in particular, seems to have made the volcano a crucial symbol of belonging to an outraged Neapolitan nation. This chapter, however, has tried to show how the broader sense of identity he shared with a significant segment of his city developed in the first half of the seventeenth-century, and more precisely how the volcano fit in this picture. One clue as to why Vesuvius seemed to speak so forcefully to these matters has surely to be the fact that seventeenth-century people had an intense awareness of the volcano's extremes – far more so than in the preceding centuries of dormancy. The mountain's shifting positive and negative valences made it a natural symbol – literally – of a city everyone knew to be deeply troubled, but that many also imagined to have once been justly governed and free.

Tutini continued this conversation in his later years. This time, however, he was writing two decades after the revolt, still an exile in Rome. Some of the intense passion

of the late 1640s seemed to have faded, but he remained deeply committed to defending and promoting national pride. Around 1664-1665, he finished a manuscript entitled the *Anatomico discorso del Regno di Napoli*, a work he noted in the preface had been occasioned by disparaging comments about his city. His response aspired to be a complete description of the *Regno* that would silence its critics: ancient institutions, artists, scholars, monuments, commercial life, men of arms, and, importantly, nature.⁸⁴

“Finding myself distant from my *patria* and ever recalling the glories and beauties of the Kingdom of Naples, and the no less magnificent and illustrious Parthenope,” he wrote that he recognized that, “it was from time to time afflicted now by fires, now by rebellions, and by pestilence.”⁸⁵ This was the usual catastrophic picture that was part of the late 1600s retrospective on a difficult century. Tutini’s three types of calamities – which he called *morbi*, or “illnesses” – were identical to the ones identified by the historian Pietro Giannone, also an exile.⁸⁶ While remaining critical and bemoaning the continuing Spanish presence, the *Anatomico discorso* was, however, a more generally positive work.

In this later patriotic piece, occasioned by what Tutini called his, “duty owed to my *Patria*,” Vesuvius figured from the start, but it was now a more two-fold picture of the volcano that emerged. The agricultural and pastoral themes that described the mountain before 1631 returned to complement its vengeful side. It was an effective way to present the contrasts of his nation, which he had described earlier as having, “an abundance and

⁸⁴ BNN, Ms. Brancacciani II A8, ff. 3.

⁸⁵ Ibid.

⁸⁶ Pietro Giannone, *The Civil History of the Kingdom of Naples* (London, 1729). See chapter three.

superabundance of everything nature produces, and yet chooses to be slave to a barbarian people rather than govern itself.”⁸⁷

Surely, he still believed that the now distant eruption of 1649 had been an outburst of natural rage against the “barbarian.” He now chose to employ, however, a less angry representation of Vesuvius. Furthermore, the volcano was more generally emblematic of one of the things that made Tutini’s *Patria* better and more glorious than others – its natural wealth. He wrote, “the Kingdom of Naples is the most beautiful part of Italy, and all of Europe for that matter, and it was endowed by God with diverse natural gifts.” He went on:

Eight miles from Naples to the east there is a mountain four miles high, unattached to others and resembling a Pyramid. It stands out in the plain and is called Mount Vesuvius. It circuit is of twenty miles around which there are pleasant and delightful little towns ... this mountain is for a few miles covered in vines and fruit-bearing trees ... [but] the part that faces the sea is hollow and barren and covered with burned rocks and pumice because of the Fires that come from its breast.⁸⁸

The pages that followed this description were literally a record of what we might today call Mediterranean biodiversity, much of it lost in the modern age.⁸⁹

⁸⁷ BNN, Ms. Brancacciani V F3, ff. 127.

⁸⁸ BNN, Ms. Brancacciani II A8, ff. 27.

⁸⁹ Natural historian, author, and filmmaker David Attenborough’s *First Eden: The Mediterranean World and Man* (Boston: Little, Brown, and Company, 1987), based on a 1985 BBC series, offers an excellent introduction to the ecology of the Mediterranean. It should be noted that some historical ecologists contest what they dub the ‘Ruined landscape myth’ that is often applied to the Mediterranean. Such notions, they posit, are rooted in negative northern European attitudes toward landscapes that are not heavily forested and are therefore deemed barren and lifeless. For a provocative discussion and an outstanding survey see: A.T. Grove and Oliver Rackham, *The Nature of Mediterranean Europe* (New Haven: Yale University Press, 2001). Levels of biodiversity in the Mediterranean are among the highest in the world. Some 10% of all known plant species on earth (30,000) are found in the region, which comprises only 1.5% of Earth dry land. This can be compared to a mere 6000 species of higher plants in Europe outside of the Mediterranean basin. The same diversity is found among invertebrates: 75% of Europe’s insect fauna are endemic to the basin. Faunal diversity is also very high, with 366 bird species compared to 500 for all of Europe. The Mediterranean Sea is one of the richest in biodiversity in the world, though population sizes and biomass levels are much lower than the Atlantic Ocean, largely due to the

“The abundance and variety of fruit, both in summer and winter is something I can scarcely comprehend,” he declared in his description of the base of the volcano. He then composed lists of hundreds of distinct types of cultivars, from fruits to legumes. Wild game and domesticated animals figured as well, as did an unusually long accounting of every kind of fish known to be present off the waters of Naples. There was a very important reason why Tutini lavished so much attention and detail on the gifts nature had given his nation.⁹⁰

He deliberately paired each example of natural bounty with a trade or profession in the city – suggesting that if Neapolitans had been left to their own devices and justly governed, the lower classes would have been happy and prosperous, and not the ferocious mob they became in the late 1640s. He made comments of this sort below his lists, “there are two hundred shops in Naples that sell fresh fruit,” or, “what should I say of the fish market and the fish mongers who are over a hundred distributed throughout Naples.”⁹¹ These were loaded references any reader aware of the city’s politics would have immediately grasped. The revolt of 1647 began in a fruit market and was led initially by the fisherman Masaniello. Still an anti-Spanish commentary, Tutini’s late defense of his *patria* thus sought to upend the image of a people by nature poor and ragged. What was the implication? It was the barbarians’ fault.

absence of continental shelves and nutrient upwelling. It is, in short, a diverse but sparsely inhabited sea. It comprises .82% of the world’s oceans, but it harbors 18% of marine floral species, 13.6% of cartilaginous and bony fish species, and a remarkable 18.4% of sea mammal species. For these figures see: Jaques Blondel and James Aronson, *Biology and Wildlife of the Mediterranean Region* (Oxford: Oxford University Press, 1999), 57-82.

⁹⁰ BNN, Ms. Brancacciani, II A8, ff. 7.

⁹¹ Ibid.

The subterranean fires Tutini had once seen as portending the vengeance of an outraged people ultimately assumed a less overwhelmingly terrible aspect in the *Anatomico discorso*. The Campi Flegrei were a place “mother nature made for the physical good of the ill,” and, importantly even Vesuvius was “salutiferous, because in its bowels and subterranean veins it produces an oily liquid which flows into the sea and is called oil of petroleum.” Tutini was not a natural philosopher, and the consideration of volcanism’s natural causes – as opposed to its moral, political, and religious ones – generally escaped him. Definitely by the 1660s, however, Vesuvius and volcanoes in general had become the object of considerable scientific interest throughout Europe.

Chapter 5

Seventeenth-Century Natural Philosophers and Subterranean Heat

Beyond Vesuvius' positive and negative valences in European culture explored so far – Arcadian and pastoral landscape, castigator of Naples or alternately of Spanish tyranny – there remains another aspect to be considered: seventeenth-century scientific explanations of volcanic activity. After all, why had the eruption occurred, and by extension, why did other volcanoes do the same? As they probed these questions, natural philosophers considered volcanism over an increasingly broader arena, largely by observing similar places in the Mediterranean and even all over the world. Discussion about the newly active volcano fueled debates about combustion in the subterranean world and contributed to what may be termed a global model of volcanism. To date, these effects on seventeenth-century natural philosophy scarcely have been recognized.¹

Throughout the 1500s and the early 1600s, naturalists generally mentioned Vesuvius in combination with the Campi Flegrei, often doing so secondarily. The latter caldera in this period was generally deemed a more interesting place to consider subterranean heat. It contained Monte Nuovo (also known as *mons cineris*, or “ash mountain”), as well as solfataras, fumaroles, and thermal springs that always seemed to “burn,” unlike Vesuvius

¹ There is no better example of this than two studies of volcanoes in human history, both of which neglect the significance of Vesuvius' 1631 eruption almost completely. These are: Harald Sigurdsson's excellent *Melting the Earth* (Oxford: Oxford University Press, 1999) and Jelle Zeilinga de Boer and Donald Sanders' *Volcanoes in Human History: The Far-Reaching Effects of Major Eruptions* (Princeton: Princeton University Press, 2002). Sigurdsson writes: “It is remarkable that the cataclysmic eruption of Vesuvius in 1631 had little or no impact on the development of ideas regarding the origins of volcanoes or their inner workings. Contemporary natural philosophers made little mention of the event, nor did they discuss the unusual effects of the eruption on the surrounding area.” *Melting the Earth*, 100. This assertion is incorrect, and must surely reflect a lack of familiarity with the sources discussed below.

itself. Frequently, explanations of these places' "combustion" explored the properties of sulfur and other various minerals that were present wherever the earth crust was hot.

Empirical knowledge about sulfur and other combustible substances would greatly inform theories of volcanism a century later, meaning that there was a direct continuity between naturalists' study of the Campi Flegrei and the theories later developed to explain the eruption of Vesuvius. This suggests a more important point. Fundamentally, the debate about the materials combusted by volcanoes sprang directly from an ongoing dialogue between two sources of knowledge: the corpus of ancient science and the practical knowledge alchemists, metallurgists, and field naturalists had about mineral substances and compounds. Contemporary scientific explanations of Vesuvius' volcanism grew out of the conversation between two traditions. If it was still inconceivable to abandon the basic vocabulary of Aristotle's science, many of the key terms used to account for the mountain's recent activity also borrowed from pyrotechnics, mining, alchemy, and early chemistry.²

The seventeenth century was ripe with tensions between the received knowledge of antiquity and scientific know-how based on practice, observation and empiricism. Understanding this helps situate what follows, for it must be stressed that Vesuvius' paroxysm on December 16-19 1631 fueled a characteristically Baroque exchange between new and old ideas. Observers in this instance registered their place as autoptic

² Nancy Siraisi has pointed to a similar conversation – "constraints" and "opportunities" as she calls them – in Renaissance medicine. She notes that although sixteenth-century medicine was highly receptive to change, this change tended to involve the inclusion of new information rather than the abandonment of the old, as it also always involved an ongoing conversation with the canonical medical texts of antiquity – like Galen. See: Nancy Siraisi, *The Clock and the Mirror: Girolamo Cardano and Renaissance Medicine* (Princeton: Princeton University Press, 1997), 13-17.

observers, but the novelties of volcanism also encouraged, or really required, a conversation with the theories of ancient naturalists. The resulting dialectic between the two is amply recorded in sources that have been totally ignored by historians. Eighty-seven treatises and pamphlets were printed in late 1631 and early 1632 alone, compared to seven works on Vesuvius in the previous thousand years, most of these dating to late antiquity.³ A rich and complicated picture emerges, even if one only considers the most important of these treatises. Early modern natural philosophers were not about to toss out long-held beliefs about the earth, despite widespread enthusiasm for novelty.

Stresses and cracks formed when the weight of new observations strained established knowledge, but not enough to provoke the ruptures that had appeared in other fields of inquiry in the same years. This is something many narratives of the Scientific Revolution have suggested was the case, for example, with Galileo's astronomy.⁴ Simply put, classical models of volcanism largely withstood the shock of the volcano's first truly massive eruption since late antiquity. In fact, they were confirmed by it. The worldview that dominated European intellectual life well into the seventeenth century was still satisfied with many aspects of the Aristotelian-Ptolemaic-Galenic universe, even as these

³ Iaria Cerbai and Claudia Principe, *Bibliography of Historic Activity on Italian Volcanoes* (Pisa: Consiglio Nazionale delle Ricerche, Istituto di Geocronologia e Geochimica Isotopica Internal Report, 1996), 9.

⁴ Alexandre Koyré was one influential historian of the 'Great Tradition' in the history of science who argued that Galileo came close to the 'essence' of the Scientific Revolution. See Koyré's *Galileo Studies*, trans. John Mepham (Atlantic Highlands, NJ: Humanities Press, 1978; orig. publ. 1939). Revisionist approaches to the history of science and to the Scientific Revolution have tried to move away from narratives of triumph of the sort suggested notably in Herbert Butterfield's *The Origins of Modern Science, 1300-1800*, rev. ed. (New York: Free Press, 1965, orig. publ. 1949). More recent historiographical revisions and debates are covered well in Steven Shapin's, *The Scientific Revolution* (Chicago and London: University of Chicago Press, 1996); see especially the bibliographical essay, 168-211.

ideas were being in some places dismantled. This shared intellectual inheritance continued to offer, overall, a convincing account of the earth's inner workings.⁵

The persistence of ancient models of the earth can be observed in many places. For starters, geology was not a distinct science throughout the early modern period, nor would it be until well into the eighteenth century. From antiquity through most of the 1600s, thinking about the nature of the earth often referred to the cosmos as a whole, emphasizing, consequently, cosmology rather than geology. In the seventeenth century, geological phenomena were still being separated from the cosmological system constructed by the ancients, which collapsed everything from meteorological effects to earthquakes and volcanoes into one.⁶

With reference to the broader context of contemporary natural philosophy, some historians have argued that René Descartes (1596-1650) was among the first to disengage geology from this ancient cosmology. In his *Les météors* (1637), Descartes distinguished meteorological phenomena on the one hand, and earthquakes and minerals on the other, rejecting the Aristotelian paradigm completely.⁷ Emphasis on ruptures of this sort have tended to produce a particular picture of the Scientific Revolution, stressing that a radical change occurred in the way Europeans thought about nature during the 1600s. From a

⁵ William Eamon, "The Scientific Renaissance," in Guido Ruggiero, ed., *A Companion to the Worlds of the Renaissance* (Oxford: Blackwell, 2002), 403-424.

⁶ Gabriel Gohau, *A History of Geology* (New Brunswick and London: Rutgers University Press, 0), 1-3.

⁷ Nicoletta Morello, "Nel corpo della Terra. Il geocosmo di Athanasius Kircher," in Eugenio Lo Sardo, ed., *Athanasius Kircher. Il museo del mondo* (Rome: De Luca, 2001), 179-196. Gohau argues, for example, that Descartes' *Principes de la Philosophie* (1644) framed studying the physical creation of the earth in a way that ruptured the closed universe of the ancients, and applied the principles of 'mechanical' philosophy to the earth. See: Gohau, *History of Geology*, 37-46. Oldroyd, while recognizing the significance of the mechanical philosophers, argues for the perseverance of older 'organic' theories in many approaches to the earth, including those in Athanasius Kircher's *Mundus Subterraneus*; see David Oldroyd, *Thinking About the Earth: A History of Ideas in Geology* (London: Athlone, 1996), 43-50.

certain perspective, this was the period when the new science ushered in by the likes of Francis Bacon, Galileo Galilei, René Descartes, and Isaac Newton gave greater clarity to the models and language used to understand the phenomena of nature.

A simplified picture may go something like this. Experimental and mathematical ways of proceeding gained precedence, observations became more exact, and a new social system was developed for the production of knowledge. Science came to be legitimated by a well-patronized system of academies that published their research for the scholarly public.⁸ Correspondingly, the old system of virtues, sympathies and correspondence, dominated by occult powers and forces, declined. All the same, this gratifying story is not without its flaws, as we can see when it is related to the sciences of the earth and volcanoes.⁹

Observation certainly mattered, and increasingly so, but for a considerable time and in many fields of inquiry, the new was comfortably folded into the old. Classical paradigms fragmented in many places, but only when the accumulation of novelties – especially those in the heavens – made it seem unlikely that classical cosmology could possibly embrace all that had been discovered. When it came to volcanoes, for the time being, Aristotelian and later Roman theories held surprisingly well. They were resilient enough to contain a flood of new observations, generally speaking.

⁸ Rhonda Rappaport has studied the exchange of information among the scientists and academies as it relates to the development of the geological sciences in the later 1600s. The ‘republic of letters,’ as it was commonly imagined, idealized the search for truth and frank communication with colleagues across multiple boundaries: confessional, political, and linguistic. She identifies the creation of journals – such as the *Journal des Savants* (Paris) and the *Philosophical Transactions* of the Royal Society of London – as creating an important medium for the exchange of scientific information, even as unavoidable conflicts and biases persisted. See: Rhonda Rappaport, *When Geologists Were Historians, 1665-1750* (Ithaca: Cornell University Press, 1997), 7-40.

⁹ Oldroyd, *Thinking About the Earth*, 43.

Natural philosophers, however, were increasingly conversant also with the practical knowledge of artisans and field naturalists, whose collections and expertise – mineralogy, pyrotechnics, alchemy, metallurgy, and chemistry – complemented the classical canon on volcanoes, and even drove it to the limits of heuristic currency. This is where one should situate the shifting conceptions of Vesuvius and volcanism in a bigger picture.

Broader trends in early modern natural history were thus influenced the way seventeenth-century observers processed the strange effects witnessed when volcanoes erupted. The increasing reliance naturalists placed on experience, observation, and the collection of plants, animals, minerals, fossils, and similar natural objects, frequently situated the investigation of nature outside the categories of classical science. Aristotle, for example, had scarcely distinguished between earthquakes and eruption, and this dissatisfied a number of authors writing on Vesuvius. The sources considered below point to a specialization and sophistication undoubtedly stimulated by the mounting obsession with *fare esperienza*. Applied to the earth and its phenomena, the practices of field collection and museum display produced a movement toward the evolution of distinct themes of study: fossils and their formation, the related question of why fossilized shells were found atop mountains, the morphology of terrain, and, I would argue here, the study of what volcanoes “burned.”¹⁰

This partly explains a palpable interest in treatises on volcanoes, many with titles along the lines of “The Fire of Vesuvius,” or “Natural Discourse on the Causes and

¹⁰ Nicoletta Morello, “Nel corpo della Terra,” 184. See Paula Findlen’s groundbreaking study of natural history: *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994). Findlen argues for the tremendous importance of collecting and early museums as the set of practices and the loci of learning, respectively, that contributed to the growth of the natural sciences in sixteenth and seventeenth centuries.

Effects of the Conflagration of Mount Vesuvius.” Here the particular manifestations of one volcano intersect with important transformations in European attitudes toward nature for the first time. There is no doubt that after 1631, thanks directly to Vesuvius, volcanic phenomena assumed greater epistemological distinction.

The novelty of geology in this period, however, complicates matters a good bit. Ulisse Aldrovandi's (1522-1605) *Geologia, ovvero de Fossilibus* (posthumous, 1648) was among the first to widely employ the term, but in a way that reflected contemporary hierarchies and priorities of knowledge. Its subject was fossils and minerals, and one of the big questions of the day: distinguishing between organic and inorganic matter. Furthermore, it was a sub-section of a greater work entitled the *Musaeum metallicum*. Around the same time, the first part of the 1600s, the Neapolitan natural philosopher Ferrante Imperato (1550-1625) offered a few important considerations on Vesuvius. These were also buried, characteristically, in a monumental study on minerals.¹¹ The opening portions of this chapter will weigh the differences between this latter work, in particular, and the seventeenth-century treatises that followed.

Explanations of volcanic activity were multiple variations on a common theme. Most will strike the modern reader as strange but commonsensical – familiar as we now are with the theory of plate tectonics and subduction zones, concepts scarcely fifty years old. For early modern Europeans, however, volcanoes were like great furnaces, composed of an incredible variety of substances, and ignited by a plethora of causes. The

¹¹ Ferrante Imperato, *Dell'istoria naturale. LibriXXVIII nella quale ordinamente si tratta della diversa condition di miniere e pietre (con alcune historie di piante e animali fin'hora non date in luce* (Naples: Costantino Vitale, 1599).

theories they elaborated bore the unmistakable stamp of classical science, but they also shifted the question of subterranean heat on two levels. One direction was toward the level of particulars: toward specific knowledge about the qualities of minerals substances that in turn supported an accompanying model of “chemical” ignition. The other was global: volcanoes as universal features of the earth.

The reader should also note the close coincidence of dates between the eruption and key events in the history of the sciences in Italy. In 1630, the founder of the Accademia dei Lincei, Federico Cesi, died. The premature death of a naturalist who did much to support the advancement of learning in botany and astronomy in particular, was a sorely felt blow. The Church formally condemned Galileo in 1633 for stubbornly promoting the Copernican model of a heliocentric universe. The debate on volcanoes and what lay inside the earth, as opposed to beyond it, never approached the importance of that on the heavens, but its lesser stature is an interesting part of the story. It’s worth considering what place investigating Vesuvius and subterranean heat held in the ambitious projects of the Lincei, even where Naples – with its rich scientific tradition and exciting natural places – fit into their picture. I ask how interested Cesi, Galileo, and their Lincean colleagues might have been in what they called *vulcania*.

To wonder whether the Lincei would have turned their focus on Vesuvius had Cesi lived and Galileo not fallen out with Urban VIII is not likely to yield a definitive answer. Posing the question, however, gives further shape to the volcano’s stature in the scientific culture of seventeenth-century Italy, and suggests that even though the greatest novelties

lay in the heavens, many valued studying the earth and volcanoes. Furthermore, they thought that Naples was a great place to do so.

Intellectual Contexts and Early Explanations

Treatises on the eruption of 1631 offer a precious record of seventeenth-century theories on volcanism. Natural philosophers asked a number of specific questions about the volcano's conflagrations, as they imagined them. These now seemed to be ignited in rapid succession. In fact, Vesuvius erupted again in 1649, 1660, 1680, 1682, 1685, 1689, and 1694 – though with far less force. Understandably, the most pressing concern had to do with explaining the mountain's seemingly inexhaustible source of heat, but other questions also appeared logical. What was the nature and composition of the combustible material ignited by the earth's heat? Why and how did volcanoes expel ash, rocks, and lava? What was the origin of the destructive floods that swept away entire towns in flows of liquid mud?¹²

When the first burst of scientific writing on Vesuvius occurred in the early 1630s, explaining volcanoes seemed largely a matter of situating their effects within cosmological model of the Aristotelian universe. According to the ancient Greek philosopher, the cosmos formed a great sphere at whose center sat the earth, while the sun, the planets, and the stars revolved around it in a uniform circuit that defined the length of the days and nights. Matter below the moon was subject to generation and decay; above the moon, everything was ungenerated and indestructible. In the sublunary

¹² Antonio Nazzaro, *Vesuvio. Storia eruttiva e teorie vulcanologiche* (Naples: Liguori, 2001), 74.

sphere, all was composed of the four elements: earth, water, air, and fire. A fifth element, of which the incorruptible heavenly bodies were composed, inhabited the celestial sphere. Importantly, the positioning of matter in the universe reflected the hierarchy of the elements, with earth tending toward the corrupt center, fire aspiring upward.¹³ With the accompaniment of Ptolemy's astronomy, this cosmology presented a sophisticated account that embraced everything from the heavens to terrestrial phenomena.¹⁴

Briefly, how did a cosmos thus structured translate into seventeenth-century theories about the earth? As it was described in the Aristotelian model, volcanism was ultimately an example of the habitual longing of the elements to be in their natural place, as well as of their perpetual conflict with each other. This motion was caused by the tendency of things to move toward matter of similar substance and qualities. Heavy, earthy things, for example, moved toward the center of the universe, while fiery things moved upwards toward the heavens. In the *Meteorologica*, Aristotle argued that earthquakes were the result of exhalations that flowed in and out of the earth as subterranean winds. Dry and hot exhalations (*pneuma*) trapped beneath the crust shook and pressed the earth as they sought to rise. Their movement became particularly violent in places where the crust was porous, cracked, and full of caverns and tunnels. This attempt of hot vapors to rise toward its natural place could also, if material to burn was present, ignite subterranean

¹³ Bertrand Russell, *A History of Western Philosophy* (New York: Simon and Schuster, 1972; orig. publ. 1945), 203-207.

¹⁴ Eamon, "Scientific Renaissance," in *Worlds of the Renaissance*, 403-407.

fires. Conceived in this fashion, volcanism was limited to being the accident of forces that commonly created earthquakes.¹⁵

Aristotle, however, also intuited that the existence of volcanoes had to be connected to the earth's inner fires. This logical assumption was developed even further in the Roman period. Reasonably, if exhalations from the crust to the atmosphere caused eruptions, it made sense to locate the sources of volcanism near the surface of the earth. Largely influenced by examples of volcanism in southern Italy, Roman authors thus postulated that the cores of volcanoes were vast (but likely finite) accumulations of material, concentrated in regions where the earth's crust was particularly cavernous. Latin sources on volcanic activity were deeply influential in the seventeenth century, for a number of good reasons. Complementing Aristotle's more general model, they provided direct information about specific volcanic regions in the Mediterranean basin and addressed directly the question of fuel. The Roman vision was particularly close to proclivities of early modern naturalists.

The most advanced Latin theory on volcanism was elaborated by Seneca (ca. 2 B.C – 65 A.D.), a playwright, philosopher, and the political advisor of Nero. Seneca's idea of volcanic activity built on Aristotle's notion of subterranean winds, but also complemented it on one crucial point. He attributed the heat liberated from volcanoes to their internal combustion of sulfur and other flammable materials stored in large deposits beneath the crust. The ignition of these substances was the result, he argued, of the

¹⁵ Aristotle, *Meteorologica* (London: Loeb), II, 8, 367.

friction caused by onrushing winds. Well past the seventeenth century, volcanism often amounted to telluric flatulence setting off fires beneath the crust.¹⁶

Throughout antiquity there were only slight divergences of opinion on this basic model. Well before Seneca, the philosopher Lucretius (95-52 B.C) compared volcanoes to huge furnaces, whose fires could find their way to the surface.¹⁷ In another example, the anonymous first century AD Latin poem *Aetna* emphasized the pressure built up by massively powerful winds that flowed into the volcano from underneath, on all sides. The geographer Strabo reasoned that something similar happened also in the Aeolian archipelago, while Vitruvius stressed the combustion of the usual trilogy of substances (once again sulfur, bitumen, and alum) accrued in caverns.¹⁸

Intensified volcanism in the Campi Flegrei in the 1530s offered a minor preview to Vesuvius' seventeenth century activity, causing contemporary observers to dust off these ancient theories. Simone Porzio's *De Conflagratione Agri Puteolani*, for example, described the creation of Monte Nuovo in largely Aristotelian terms. Porzio concluded that the eruption was a conflagration ignited by the passage of the earth's 'humors,' though he also borrowed the Roman notion of a furnace.¹⁹ It is not surprising, considering the ceaseless volcanic activity in the Campi Flegrei, that in the final decades of the sixteenth century Naples claimed one of Europe's most distinguished experts on geological marvels, minerals, and the earth's inner fires.

¹⁶ Sigurdsson, *Melting the Earth*, 47-50.

¹⁷ Lucretius, *De Rerum Naturae* (London: Loeb, 1975), VI, 685-702.

¹⁸ Ellenberger, *History of Geology*, 41-45.

¹⁹ Simone Porzio, *De Conflagratione Agri Puteolani. Simonis Portii Neapolitani Epistola* (Florence: Lorenzo Torrentini, 1551). This is discussed in Chapter Two.

The Italian authority on volcanoes before 1631 was Ferrante Imperato, a renowned collector, museum owner, and natural historian with broad interests. Unfortunately, he died only a few years before Vesuvius' paroxysm, and one can only imagine how much he would have relished explaining the mountain's ferocious explosion. His brief analysis of volcanism was formulated largely with the Campi Flegrei in mind, but it was, along with Porzio's *De Conflagratione*, one of the most immediate precursors to the seventeenth-century works dedicated to Vesuvius. Notably, Imperato's conclusions also point to the growing tensions between the knowledge of the collector and the authority of the ancients. This was a dialectic resolved, often, still in Aristotle's favor.

The sum of Imperato's knowledge on mineralogy was crammed into a fascinating book, the *Historia Naturale* (1599), concerned with the immense variety of stones in nature. Obviously, considering volcanoes was a small part of the natural philosopher's greater project, as the topic only came up when he considered the various qualities of substances like sulfur and alum. Ferrante's assumption, shared by later natural philosophers, was that volcanoes could be understood by considering the substances they burned in their huge furnace-like interiors. It was an important intuition, but by no stretch an original one. What Ferrante brought to the discussion was a collector and field naturalist's knowledge.

The Italian naturalist's contributions to sixteenth-century natural history in general were notable. This was true particularly in the realm of collecting *naturalia*, gathered and displayed in his celebrated museum. Importantly, collectors like Imperato made of antiquities, art, exotica, and natural things – like minerals and fossils, for example – the

objects and building blocks of knowledge. In a way reminiscent of Pliny's encyclopedic vision of nature that embraced everything worth knowing, Imperato fashioned his book into a literary version of his real-life museum. Ultimately, only rocks and minerals made it into the *Historia Naturale*, possibly because the naturalist was pressed for time.²⁰

Historians have suggested that the voluminous work was a good example of the effort to manage the expansion of knowledge resulting from both the wider availability of classical texts and the empirical information being compiled by Europe's energetic naturalists, among whom Imperato certainly counted himself.²¹ The *Historia Naturale* was largely concerned with the materials of nature, even if it did not embrace the full range of the naturalist's real museum collection. Folded into long and sophisticated explanations of minerals and the formation of fossils there were also significant passages on the movement of humors through the earth's crust, and the sources of underground heat.

The tenth book in Imperato's study of minerals was entitled "In Which We Consider the Generation of Subterranean Fires: and Their Various Effects, that Elementary Bodies, from the Force of Fire, and Light Originate." The naturalist began with the observation that underground fires burn where there was alum, sulfur, and bitumen available for combustion, though he recognized that understanding this did not resolve two pressing issues. These were how fires started, and how they kept burning. In the bigger picture, subterranean conflagrations possibly pointed to a constant presence of

²⁰ Paula Findlen, *Possessing Nature*, 3.

²¹ For Imperato's place in the development of earth sciences see: Bruno Accordi. "Ferrante Imperato (Napoli 1550-1625) e il suo contributo alla storia della geologia." *Geologica Romana* 20 (1981): 43-56.

heat in the earth. Resorting to a microcosm/macrocosm analogy Renaissance natural philosophers often employed, Imperato argued that just like the human body was warm in its core, perhaps so too was the earth. He did not, however, go much further than this explanation, limiting himself to the observation that, “in all the earth the internal heat is gathered in its most intimate parts.”²²

Understandably, Imperato found the examples closest to home to be the most compelling evidence of the earth’s inner warmth. He observed that Pozzuoli, “surrounded by mountains similar to a Theater,” was one of the principal places in the world where ‘fires’ (he used alternately the words *fiamme*, *fuochi*, and *incendi*) habitually broke through the crust of the earth. In the section that followed in the *Historia Naturale*, the natural philosopher offered some further conclusions on why it was that the Campi Flegrei, the nearby island of Ischia, Etna in Sicily, and, importantly, Vesuvius, either were burning, or had once done so in the past.

Ultimately, Imperato must have felt that he had to offer another cause for the fires, suggesting that he was uncertain about a definitive explanation. Thus, although he argued for the existence of some “inner heat” intrinsic to the earth, he considered other options. Among these was the possibility that the reflection of the sun’s rays heated reservoirs of marine water contained in the hollowness of certain mountains. The resulting heat, blocked by the coolness of the sea itself, chose the most rapid exit:

²² Imperato, *Historia Naturale*, 255.

fractures in the earth and fire-spewing mountains. This, he suggested, explained why volcanism existed near the coast or on islands.²³

Despite the grab-bag nature of his argument, Imperato should be credited for having touched on an important concept with some clarity. It was an idea that would seem all too apparent after 1631: dormancy and cycles of activity. He noted the following: “there are some places that for a long period of time show no sign of flame, and then after a long rest hugely powerful fires burst forth from them. Such a place is our mount Vesuvius.” He had no answer as to why this occurred, though his immediate comparison to the “mountain said of ash near Pozzuoli, which was first a plain, then built up suddenly and vomited flame, and then there remained a cavity similar to that of Vesuvius,” possibly suggests that he believed that it took a long time for flammable materials to accrue again.²⁴

Imperato’s oblique interest in volcanism is characteristic of the period before 1631. The Neapolitan naturalist found some occasion to discuss volcanoes because heat and fire related closely to the broader field of inquiry of how one classified minerals and determined their composition. As he was well aware, a great deal of empirical information on the subterranean world came from artisan practices like metallurgy and mining, which involved high temperatures and ores. Ferrante was familiar with number of sources, notably the German scholar and miner Agricola (Georg Bauer, 1494-1555), author of the posthumous *De re metallica* (1556), who had also theorized about the combustion of minerals beneath the earth’s crust.

²³ Ibid, 270.

²⁴ Ibid, 255.

Like the Italian, who declared decades later that, “since Aristotle discussed these matters, I will begin with what he says,” Agricola relied on ancient science, but he challenged many assumptions using the practical knowledge of the miner and artisan. Still faithful to Aristotle’s four basic elements, for example, he accounted for the differences in the external characteristics of minerals based on their varying proportions of earth, water, air, and fire. In an earlier work, aptly titled *De ortu et causis subterraneorum* (1546), he also postulated the existence of a *succus lapidescens* (usually translated as ‘lapidifying juice’) that was produced by the cooking of dry and humid materials by heat. Mineral and stony matter resembled the excretions of the living body, or “humors.” The earth, in certain places, could become fat and moistened, or lean and brittle. Accounting for the tendency of certain places to erupt into flames was a matter, presumably, related to determining the composition of the underlying mineral matter.²⁵

The attempts to explain volcanism *after* 1631 worked off of the same basic assumptions employed by Agricola and Imperato earlier, but shifted significantly both in terms of precision and scope. Historians discern a mounting sophistication in earth sciences by the end of the seventeenth century, but have scarcely noticed Vesuvius’ place in this process. The rest of this chapter works to bring it into the fold. It would be tedious, however, to work systematically through all the treatises on the volcano, as these numbered in the hundreds just in the first half of the 1600s. What follows reflects an effort to select some of the most significant examples of how contemporary natural philosophers approached the subject. This analysis, therefore, is selective and thematic,

²⁵ Oldroyd, *Thinking about the Earth*, 33.

rather than comprehensive. It is focused on some of the sources most immediate to the event itself, and then moves to explore how theories elaborated in the 1630s fared in the following decades, most notably in Athanasius Kircher's *Mundus Subterraneus*.²⁶

Subterranean Heat and the Fires of the Earth

The scientific treatises written in the early 1630s reveal no small measure of confusion as to what exactly a volcanic eruption was. Was it a fire, that is, an *incendio* or *conflagratio*? Was it an earthquake, a *terremoto*? Both? Understandably, much of the phenomenon's puzzling nature could be resolved by applying these familiar terms, and by folding the whole question into the Aristotelian paradigm. This is exactly what the priest Don Pietro Asterio did in a treatise, published that year, with a revealing title: *Discorso Aristotelico intorno al terremoto novamente accorso nella Fedelissima Città di Napoli alli 16 del mese di Dicembre 1631*.²⁷

The frontispiece of the work was illustrated with an engraving of a fiery Vesuvius, and in Latin, the phrase *terrat et illuminat*: "it dismays and illuminates." There was no reason, Asterio argued in the preface, to remain in the state of dismay that had overwhelmed so many, especially the most simple inhabitants of Naples. More importantly, with careful consideration, it would be possible to derive an explanation for

²⁶ In the late nineteenth century, the Italian historian Luigi Riccio compiled the first bibliography of Vesuvian texts published shortly after 1631, as well as manuscripts sources. This includes Manso's important letter on the eruption. See: Luigi Riccio, "Nuovi documenti sull'incendio vesuviano dell'anno 1631: e bibliografie di quella eruzione.," *Archivio storico per le provincie napoletane* 14 (1889).

²⁷ Don Pietro Asterio, *Discorso Aristotelico intorno al terremoto novamente occorso nell Fedelissima Citta di Napoli alli 16. del mese di Dicembre 1631. Nel quale si dimostra la vera causa di questo Terremoto con il secreto per provvedere accio e tempi avvenire non caggioni alle rovine*. (Naples: Francesco Savio, 1632).

so much ruin and even, possibly, predict similar occurrences in the future. Nor “should it cause marvel to see,” wrote the priest, “that this work curious about the secrets of nature adds itself to the institution of pious fathers.” He asserted that the volcano’s recent activity could be defined both as an earthquake and a fire, suggesting that the first preceded the latter. Very directly, he was borrowing from both Aristotelian and Roman notions.²⁸

Both traditions spoke of earthquakes and fires, but how the two things were related was a difficult knot to untangle and not something the ancients had really explained adequately. Ultimately, Asterio tended to collapse the two things together. In a section entitled “Declaration on the causes and effects of this earthquake,” he likened Vesuvius to a gigantic furnace, “with a propensity to burn, when combustible material is accumulated in it, and there is fire to light it.” He could not, however, neglect the earth’s tremors, as these had accompanied not only the eruption, but also the weeks preceding it. This “passion of Naples’ terrain” showed that the entire region surrounding the city concealed “in its bowels a mover of great violence.”²⁹

Asterio’s difficulty in determining what exactly this ‘great mover’ was points to one of the huge frustrations felt by contemporary scholars. Although Vesuvius had given them an opportunity to experience a volcano first hand, they were severely limited in how deep their observations went. They obviously recognized that this was not very far at all. For this reason, they would be incessantly plagued by uncertainty concerning the limits of subterranean heat. Simple scrutiny from the earth’s surface suggested, as it had to the

²⁸ Asterio, *Discorso Aristotelico*, preface.

²⁹ Ibid., 22-23.

ancients, that heat did indeed exist in the earth. Did this heat extend to its very bowels, where not even the most daring naturalist had any hope of making any kind of observation? Was it closer to the surface, as some Roman naturalists had argued? How could this heat exist without air and without exhausting its fuel supply? Presumably, the long silence of some volcanoes suggested that the latter did, periodically, run out. Did there exist, as Imperato had suggested earlier, caverns of water capable of both exciting heat (when heated by the sun) and extinguishing it?³⁰

As it turns out, there were more sophisticated explanations than Asterio's. In general, natural philosophers started with the assumption that the material cause (an Aristotelian term) of the heat could be located in some kind of bitumen or sulfur compounds. Logic demanded that something had to be burning inside the crater. These minerals seemed likely culprits, as they were commonly found nearby, and they had been associated with volcanic activity at least since Seneca. The problem of sorting out their exact nature, as well as locating their placement beneath the earth thus presented itself as one of paramount importance. In this matter, other sources of knowledge were as useful as anything the ancients had imagined.

Pyrotechnics, mineralogy, metallurgy, fossil hunting, alchemy, and primitive chemistry offered ways to fill in the basic structure established by ancient theories – volcanoes as furnaces – with expanding knowledge of the “materials” of nature.³¹ The

³⁰ Rhappaport, *When Geologists Were Historians*, 180-183.

³¹ Alchemy – defined in the strictest sense as the effort to transmute base metals into gold with the aid of a “philosopher’s stone” – provided a wide base of chemical knowledge. Alchemists also contributed to the basic image of volcanoes as furnaces, places where substances were heated and transformed. See: Sigurdsson, *Melting the Earth*, 79-83. On early practices related to chemistry, see: Paolo Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico* (Chicago:

decay of organic matter, for example, was closely identified with the formation of mineral substances like bitumen, which was one of the things presumably raging in the volcanic “furnace.” Tellingly, some of the most sophisticated students of Vesuvius’ eruption were doctor naturalists familiar with the qualities of organic and inorganic matter, from which they generally sought to derive a way of “healing” human, animal, and metallic bodies, often by alchemical means.³² Two of these doctors were Scipione Falcone and Pietro Castelli.

That plants, fossils, minerals, and the burning of volcanoes could be related issues did not suggest any impossible contradictions to these naturalists. After all, the boundaries and distinctions between organic and inorganic matter were still very much being explored, and hotly debated. Federico Cesi, among the most important botanists of the 1600s, felt that the question of how one differentiated between the organic and the inorganic flowed into central preoccupations: the generation of matter, reproduction, and how things ought to be classified. Things like petrified wood, for example presented a baffling sort of problem, as they seemed to occupy a kind of “middle nature.” Importantly, Cesi identified *officinae naturae*, or ‘workshops of nature’, where such

University of Chicago Press, 1984). Rossi writes: “It makes no sense to speak of seventeenth-century astronomy and the chemistry of the same century on the same plane or within one global argument. Astronomy had for some time possessed a highly organized theoretical structure, it made use of sophisticated techniques, and in 1543 it underwent a radical turning point, which was followed, not preceded by an enormous job of acquisition of factual material. Chemistry in the seventeenth century had no organized structure as a science, it possessed no coherent theory of changes and reactions, and it had no definite tradition behind it: craftsmen and artisans had at their disposal a much more ample array of chemical knowledge than the natural philosophers.” Ibid, viii.

³² The association between alchemy and medicine was a strong one in the period. See: Tara E. Nummedal, “Practical Alchemy and Commercial Exchange in the Holy Roman Empire,” in Paula H. Smith and Paula Findlen, ed., *Merchants and Marvels: Commerce, Science and Art in Early Modern Europe* (New York and London: Routledge, 2002), 201-222.

things could be produced. One of these was the *ignificium Puteolarum*, presumably the Solfatara crater near Pozzuoli (visited by Cesi in 1604).³³

It was in the context of these debates that Scipione Falcone, author of the *Discorso naturale delle cause et effetti causati nell'incendio del Monte Veseo* (1632), stressed his expertise as a *spetial di medicina*. Surely, this was meant to suggest not only his expertise on plants and their medicinal uses, but chemistry and the transmutation of organic and inorganic substances as well. Showing visibly the continuities that existed with the accomplishments of the previous decades, he emphasized his knowledge of minerals with the requisite gesture to Ferrante Imperato's *Historia Naturale*.

It is partly from the latter naturalist that Falcone derived the opening remarks of the final, and most extensive section of his book, entitled "Natural Discourse." Reflecting a hierarchy most authors scrupulously observed in chronicling the recent eruption, the discourse on natural causes only came after a narrative of the cataclysm's effect in Naples. Falcone obligingly recounted the great procession led by Cardinal Buoncompagno, and highlighted the miracle of San Gennaro. When he finally turned to the volcano's inner workings, he announced the following:

I declare that beneath this mountain, both in its superficial bowels, and those most deeply placed and central, matter aggregates, sometimes united, other times disunited, which from time to time fire ignites; and the longer the passage of time, the more matter aggregates, and so it is that some ignitions have been small, others huge.³⁴

³³ David Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: University of Chicago, 2002), 305-345.

³⁴ The first part of the paragraph reads as follows: "Al cui principio per fundamento reale, dico che sotto quell monte tanto nelle viscere superficiali del monte quanto nelle centrali profonde, si vadi aggregando materia, alcune volte disunita, alla quale poi da tempo in tempo s'accendi il fuoco; e quanto più sia la distanza del tempo tanto maggior quantità di materia si vadi aggregando." Scipione Falcone, *Discorso*

Essentially, these were the same conclusions drawn by Imperato regarding Monte Nuovo and the subject of volcanic dormancy, but what followed was a more detailed set of reflections and theorizing than anything attempted by the author of the *Historia Naturale*. Falcone's analysis had all the basic outlines of the growing scientific debate on subterranean heat.

If Falcone felt certain about the fact that there had to have been a considerable amount of stuff built up for Vesuvius to burn, he was less confident as to its composition, and even less secure about knowing why these fires started in the first place. Very tellingly, he reasoned that any number of things could have caused the eruption. Again, his words deserve a close reading, because they point to one of the hugely frustrating aspects of Vesuvius as an object of contemporary science:

Before continuing, it seems necessary for me to declare how this fire ignited these substances. For this reason, I say that it could have been an underground fire that ignited it, or perhaps some effect of a fixed star, or wandering one, like a crystal mirror in the Sun that ignites fire. Or perhaps, it might have occurred through Antiperistasis of contrary qualities as air vapors; or perhaps subterranean sulfur vapors. Or perhaps it was the concussion of rock against rock, as we might strike a flint stone. Be what it may, I did not see it.³⁵

naturale delle cause et effetti causati nell'incendio del Monte Vesevo con relatione del tutto di Scipione Falcone Spetial di Medicina Napolitano, ed. Ottavio Beltramo (Naples, 1632)., 4

³⁵ "Ma pria di passar più oltre, necessario parmi dichiarare, come questo fuoco si fosse acceso a questa material: perciò dico che può esser stato fuoco sotterraneo, che l'habbi acceso. O pure qualche aspetto di stella fissa, ò stella errante, a modo del specchio di cristallo nel Sole, che accende il fouco. O pure, per l'Antiparistasi nelli contrarii a guisa delli vapori nell'aere. O pure vapori solforei sotterranei. O pure per concutimento di pietra con pietra, come noi battemo la focara con il ferro. Ma sia, come egli sia stato, io non l'ho veduto." Falcone, *Discorso Naturale*, 6. Antiparistasis was an Aristotelian concept whereby the intensification of a quality could be occasioned by its being surrounded by an opposite quality, as supposedly occurred with the sudden heating of a warm body when in contact with cold. Presumably, what Falcone meant was the superheating of hot air vapors surrounded by colder ones, in this case imagined to exist because of the volcano's close proximity to the cool sea.

“I did not see it.” Indeed, Falcone emphasized the impossibility of actually observing what made volcanoes work, for the obvious reason that their insides were totally hostile. Limited in this way, he grappled with the Aristotelian distinction between material and efficient causes. The former could be identified in the matter accrued around inert volcanoes, or in the substances hurled by live ones, but the operation of the latter – the spark, so to speak – was clearly beyond the limits of observation. In short, Falcone felt he could identify the tinderbox, but not so readily the match that struck it.

The material causes of the eruption, however, could be detected, Falcone argued, especially by studying the rocks and minerals naturalists had collected both on Vesuvius and in the Campi Flegrei, and by considering the volcano’s proximity to the sea. He wrote, “I say that the matter that keeps the mountains in Italy burning, and maybe all the other ones that from time to time are said to ignite (like the present Vesuvius) are certain fatnesses of the earth, generated beneath the sea.”³⁶ The process he imagined worked as follows.

Thanks to the inflow of rivers, and sewers, even the dumping of human and animal cadavers – all presumably common near a city of three hundred thousand people – the seafloor in the Bay of Naples, as in other similar places, was a sort of fatty and oily sludge. Falcone reasoned that these oily substances, light as they were, were nonetheless prevented from rising to the surface by the pressure of the water above them. Thusly compressed, they were literally squeezed back underneath the littoral, permeating

³⁶ “Dico che le materie le quali tengono accesi li monti d’Italia, e forse tutti li altri, e che da tempo in tempo possono esser accesi (come al presente il Vesuvio) sono grassezze terre, generate sotto il mare.” Ibid, 5.

fractures and caverns beneath the shoreline. Where these openings did not exist, the ‘fatnesses’ (*grassezze*) remained trapped under the sea. This clearly was not the case near Vesuvius, nor, for that matter, near the Campi Flegrei. Huge caverns must have taken in this sludge, which would in time cause the volcano to explode, presumably after it dried into stores of combustibles.

This remarkable theory – which is also suggestive of how proximity to rot and putrefaction were ever-present features of life in seventeenth-century Europe – still left the naturalist facing a bewildering number of options as to what exactly these ‘fat’ substances were, and especially which ones were most responsible for the recent eruption. Falcone sorted through different substances systematically, excluding some and accepting the presence of others. He concluded, for example, that sulfur was not the primary mineral combusted in Vesuvius’ great conflagration, although he reasoned that this mineral was largely responsible for the eruptions and constant heat of the Campi Flegrei. A number of observable features of Vesuvius’ eruption led him to this conclusion, most significantly the massive presence of water in the recent cataclysm – the flows of *lahar* caused by the rupture of aquifers and the downpours induced by the huge quantities of ash in the atmosphere. Just as significantly, Falcone felt, no one had reported a strong smell of sulfur, of the sort always detected around the various fumaroles of the Campi Flegrei.³⁷

³⁷ Sulfur (S) in its crystal mineral form is a sublimate of various volcanic gases, and was actually very much present on Vesuvius. It has an easily detected odor, and is generally yellow, orange, or white in color.

Essentially, what Falcone did was to see what materials – out of the stock accepted by ancient and contemporary naturalists – fit the observed features of the eruption. Because of the very dark, dense, and enduring nature of the eruptive cloud observed in December 1631, for example, Falcone excluded nitre as the primary combustible. Nitre was used in gunpowder, but everybody knew that artillery and arquebus rounds burst with a white smoke that rapidly vanished.³⁸ Pietro Castelli, below, thought very differently.

In the vast storehouse that was now the shattered heart of Vesuvius, there had to be something capable of burning with absolutely ferocious power. The culprit, Falcone declared, was a terrible combination of dense bitumen compressed in the volcano's core and an upper layer of liquid naphta above. Although he curiously rejected sulfur in the particular case of Vesuvius, by identifying these other two substances Falcone was perfectly in tune with the majority of developing theories concerning volcanism. Both terms – *bitume* and *naphta* – generally referred to an assortment of dark, solid, pitchy, or liquid substances that were now associated with the “combustion” of volcanoes.³⁹

There is no need to delve further into Falcone's complex discussion of each mineral's qualities. Worth noticing, however, was a concerted effort on his part to explain a whole range of effects that had been observed only recently by contemporary naturalists. In a passage that has been subsequently used by modern geologists to confirm the debatable presence of significant flows in the eruption of 1631, Falcone

³⁸ Nitre (KNO_3 – Potassium Nitrate) is an efflorescence found in hot and dry regions.

³⁹ Bitumen is today used as a generic name for certain mineral substances, composed of hydrocarbons, that is either solid, semi-solid, and liquid: like petroleum and asphalt. Naphta is basically petroleum.

wrote, “that this is true, that there is naphta, and that it was superficial to the bitumen, and is often seen on the surface of the earth, and it was seen on that morning from Torre del Greco that naphta burst from a fault in the mountain.”⁴⁰ Here he was certainly speaking about what modern volcanologists call lava (magma once it has been extruded to the surface), which he conflated with a petroleum substance.

There were some particular features of exploding volcanoes that had received little, if any consideration before 1631. Lava must have been one of them. Vesuvius’ counterpart in Sicily, mount Etna, was actually the sort of volcano that produced large lava flows (and much less explosive eruptions). The latter had not, however, stimulated similar interest in volcanism, even when it had been active in the 1500s. This was perhaps because of its relative remoteness, and possibly because it never erupted with huge catastrophic force. It was only after a larger eruption in 1669 that Etna become the subject of an important scientific monograph, Giovanni Alfonso Borelli’s notable *Historia et metereologia incendii Aetnaei* (1669).⁴¹ It was thanks to Vesuvius some decades earlier, however, that natural philosophers really started to explain the variety of effects observed when volcanoes erupted.

⁴⁰ Falcone, *Discorso naturale*, 9. The eruption of 1631 was a highly explosive sub-Plinian occurrence, with very big bang. On the other hand, *effusive* eruptions of the sort generally experienced by Etna and sometimes Vesuvius (when it is active and has an open conduit), create large flows but far less explosive destruction.

⁴¹ Giovanni Alfonso Borelli, *Historia et metereologica incendii Aetnaei anni 1669* (Regio Julio, 1670). As was the case with Vesuvius, hardly anything was written about Etna before the seventeenth century, at least that was printed or survived. There are only rare and scattered works on this other Italian volcano dating from the 1500s. The *Bibliography of Historic Activity on Italian Volcanoes (BIBV)* only lists a couple of books on the volcano before the second half of the seventeenth century. One was Antonio Filoteo’s *Aetnae topographia atque ejus incendiorum historia* (Venice, 1590). Another is listed as appearing in a nineteenth century printing: F. Palgrave, *An Account of the Eruption of Mount Etna in the Year 1536, from an Original Contemporary Document communicated in a letter to J.G. Children, Esq., Secretary of the Royal Society* (London: Proceedings of the Royal Society, 1835). See: Cerbai and Principe, *BIBV*.

Not surprisingly, Falcone also dwelled on flows of another sort than lava, as he moved toward considering the hugely devastating effects of the conflagration. Most of the people killed by Vesuvius, it turns out, were killed by water. *Lahar* flows that washed out huge portions of the mountain buried most of the towns at the base of the volcano and left the landscape a muddy and scorched mess. For anyone who survived or witnessed the eruption, they would undoubtedly have been an unforgettable feature of the cataclysm. They were also a difficult effect to explain, considering that volcanoes were presumably all about fire and heat.

Falcone wondered if Vesuvius contained a subterranean river, or possibly a great lake filled with rainwater, but these things seemed unlikely. Ultimately, he concluded that the effect was explainable by considering the burning of the volcano's inner core. Observing the Aristotelian dictum that 'nature abhors a vacuum', he postulated that as Vesuvius emptied itself in the eruption, seawater had been drawn in to fill the resulting space. If one then imagined that the whole cone of Vesuvius had lost its integrity, and was essentially turned to ash, then it became reasonable to imagine that huge portions of the volcano had been washed out by the inrushing seawater.⁴² This was a valiant effort to theorize on why two contrasting elements, fire and water, were so visible in the eruption.

There was once again a constant tension throughout Falcone's explanation between what had been observed, and what could never be seen. By considering the color and intensity of the eruptive smoke, and by collecting the rocks hurtled by Vesuvius, the naturalist felt he could be certain that huge quantities of combustibles had fueled the

⁴² Falcone, *Discorso naturale*, 20.

volcano's fires. If this was the case, it was partly good news. "I say that this fire will last little time there, having demonstrated that that this was not the ignition of copious sulfur, which conserves fire, but rather bitumen and naphta," wrote Falcone.⁴³ There were, however, nagging doubts, simply because there was no way of looking inside of Vesuvius.

This suggested another important question: how rare were volcanoes? Beyond this, how long did they remain aflame? Falcone's very next words, after he announced that he thought Vesuvius was not meant to burn for a long time, were very telling indeed. It was possible, he conceded, that the volcano had been ignited for good, with huge deposits of bitumen stretching deep within the earth, possibly, "making union beneath the earth with Pozzuoli, Mongibello [Etna], Lipari, Volcano, and all the mountains of Italy, where there are open mouths of fire."⁴⁴ This was a scary and exciting prospect to consider.

Most natural philosophers, however, were initially cautious about accepting that volcanoes were common features of the earth, even though evidence *on the surface* was now beginning to suggest otherwise. "This fire is here accidentally," Falcone surmised tentatively about Vesuvius. All the same, he conceded that there were some other places in the Mediterranean, like Stromboli, Etna, and Monte Nuovo, where mountains burned with fair regularity. Reluctantly, he conceded that there was a possible connection – deep veins and tendrils of pitchy bitumen running beneath the earth in a web of fire – between these cones and the recent eruption. Plausible as this now seemed, Falcone still found it

⁴³ Ibid, 34.

⁴⁴ Ibid.

extraordinarily novel to accept volcanoes as normal terrestrial features, simply because so few had been recorded.

Besides the famous Mediterranean cones the naturalist mentioned in the *Discorso naturale* as places akin to Vesuvius, there was only one other volcano that was even remotely familiar to literate seventeenth-century Europeans. This was Mount Hekla, in Iceland. Its eruptions had been recorded toward the end of the twelfth century in a number of medieval sources (most likely after 1157). For centuries the Icelandic volcano shared a dubious honor with Etna in Sicily: both were associated with the mouth of Hell. Decades before the eruption of 1631 reminded Europeans that Vesuvius was a volcano, Hekla appeared in Sebastian Münster's *Cosmographia* as a singularly unusual 'fire mountain', said to devour all who approached it. Likewise was Etna – in *Gerusalemme Liberata* Torquato Tasso imagined a council of devils meeting in its fiery crater.⁴⁵

The idea that volcanoes were portals to the infernal depths, however, implied that they were anything but common to the earth's geology. Gradually, a different conclusion began to chip away at this entrenched notion. Europe's vastly greater knowledge of world geography by the 1630s, for one, fueled the global perspective of volcanism. This implied that places where mountains burned themselves from the inside out, as the image went, were found throughout the continents. A crucial fact was now very apparent: the substances now thought to be burning so near to Naples existed elsewhere. This was evidence of a natural process that was not only repeatable at other times in the same cone,

⁴⁵ Sebastian Münster, *Sei libri della cosmografia universale...* (Basel: Heinrich Peter, 1558), 908; Torquato Tasso, *Gerusalemme Liberata*, IV.

but importantly, also elsewhere. Reports of other such places in Africa, Asia and the Americas lent credence to the idea.

Pietro Castelli's *Incendio del Monte Vesuvio*, also published in the first months of 1632, actually began where Falcone faltered. This was with the premise that volcanoes did indeed exist everywhere. The man who forwarded such a bold and unsettling notion came from the Sicilian city of Messina, dominated by the prospect of Etna. Possibly, this may have contributed to his sweeping vision of volcanism. In sum, Castelli was a well-respected naturalist, resident in Rome during the pontificate of the Barberini pope Urban VIII. In 1625 he authored a treatise on the Farnese gardens, although the work was subsequently incorrectly attributed to another author.⁴⁶ If the *Exactissima descriptio* of the rare plants in the Roman garden highlighted his considerable skills in botany, the *Incendio* can rightfully be considered his great accomplishment in earth science.⁴⁷

The starting premise was that subterranean heat was ubiquitous. Fire, Castelli wrote, was "that proud, cruel, and hugely powerful Element, quiet and voracious, that immobile, and without sustenance, cannot be." He continued, "in our time there are subterranean Fires throughout the terrestrial sphere, these burning chimneys, and spirals of ever-burning furnaces, that the Poets dubbed infernal." With this last reference Castelli was alluding to Virgil's account of how Aeneas entered Hades in the Campi Flegrei, but he

⁴⁶ Pietro Castelli, *Exactissima descriptio rariorum quarundam plantarum, quae continentur Romae in Horto Farnesiano* (Rome: Giacomo Mascardi, 1625). See Freedberg, *The Eye of the Lynx*, 398.

⁴⁷ The Roman printer Giacomo Mascardi printed both of Castelli's successful books. In his preface to the *Incendio*, Mascardi lauded Castelli's prowess as a naturalist: "Il gran studio, e la gran potenza di quest'huomo in osservare a puntino la natura, le proprietà, e l'accidenti di detti Animaletti, e incominciando dall loro prima nascita, et osservando i loro progressi, accrescimenti, nutrimenti, mutationi, moti, quieti, e nuovo generationi, infino all'ultima loro perfettione, e l'altro rinascimento: ne in una sola spetie; ma in infinite, e da infinite piante, e materie diverse: poichè ogni Animale, ogni pianta, et ogni sostanza, produce il suo verme."

had a far wider broader vision of volcanism in mind than the Romans possibly could have imagined. Each of the known continents had its share of volcanoes:

We know about many Fires in America, in Africa, in Asia, and in Europe. Beginning with America, part of the world recently found, which we call Occidental India, there is a Kingdom called New Spain, where in the province of Nicaragua the Spanish have observed more than ten Mountains, which like many Mongibelli [Etnas] burn continuously, hurtling at a distance and spreading wide ash, burning stones. By day one sees their smoke, by night fire: for this reason they are called Volcanoes.⁴⁸

Castelli's reckoning of how widely distributed volcanoes were (and his stress on a precise terminology) suggests a number of things.

It points, for one, to specificity. Volcanoes – not just mountains, or even ‘burning mountains’ – appeared to him to be something particular. They had unique features that could be studied within human limits. ‘Like many Mongibelli’, the ones in Nicaragua burned continuously. Others, like Vesuvius, were variations on the same design, shaped by their internal composition to be silent for long periods of time, and then burst with horrific force. Understood in this way, however, volcanoes also assumed a global characteristic, since nature presumably worked its volcanism in many places.

Like Asterio and Falcone, Castelli's conception of why Vesuvius erupted was strongly influenced by Aristotelian hermeneutics, but it visibly complemented the paradigms of ancient natural history with alternate forms of knowledge. The central questions he identified related to the elemental qualities of fire, and the difficult problem

⁴⁸ “Noti a noi sono molti Fuoghi nell’ America, nell’ Africa, nell’ Asia e nell’ Europa. Et incominciando dall’ America del mondo parte ultimamente ritrovata, che India Occidentale chiamano, evvi in questa un Regno detto la nova Spagna, ove nella Provincia di Nicaragua hanno osservato i Spagnuoli più di dieci Monti, che come tanti Mongibelli ardono di continuo gettando a lungo, e spargendo ceneri, e sassi abrugiati, e vedevesi di giorno il fumo, e di notte il fuoco: onde sono chiamati Vulcani.” Castelli, *Incendio*, 3.

of identifying material and efficient causes of volcanism. “Physically speaking,” he declared, “we must first explain what is Fire, its various sorts, and their respective origins; to say this from the start, I have not found a single Author until now, among my few books, who gives me satisfaction.” He continued: “I would really like to know why it burns, what its essence is, and what substance it has.” The most persuasive definition of fire, of course, was Aristotle’s, but Castelli was fundamentally skeptical about the idea that volcanic fire could be of the elemental sort. Was this not difficult to reconcile with the fact that it continually needed matter to consume in order to exist? He resolved this by accepting that there was elemental fire (*fuoco elementare*) in the firmament, but that the fire observed was of a baser sort. This type of conflagration required things to burn.⁴⁹

As he imagined that volcanoes were the consequence of the ignition of a finite store of earthly combustibles, Castelli filled in the classical model of volcanoes with the very detailed contemporary knowledge of mineral substances. As a basic paradigm this emerging alchemical/chemical model of volcanic ignition would exert its grip on the scientific mind for considerably longer. Basically, the development of chemistry as a science in the following century greatly expanded this discourse on the possible sources of subterranean heat. As late as 1807 – when the Geological Society of London was founded – the oxidation of sodium and potassium was still thought to be the secret to volcanoes.⁵⁰

⁴⁹ Ibid, 21.

⁵⁰ Simon Winchester, *Krakatoa: The Day the World Exploded, August 27, 1883* (New York: HarperCollins, 2003), 301.

What Castelli had to work with in his day was still a considerable array of possible options, both when it came to the material and efficient causes of Vesuvius' combustion – the fuel and the match, so to speak. Many things could be immediately rejected: simple soil, and precipitates from seawater, for example. Something more, “fat, oily, and prone to burning,” was required for a conflagration of this magnitude. He determined that, in some ratio, the familiar culprits of alum, bitumen, nitre and sulfur were involved. Castelli, however, was more confident than Falcone about identifying the actual cause of ignition:

I now come to the agent, which lights the fire in the mountain's roots. Leaving aside the little fires approximated by man, celestial bolts, as well as solar heat, I say that the bombardier that gives fire to bombards, and fireworks, could equally ignite these underground mines. So it is, be it repeated motion and the collision of clouds in the air, and great subterranean exhalations in the interlaced caverns⁵¹

The analogy to artillery and fireworks – which also echoed people's reports of hearing cannons in December of 1631 – was the lynchpin of Castelli's explanation. In short, the volcano contained something resembling gunpowder.

Obviously, no artilleryman had set off Vesuvius, but rather a kind of fermentation that the naturalist had observed to occur when wet hay, or stucco, was left to sit. All of this had occurred in the deep and dark caverns of the volcano, which Castelli imagined as resembling the mould of an immense tree trunk. “Do me the grace,” he asked the reader, “of imagining that the deep crater found on the mountain's peak is like the trunk of an extinguished tree, with in the middle its great trunk, and then around it infinitely deep

⁵¹ Castelli, *Incendio*, 34.

roots.”⁵² Somewhere below the earth, these roots of the volcano connected to the sea. Seawater, in turn, was largely responsible for flushing in the minerals that would in time desiccate and ferment. Because of the varying depths of Vesuvius’ mines, and because such an assortment of minerals were contained in them, the volcano did not erupt as a single uniform fire – something that helped the naturalist explain the bewildering range of effects observed in the recent eruption.

This is where the comparison to an artillery barrage or a fireworks display seemed particularly appropriate. After all, different cannons fired with dissimilar effect and force; likewise, fireworks burned with variegated displays. Castelly was confident that the same principles applied to the volcano: “We have to conclude that all the cavities of the mountain do not all ignite at once, but in succession one after the other, and since they are filled with different mixtures, we observe different effects.” In essence, he likened the eruption to a massive pyrotechnic occurrence – a “great mortar stood upright, with infinite barrels loaded below with different powerful munitions, and now one, now another discharges from the main barrel, with different impetus.”⁵³

Because Castelli thought he detected the overwhelming presence of sulfur, nitre, and charcoal (all contained in gunpowder) inside the volcano, a pyrotechnical explanation for the eruption had obvious attractions. Importantly, the natural philosopher obviously had at least a reading familiarity with pyrotechnics. He cited, for example, Vannoccio Biringuccio’s *De la Pirotechnia* (1540), noting this author’s studies of the various precipitates, nitre among them, that resulted from the combination of substances like ash

⁵² Ibid, 44-45.

⁵³ Ibid.

with water. Biringuccio's treatise was in the tradition of Agricola's *De re metallica*, in the sense that it revealed how the practice of mining in the sixteenth century had an influence on scholarly theories regarding the formation of metals and ores.⁵⁴

The attribution of subterranean heat to chemical reactions between sulfur and iron ore originated from frequent experimentation with the former substance in the related fields of metallurgy, alchemy, and pyrotechnics. What was commonly called oil of vitriol (sulfuric acid), for example, was a key ingredient in the art of alchemy as it had been practiced for centuries. The relation of sulfur to fire explored by both alchemists and pyrotechnical experts in the sixteenth century surely suggested to Castelli a plausible starting point to explaining Vesuvius' eruption. Crucially, however, seventeenth-century natural philosophers were also beginning to articulate increasingly sophisticated theories about the combustion of sulfur – attributing it to a *spiritus nitrus-aerus* (surely oxygen) present in the air.⁵⁵

Sulfur figured prominently, for example, in the later chemical theories of Robert Hooke (1635-1703), who studied the various phenomena of heat very closely. With a “nitro-aerial” theory of combustion, he likened a number of things – thunder, lightning, and volcanic eruptions – to explosions of gunpowder. Volcanic activity in particular he attributed to sulfurous vapors beneath the earth, concluding also that subterranean fuel

⁵⁴ Vannoccio Biringuccio, *De la pirotechnia* (Venice: Roffinello, 1540). Within the mining community there was a great deal of practical knowledge about the ores of different metals. Oldroyd notes: “So while the chemists of the seventeenth and eighteenth century, up to the time of Lavoisier's ‘chemical revolution’ when ‘modern’ chemical theory was initiated, wrote copiously on notions of Aristotelian elements, of abstract chemical principles, or on mechanical explanations of chemical phenomena – and made rather little headway in the matter – the practical men carried out their work successfully, apparently unimpeded by the chemical theories of the time.” Oldroyd, *Thinking About the Earth*, 68.

⁵⁵ Sigurdsson, *Melting the Earth*, 103.

had once been more plentiful than it was in his day. The frequency of volcanoes near the coasts and on islands – he surely had the southern Italian examples in mind – suggested to him that the saline quality of seawater produced some kind of fermentation resulting in sulfurous minerals.⁵⁶ Castelli's explanation of Vesuvius' eruption rested on a nearly identical set of concepts, suggesting that the theories forwarded after 1631 participated very much in contemporary debates about subterranean heat. Really, they were on the cutting edge.

As Castelli saw it, Vesuvius had all the elements for rebuilding its 'ammunition', this thanks to the constant infiltration of the sea in the volcano's roots. In conclusion, he wrote:

it seems to me that I have clearly demonstrated that nitre, combined with sulfur, is why subterranean fires burn so violently, and returning to Vesuvius I say that, once refilled after a long time with nitre, and sulfur, it sits there fat and quiet for some time.⁵⁷

Overall, Castelli worked out a sophisticated understanding of volcanoes that explained many of the phenomena observed in 1631, even if he did so with varying degrees of satisfaction. The material causes – the 'stuff' of the fire – were more or less confidently agreed upon, as was to some extent the question of 'why now?' Simply put, the answer to this was that it had taken a long time for the volcano to build up its huge stores of combustibles, which were in essence gunpowder. When it came to the efficient cause of ignition, Castelli imagined a kind of fermentation similar to the 'spontaneous combustion' observed with other substances. He had identified, in other words, all the

⁵⁶ Ibid.

⁵⁷ Castelli, *Incendio*, 47.

makings of volcanoes as they would be construed more famously later in the century, and well beyond.

In 1669, for example, an anonymous correspondent of the Royal Society asked whether the ignition of volcanoes might not be explained by understanding how “sparks meet with Nitro-sulphureous or other inflammable substances heap’d together in the bowels of the earth.” In a recent work, one scholar of historical geology describes how the ‘chemical model of ignition’ was debated in articles of the *Philosophical Transactions* published by the Royal Society – as the correspondent above reveals – but also in papers by members of the French Academie des Sciences (established in 1666), and, importantly, in Robert Hooke’s lectures on earthquakes. One of the common themes was that volcanoes burned a combination of sulfur compounds and assorted ‘bitumens.’⁵⁸

In an Italian context, historians frequently cite Borelli’s book on Etna as a canonical early work on volcanoes. This notoriety has to do with the important fact that Borelli’s treatise of 1669 was intensely reviewed by the Royal Society two years later, and thus had a learned English audience, and a continental one too. Nonetheless, this work was published more than thirty years after Vesuvius’s eruption – during a period of intense activity for the Sicilian volcano – and it presented the same basic conclusions offered by Castelli on Vesuvius.⁵⁹

More important, perhaps, is the fact that Nicolaus Steno (Niels Stensen, 1638-1686) also subscribed to the theory of sulfur and chemical ignition. This unusually talented

⁵⁸ Rappaport, *When Geologists Were Historians*, 181. The anonymous quote, taken from the *Philosophical Transactions*, is cited in *ibid.* The English physicist and naturalist Robert Hooke (1635-1703) was an important member of the Royal society, but his writings on earthquakes and volcanoes were only published posthumously in 1705. See: Robert Hooke, *Posthumous Works* (London: R. Waller, 1705).

⁵⁹ Rappaport, *When Geologists Were Historians*, 181.

naturalist was extraordinarily important for the development of geology, most notably for his intuition that the earth's history – still imagined as being only approximately six thousand years – could be read in its various geological strata. Stratigraphy and the 'principle of superposition' accompanied an awareness of how the earth's crust could be displaced and disrupted, the sequence of its various levels visibly mismatched in many observable places. Increasingly, it seemed to Steno that the forces that shaped the natural world pointed to a dynamic earth sculpted by numerous forces – including earthquakes and volcanoes.⁶⁰

The Danish anatomist turned geologist Steno spent a good deal of his life and career in the court of the Grand Duke Ferdinand II de' Medici, where he renounced Lutheranism and converted to Catholicism. He came to geology by means of fossils – or better yet, by the dissection of a large great white shark caught off the Tuscan coast in 1666. By examining the teeth of the huge *Charcarodon charcharias*, he found them to resemble the *glossopetrae* (literally 'petrified tongues') that puzzled many contemporary naturalists – they were in reality fossilized shark teeth. This led him to conclude that fossils were of organic origin, a concept he elaborated in 1669 in a treatise commonly known at the *Podromus*, meant to be the introduction to a much larger work that was never published.⁶¹

⁶⁰ Alan Cutler, *The Seashell on the Mountainop: A Story of Science, Sainthood, and the Humble Genius Who Discovered a New History of the Earth* (New York: Dutton, 2003).. Cutler's is very engaging and intended for a general readership, but it is good biography and survey of Steno's accomplishments. Caution is in order, however, for Cutler's tendency to see Steno as a lone 'genius' who founded a 'new science.'

⁶¹ Nicolaus Steno, *De Solido intra solidum naturaliter contento dissertationis podromus* (Florence: Typographia sub signo Stellae, 1669). Cf. Gohau, *History of Geology*, 57-60.

The *Podromus* was undoubtedly Steno's most important work, but in 1660 he discussed the origins of subterranean heat in a lesser-known *disputatio*. His topic in this instance was thermal springs – which he identified in the Campi Flegrei, but also in many parts of Tuscany. He argued the following: “Every fire needs fuel, and there scarcely seems to be any cause that could provide a limitless supply of these subterranean fires, since bitumen, sulfur, and other similar materials are consumed by burning.” This was why thermal springs presented particular difficulties. Unlike volcanoes (and certainly not like Vesuvius, prone to long silences) they appeared to stem from continuous sources of heat that burned *all the time*. Obviously, Steno was familiar with his day's explanations of volcanism, which suggested that volcanoes required time to rebuild their “ammunition” after an eruption. The perpetual smoldering that heated thermal springs suggested to him different substances than those in big volcanic cones, but the same mechanisms of chemical ignition. Ultimately, he felt it was quicklime, ignited by contact with water.⁶²

The point is that the weight of all these observations on the particulars of subterranean heat had been building steadily, especially since the 1630s. Furthermore, the now intermittent and frequent nature of Vesuvius' “re-ignition” provided a constant source of questions, some of them of broader importance. If one concluded, as Castelli had, that Vesuvius required an indeterminate period to rebuild its stores, why was it taking so little time now for the volcano to ignite? Why were the cycles so short? Ultimately, these questions became central to modeling volcanism and the earth, because

⁶² Nicolaus Steno, *Geological Papers*, translated by Alex J. Pollock, edited by Gustav Scherz (Odense: 1969); 55-57. Cited in Rappaport, *When Geologists were Historians*, 181.

their follow-up led very deep indeed. How far down were those stores of bitumen and sulfur, after all?

Athanasius Kircher undoubtedly made these considerations when he climbed the volcano in 1638, even if he only published his results decades later – in the monumental *Mundus Subterraneus* (1665/1678). The Jesuit polymath's range of interests was phenomenal. It included astrology, alchemy, magic, numerology, hieroglyphics, cosmology, cosmogony, mineralogy, and, very importantly, the subterranean world.⁶³ His encounter with Vesuvius stands out as one of the most singular of the period.

The *Mundus Subterraneus* was largely stimulated by Kircher's youthful voyages in the Mediterranean and the Italian south, during the period of Vesuvius' renewed volcanism. Between 1637 and 1638, the Jesuit explored a number of volcanic regions on the peninsula and at sea, including Etna, the sulfur fields of the Campi Flegrei, and Vesuvius. Climbing the latter volcano must have been truly memorable for him, as he recounted the experience vividly in the preface of his great work. Both his experience with Etna and Vesuvius led him to create stunning illustrations of volcanoes, and, in a sense, imagine them as entry points to a deeper consideration of the subterranean world as a whole.

An early manuscript draft of the *Mundus Subterraneus*, for example, included a breathtaking rendering of the Campanian volcano, as it poured forth a horrendous looking

⁶³ For an introduction to Kircher see: Fred Brauen, "Athanasius Kircher (1602-1680)," *Journal of the History of Ideas* 43 (1982): 129-134.; Joscelyn Godwin, *Athanasius Kircher: A Renaissance Man and the Quest for Lost Knowledge* (London, 1979).; P. Conor Reilly, S.J., *Athanasius Kircher S.J. Master of a Hundred Arts 1602-1680* (Wiesbaden: Edizioni del Mondo, 1974)..

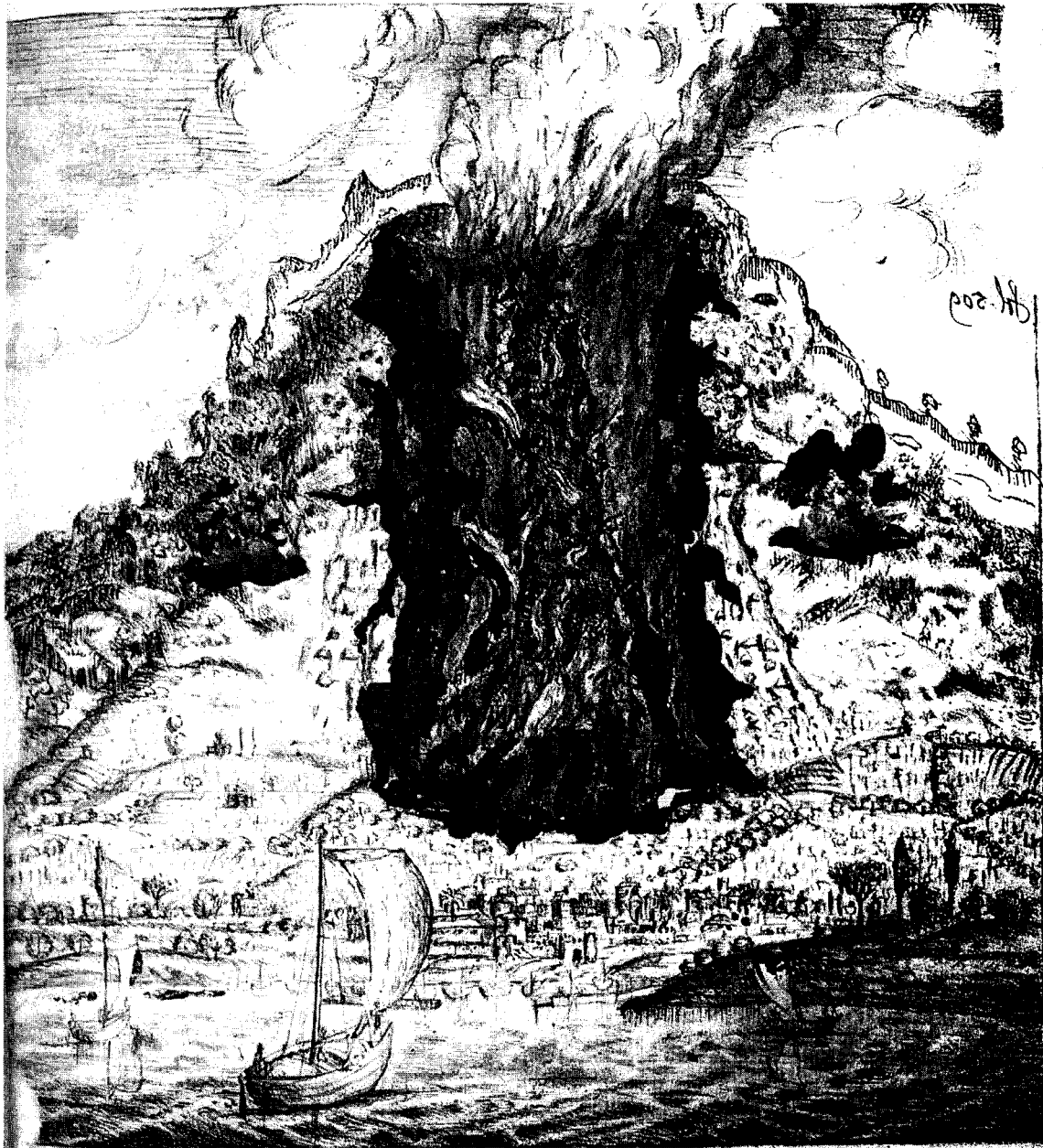


Figure 5.1 Vesuvius streaming lava (Athanasius Kircher, *Mundus Subterraneus*)

stream of lava, which Kircher concluded had to be a pitchy mass of naphta and bitumen (Figure 5.1). The final printed version of the volume also included similar depictions of Etna, showing how chambers, channels, and chimneys of fire extended down toward the

earth's center.⁶⁴ Obviously, Kircher felt that subterranean fires were a central feature of understanding the structure of the globe. This made volcanoes very significant indeed, as they were the most obvious evidence of vastly distributed inner heat.

One chapter of the *Mundus* was entitled, "Mountains Visible on the Telluric Surface Amply Demonstrate that the Earth is Full of Fire." Based on observations made in 1637-38, the Jesuit natural philosopher argued that sulfur, nitre, and bitumen filled "innumerable perforations," along with "mines and submarine channels," that connected the volcanic Aeolian islands with Etna and Vesuvius. These mines extended, he imagined, along the Appennine chain down the toe of Calabria – this also explained the devastating earthquake Kircher witnessed on his Mediterranean journey.⁶⁵

Mines were important to a complex theoretical system. As Kircher saw it, deep within the earth there were 'matrices' of fire and water, where the minerals, metals and ores commonly associated with volcanism were generated (**Figure 5.2**). He pulled out all the stops in trying to explain this phenomenon, as he explored chemical and pyrotechnical models for ignition. The result was almost immeasurably complex, revolving around concepts like the permeation of 'sulphureo-salino-mercurial spirits,' and the presence of so-called 'lapidifying juices.' The Aristotelian elements still played

⁶⁴ Athanasius Kircher, *Mundus Subterraneus*, Tomo I, Biblioteca Nazionale Centrale "Vittorio Emanuele II", Rome, Fondo Gesuitico, ms 562, f. 509. One problem with this rendering is that it does not resemble Vesuvius very much, as there is no hint of its double peak (which may just be occluded by the perspective. This could be Etna, or simply a generic cone that would have worked well to represent both volcanoes.

⁶⁵ Athanasius Kircher, *Mundus subterraneus in XII Libros digestus* (Amsterdam: Johan Jansson, 1678), Caput VI.

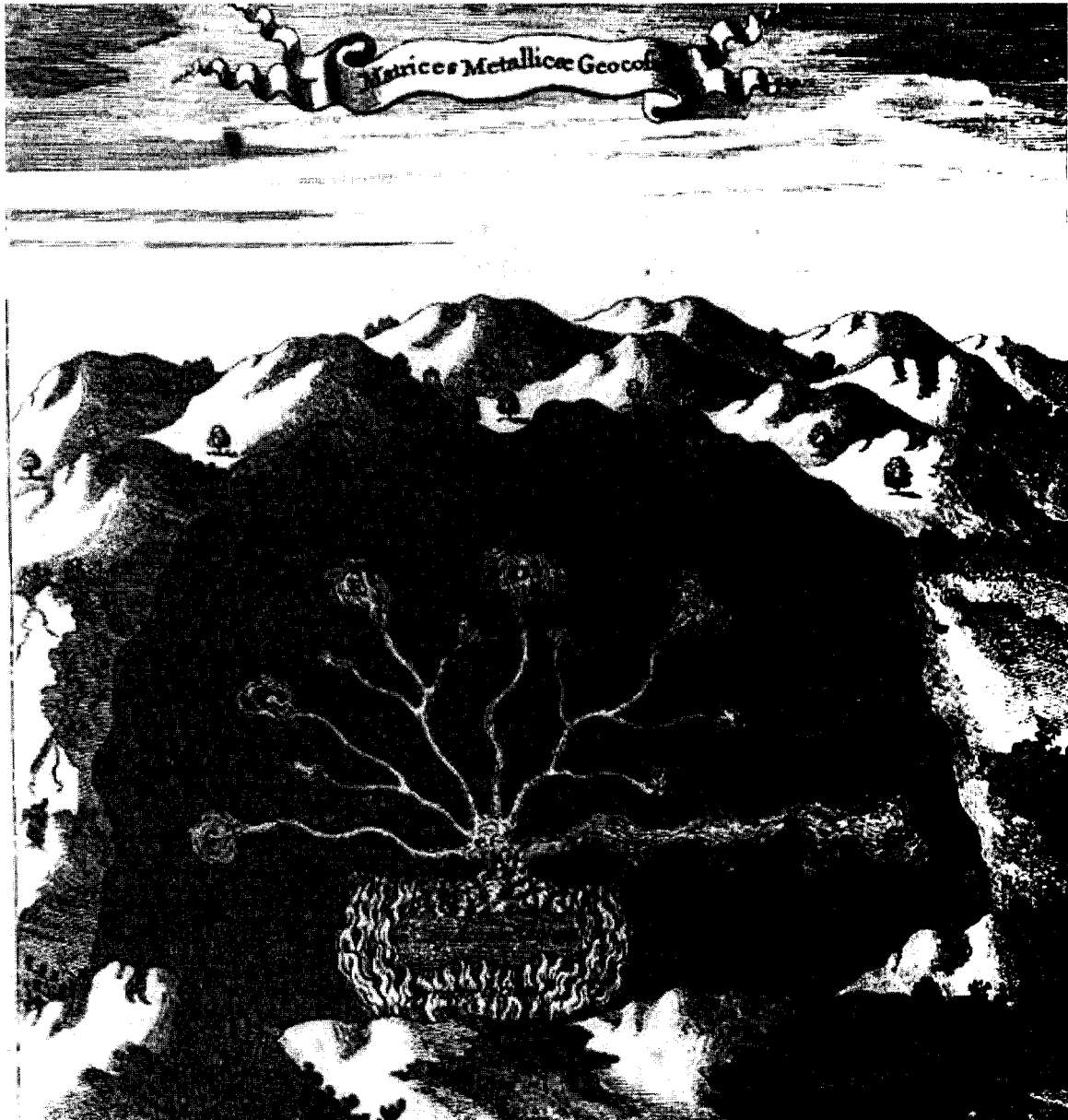


Figure 5.2 Matrices showing growth of metals and ores in the Earth (Kircher, *Mundus Subterraneus*)

a role in this, as earth, water, air, and fire all were crucial to the process of fermentation occurring in the subterranean world.⁶⁶

⁶⁶ Oldroyd, *Thinking About the Earth*, 37-38.

To Kircher, the earth appeared to be great organism – living and breathing. Envisioned thusly, volcanoes were normal terrestrial features, their combustion evidence of telluric life processes. Historians have observed, for example, that Kircher was strongly influenced by William Harvey’s studies on the circulatory system, which he found helpful not only in explaining the nature of subterranean heat, but also the circulation of water in the oceans and beneath the surface of the earth.⁶⁷ Correspondingly, the *Mundus* was full of analogies to the human body. One chapter began with the query: “On the Universal Distribution of Subterranean Fire: And Why in Certain Places it is Perpetual and Others Not?” The author answered this by determining that, “what spiritual blood is in the human body, thus is subterranean fire in the veins of the earth.”⁶⁸

The Baroque polymath had a title that matched the huge scope of his system: *Theoretical System of Subterranean Fire-Hearths, from Which Volcanic Mountains Protrude, Like Some Sort of Breathing-Fissures*. Rendered as a visual schema, it was breathtaking. The earth was shown in cross-section, with a great raging central core, connected to numerous other ‘fire-hearths’ by channels. These wound their way to the surface, bursting forth as volcanoes. Kircher recognized that no human observation could confirm his theories, and that many were likely to find them far-fetched. He asked: “Who indeed has observed this? Who among men ever entered thither?” He went on to stress that his speculative schemata was merely meant to offer some representation of what the ‘fire-hearths’ might look like. There was no doubting, however, that the earth’s

⁶⁷ Nicoletta Morello, “Nel corpo della Terra,” 191.

⁶⁸ Kircher, *Mundus Subterraneus*, Caput III, 186.

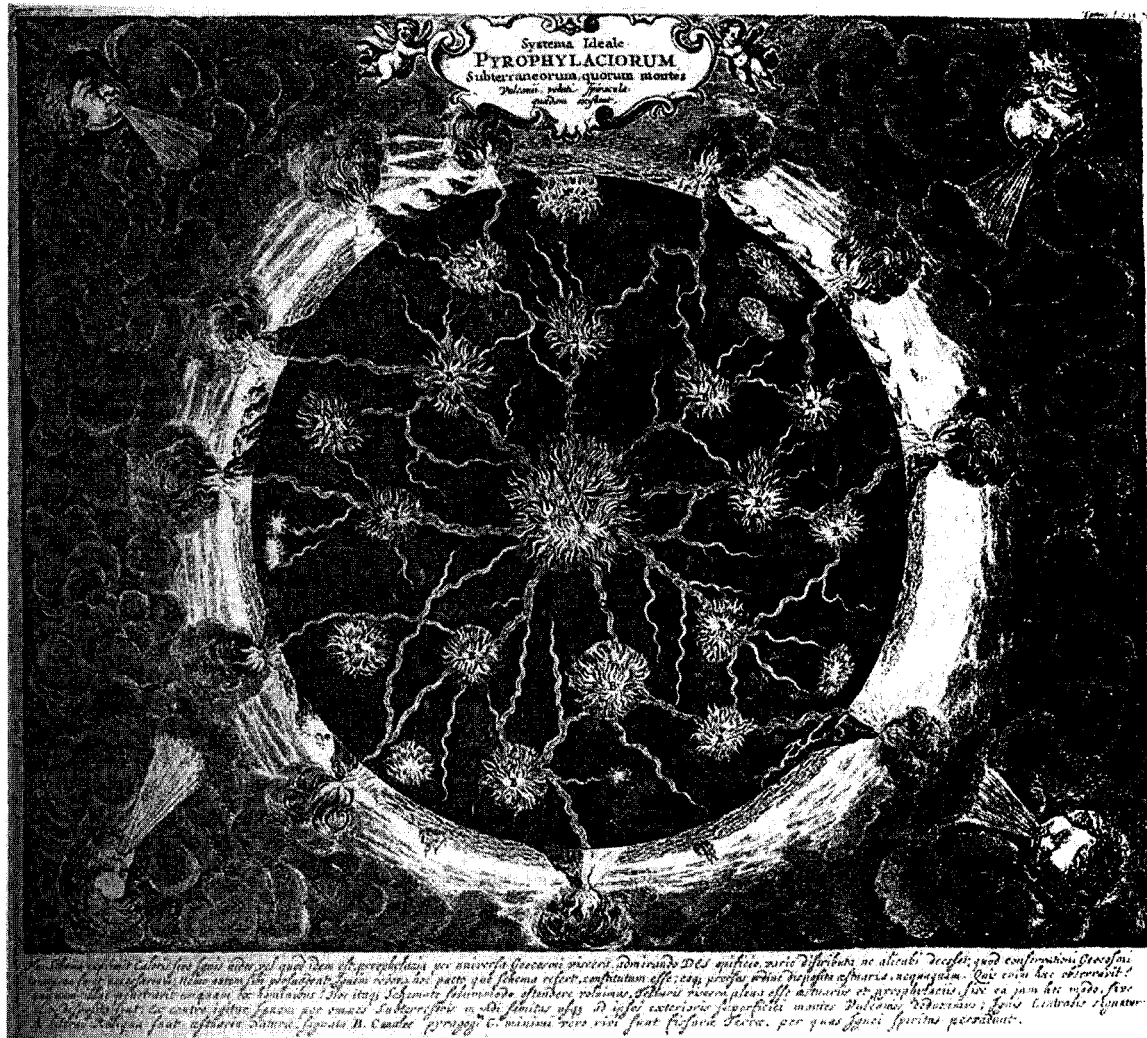


Figure 5.3 Pyrophylaciorum (Athanaseus Kircher, *Mundus Subterraneus*)

central fire was connected to volcanic phenomena on the surface. Like many others, Kircher recognized the insurmountable hurdle of never being able to observe these things *ad vivum*, as one might train the eye on the heavens with the telescope (Figure 5.3).

This brief analysis of the *Mundus Subterraneus* should suggest some important adjustments in understanding since antiquity, and more subtly since the first Vesuvius

monographs of 1631-32. It was one thing to imagine the volcano as an isolated furnace, as the Romans had, or as a cannon with very deep stores of ammunition, as Castelli had. It was something else yet to see it as inextricably part of the earth's fiery life-blood. Most important, Kircher never doubted for a moment that Vesuvius' eruption was anything but normal as a natural process (this, of course, cohabited with his sense that volcanoes hinted at the Apocalypse). Nor did he imagine that it would extinguish itself. How could it, if the earth looked like this?

It's worth noting, however, that Kircher was more convinced than many that volcanoes stemmed from inexhaustible sources of heat. Back in the 1630s, Falcone was reluctant to concede that the world possibly contained many more places like Vesuvius; Castelli was more willing, but cautious. As late as the 1670s, around the publication of the *Mundus Subterraneus*, Giovanni Alfonso Borelli's study of Etna concluded that this volcano was likely to burn out soon – suggesting only finite and isolated stores of sulfur and bitumen, and nothing like Kircher's system of 'fire-hearths.' For the latter natural philosopher, on the other hand, the evidence he had compiled over the last thirty years – in daring climbs, and thanks to a network of correspondents that spanned the continents – was simply overwhelming.

Conclusion: The Lincei Connection that Almost Was

Unlike his Neapolitan colleagues, Pietro Castelli did not have the benefit of personal observation as he composed his treatise on Vesuvius. Instead, he employed a willing network of correspondents south of Rome to provide him with the information necessary

to complete the *Incendio del Monte Vesuvio* – in what must have been a big hurry. By Castelli's own estimation, the work was written in a scant two weeks, largely with the invaluable correspondence of Egidio Longo, one of Naples' foremost printers.⁶⁹ "Not being an eyewitness to this case that I recount," he wrote, "I have endeavored to use the testimony of diligent and attentive people, and then with the reason, that art and nature concede to me, to investigate the causes."⁷⁰ Naples, it turns out, had a number of such reliable persons that enjoyed high esteem in Roman scientific circles. In particular, the southern city was recognized as the home of important naturalists and regarded as a place highly-suited to the investigation of nature – not least because of its volcanoes.

Longo replied promptly to Castelli's questions, even if many of his answers reached the Roman author frustratingly late for publication. A number of these late responses were published in the appendix of the *Incendio*, revealing not only Longo's own fervent interest, but also that of an entire community of naturalists. Some seven years before Kircher's renowned ascent, local *curiosi* were already exploring Vesuvius. Despite the risks, Longo reported, things had gone favorably for most of these volcano explorers, as, "until now we have heard of no single death, even if many have returned stunned."⁷¹

Longo explained to Castelli that a number of things were being fiercely debated in Naples' philosophical circles, including one of the questions that bothered the latter so much in the *Incendio*. Where on earth had all the water observed during the eruption come from? Castelli, in fact, asked Longo, "whether the waters, as has been told, that

⁶⁹ Longo took a very active part in the scholarly response to Vesuvius. Beyond corresponding with Castelli, he published a number of important treatises on the volcano, including Vincenzo Bove's, *L'incendio del monte Vesuvio* (Naples: Egidio Longo, 1632).

⁷⁰ Castelli, *Incendio del Vesuvio*, 75.

⁷¹ Ibid, 76.

poured forth from said Mountain were true, and real?" Longo replied: "They were true, and most real." The Neapolitan went on to note that he attended a meeting of one of the city's prominent academies, the Accademia degli Erranti, where this exact question had been at the center of contrasting opinions.⁷² Gathering this sort of information was obviously of central importance to Castelli, as his colleagues and correspondents to the south were right in the thick of the action when it came to explaining the novel phenomenon.

Castelli either received, or read second hand, letters from Giovanni Battista Manso, possibly including the latter's 'Plinian' eyewitness account of the eruptive cloud rising into the skies of Naples. The founder of the Accademia degli Oziosi was consulted for his opinion on the earthquakes that had accompanied the recent paroxysm, since he was one of those people Castelli considered to be an eminently reliable source of information. Manso, in fact, participated in an extensive network of correspondents that went beyond Castelli. It included none other than Galileo Galilei, who was by the 1630s the single most controversial figure in Italian science.

Manso's letters to and about Galileo, however, dated back to the early seventeenth century, when the latter's fame was on the ascendant. Considering the context in which these letters were written, it is possible to see the sketches of two projects that never materialized despite some promise in the early 1600s: the Lincei in Naples, and their program to study geological phenomena. The Marquis of Villa was an ardent and early

⁷² On the Accademia degli Erranti, see: Antonella Ambrosio, *L'erudizione storica a Napoli nel Seicento: manoscritti d'interesse medievalistico del Fondo Brancacciani della Biblioteca Nazionale di Napoli*, Iter Campanum (Salerno: Carlone, 1996), 24-50.

admirer of the Tuscan astronomer, and among the Neapolitans best situated to solicit the attention of the rising star. In a 1610 letter that followed the publication of the *Siderius Nuncius*, he complimented Galileo for being:

A person of rare virtue, and singular doctrine, in whom God wished to unite not only all those gifts that he has distributed among other men in the past but has reserved him for a new and unheard of discovery of new skies ... and has taken him along ways never tread by human intellect, like a new Columbus.⁷³

Manso's desire to participate in the novelties of the day was palpable, just as it was reasonable for him to think that Galileo and the Lincei would appreciate the interest for their discoveries being shown in Naples.

In a letter of the same month, Manso told his friend Paolo Beni that, "I admire [Galileo's] singular virtues as one should, and aspire so much to them in life that I would not exchange the title of his servant with that of lord of the remaining world." In the same missive, he continued:

I hold great hope that just like the last century claims to have discovered new and unknown worlds, so the present one will glory in having discovered new and unimagined skies, with such wonderment for the coming age that they will envy us who were born in these adventuresome times and knew such rare and divine minds ... But if *Signor* Galileo wanted to make the world marvel at these things, he should have stopped here, and not turned his most noble instrument toward the skies, because, discovering with it the marvels up there, he has stifled wonder for earthly things, strange and great as they may be.⁷⁴

⁷³ "Giovanni Battista Manso to Galileo Galilei; Naples, March 18, 1610." Biblioteca Nazionale di Firenze, Mss. Gal., P.VI, T.VI, cc. 41.

⁷⁴ "Giovanni Battista Manso to Paolo Beni; Naples, March, 1610." Biblioteca Nazionale di Firenze, Mss. Gal., P.VI, T.XIV, cc. 84-87. This portion of the letter reads: "Io fò quella stima che si deve alle sue singolari virtù, e ne vivo tanto ambizioso, che non cambierei il titolo di suo servitore con quel di padrone di tutto il rimanente mondo ... Anzi io porto ferma speranze, che come il secolo passato si vanta a ragione di haver scoperti nuovi et non più conosciuti mondi, così questo presente si glorierà d'haver ritrovati nuovi et non più immaginati cieli, con tanto stupore dell'età di venire, che invidieranno noi che semo nati in questi avventurati tempi e habbiamo possuto conoscere così rare e divini ingegni ... Ma se il S.r Galileo voleva di queste cose far meravigliare il mondo, bisognava che si fermasse qui, et non rivolgesse quest suo

As Manso recognized, the telescope and Galileo's discoveries had revolutionized the agenda and the priorities of natural philosophers, even when there remained many "strange and great" things to consider if one's gaze remained fixed on the ground.

One can only guess where Vesuvius and volcanoes stood in Manso's balance of interests two decades later, when he became such an important participant in the exchange of information on the eruption. By the 1630s, however, Galileo's interpretation of the heavens had brought the tensions between received authority – primarily Biblical – and the science of observation to an acute pitch, as the *Dialogue on the Two Chief World Systems* was formally condemned for how it impugned the former. Explaining the eruption of 1631 presented distinct challenges, granted, but even at this later point, Manso's praise of Galileo decades earlier still rang true: strange and great as earthly things may be, novelties in the heavens were a thing of their own.

Since the early 1600s, all the same, it had been clear to the Lincei and even to Galileo that volcanoes deserved serious study. Naples was a good place to do this, for reasons Federico Cesi himself found persuasive. Just a few years before Manso praised Galileo and solicited his attention, Cesi seriously entertained the possibility that the city might become a second home for the Lincei. He also actively recruited Neapolitan naturalists, asking that they suggest possible topics for scientific investigations, including those best suited to the city's unusually promising natural setting.

nobilissimo strumento verso il cielo, per ciò che, scoprendo con esso le meraviglie di cola su, fa cessare lo stupore delle cose terrene, per istrane et grandi che elle sieno."

Cesi's first trip to Naples was in 1604, as he tried to distance himself from his father's persistent efforts to quash the nascent Lincei. The cosmopolitan and bustling city had a number of attractions, not least of them two giants in the fields of natural history that were now absorbing Cesi, Ferrante Imperato and Giovanni Battista Della Porta. Della Porta was really a figure of the preceding generation, an all-around expert on how to reveal the inner secrets of nature by reading its surface signs and characteristics, but the two struck up a lasting friendship. Imperato, younger, was renowned for his studies of fossils and plants, and beyond him, Cesi also befriended Fabio Colonna, a promising young botanist who pioneered the use of etching for the illustration of plants in his *Phytobasanus* (1592). The favorable impression Naples made on founder of the Lincei was palpable. Of his first trip to Naples he wrote a friend:

Naples, paradise of delights, full of amenities and pleasures, relaxed in its loveliness, most beautiful, gentle, and charming; the abode of fertile Ceres, abundant Neptune, and most pleasing and courteous Venus ... there is much to tell you, but know how much I would have liked, if I had the Linceans with me, to establish my abode here.⁷⁵

Cesi never realized this ambition, but in the years that followed, contact with Naples continued. He ventured south again in 1610, this time to offer Della Porta membership in the Lincei.

Yet another Neapolitan joined the Lincei in 1612, Nicolò Antonio Stelliola (1547-1623). Stelliola was the sort of controversial figure that seemed to abound in Naples in

⁷⁵“Napoli paradiso delle delitie, amenità de' piaceri, spasso delle vaghezze, bellissimo, gentilissimo, giocondissimo, stanze di Cerere fertilissima e di Nettuno abbondantissimo e di Venere cortesissima et piacevolissima, ma non più inanzi di gratia che vi è troppo da dire; ma per sbrigarmene in una parola sappia, che s'io havessi havuto i Lyncei, sarebbe per me stato troppo gusto, in questa vita, la stanza a Napoli.” “Cesi in Rome to Stelluti in Fabriano, July 17, 1604,” cited and translated in Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History*, 245.

the 1590s. Like the Dominican heretics Giordano Bruno and Tommaso Campanella – one who would be famously burned in Rome in 1600, while the latter languished in a Neapolitan dungeon for nearly three decades – Stelliola had run afoul of the Inquisition. His crime was holding Copernican views, and he been briefly jailed in the same prison as Bruno and Campanella. Like the latter, he later became an ardent supporter of Galileo, and lent himself to the Lincei's various projects.⁷⁶ The number of fields in which he hoped to advance the science of the Lincei was encyclopedic, including architecture, botany, pharmacology, astronomy, mathematics, and a number of pursuits related to geological phenomena. He was also instrumental in the continuing efforts to make a home for the Lincei in Naples. Both of these important facts come to light in Stelliola's correspondence with Cesi in the 1610s.

Stelliola's ambitions were in tune with the times and Cesi's goals. In 1612, he informed the latter that he was working to promote the interests and pursuits of the Lincei in Naples, "seeing Your Excellency's fervor for erecting the noble edifice of the sciences in Naples, and arguing that this be done with the generous spirit of illustrating with virtues the present and future centuries." Stelliola referred to himself as an "Architect, Academic, Lyncean Professor of the Divine Science of the Encyclopedia," and offered Cesi, "proof of the worth of said science."⁷⁷

Besides being an avowed Copernican, the Neapolitan architect, engineer, astronomer, and more had fashioned himself as an opponent of Aristotle. Believing that

⁷⁶ Freedberg, *The Eye of the Lynx*, 113.

⁷⁷ Nicolò Antonio Stelliola, "Nicolò Antonio Stelliola a Federico Cesi, Naples, 1612," (Biblioteca dell'Accademia Nazionale dei Lincei, Archivio Linceo 12, cc. 355).

all knowledge descended from a single supreme science (*Magia, Sapienza, or Ecyclopedia*), which had been entrusted to certain men in the ancient world, he proposed a return to an encyclopedic wisdom that might liberate men. His model was the Greek philosopher Pythagoras, who had moved his school from Samos to southern Italy. This fact echoed both Stelliola's desire for intellectual freedom from the constraints of Aristotelianism, but also his engagement with fellow radical thinkers like Campanella, who envisioned the possibilities knowledge afforded for freeing peoples from tyranny and oppression.⁷⁸

Stelliola hoped that Cesi would support his plan for an *Encyclopedia Pithagorea*, "recognizing the merits of this high speculation mother of the arts and sciences, which has fallen into oblivion over the past centuries for lack of masters, will now restore it to the world with universal benefit and immortal glory."⁷⁹ The Pythagorean school he promoted was generally understood to be antithetical to Aristotelian doctrines, and more in tune with Copernican astronomy. He was deeply fascinated by the telescope, and aimed to bring his expertise to bear on "celestial architecture," but his encyclopedic range of interests extended to other applied sciences as well.⁸⁰

In the same letter of 1612, Stelliola provided an initial list of the pursuits particularly suited to the Lincean enterprise in Naples:

Of art and nature; Of the natural composition of the terrestrial orb ... Of the diverse natural movements of waters and tides; Of Fire and its faith, and the reciprocal effects of heat and cold; Of terrestrial mines; Of animal structure; Of celestial

⁷⁸ Joseph Connors, "Virtuoso Architecture in Cassiano's Rome," *Cassiano Dal Pozzo's Paper Museum* (London: 1992), vol. II (Quaderni Puteani 3), 23-40.

⁷⁹ "Stelliola to Cesi, Naples, 1612." BANL, Archivio Linceo 12, cc. 355.

⁸⁰ Freedberg, *Eye of the Lynx*, 113-114.

structure; Of the structure and parts of plant life; Of the investigation of volcanism, and the admirable effects that derive from it.⁸¹

The two pursuits that preceded the investigation of *vulcania* on Stelliola's list – botany and astronomy – dominated the most ambitious projects of the Lincei, and nothing ever seems to have come of Stelliola's suggestion, which surely meant exploration of the Campi Flegrei. We find him three years later still writing Cesi, this time with a report on a possible location for a Neapolitan observatory.

Stelliola wrote, "I cannot imagine a better place than the lands of the Anna near Porta Regale, where all the desirable conditions can be found." He continued, "It is a location eminently suited for celestial observation, and spacious enough for other occasions."⁸² The following year he formally published his *Encyclopedia Pithagorea*, but his fullest ambitions were never realized. Although the Neapolitan community of naturalists continued to contribute significantly to Lincean projects, especially in botany, *vulcania* became only a marginal interest.⁸³ It is poignant that the patch of land Stelliola picked out along the tuck of the Posillipo promontory closest to Naples would have afforded an especially good view of Vesuvius' eruption.

By 1631, however, much had changed in the Lincei. Cesi was dead, as was Stelliola, while Galileo was consumed by the final phases of drafting his most important and

⁸¹ "Dell'arte e della natura; Della natural composizione dell'orbe terrestre, e della posizion de principii elementari in esse orbe; Delli diversi movimenti naturali dell'acqua e della maree; Del fuoco e sua fede, e degli effetti dalla reciprocazione del caldo e del freddo; Delle miniere terrestri, Della struttura animale, Della struttura celeste, Della struttura e parti della vita piantale; Della investigation vulcania, e effetti ammirandi che da essa avvengano." "Stelliola to Cesi, Naples, 1612." BANL, Archivio Linceo 12, cc. 355.

⁸² Nicolò Antonio Stelliola, "Nicolò Antonio Stelliola a Federico Cesi, Naples, 1615," (Biblioteca dell'Accademia Nazionale dei Lincei, Archivio Linceo 12, cc.354).

⁸³ De phaenomenis

controversial work, the *Dialogo sopra i due massimi sistemi del mondo*. There is only one final tantalizing hint that the recent eruption of Vesuvius crossed Galileo's mind. In early January 1632, two weeks after the event, Galileo received a letter from Lodovico Lodovici informing him of what had happened.

Over the past few days in our lands in the Marches, as well as Spoleto and Perugia, a number of explosions, like cannon shots, were heard over the space of two days, on the 16th and 17th of the past month. It is thought that this may have originated in some way from the earthquake that happened in Naples on the 15th, or from the flames that came out of Vesuvius at the same time. We await your opinion on the matter, kissing your hands with the greatest humility and affection, and wishing also the happiest new year, and many more to come. Your most affectionate and devoted servant, Lodovico Lodovici.⁸⁴

There seems to be no record of Galileo's reply, if there was one.

There certainly was no response from the Lincei, who were mourning the death of Cesi, and were about to sail into very troubled waters indeed. If there was clear communication about the recent event between the natural philosophers of Naples and Rome, it moved along different channels, as was the case with Castelli's correspondence with Longo and Manso. The Lincei never studied Vesuvius or volcanism seriously, despite some early promise, for the reasons weighed in this final section.

The focus this chapter put on early geological science – in isolation from political themes – was for a reason. This was partly to look ahead and give clarity to considerations that would assume new life in the 1700s, and have importance beyond

⁸⁴ "Alli giorni passati si sono sentiti in quest nostri paesi della Marca, et anco a Spoleto e Perugia, alcuni rimbombi, come tiri di cannone, per lo spazio di dui giorni, al XVI e XVII del passato: si crede questo possa haver havuto origine in qualche modo dal terremoto successe a Napoli alli XV, o dalle fiamme che uscirono nell'istesso tempo dal Visuvio; e ne staremo aspettand il suo parere, con bacciarli in questo mentre humilissimamente et affettuosamente le mani, con pregarli anco felicissimo in l'nuovo anno et innumerabili appresso. aff.mo et obbl.mo ser.re Lodovico Lodovici" Lodovico Lodovici, "Lodovico Lodovici to Galileo Galilei, Macerata, January 2, 1632," in *Le Opere di Galileo Galilei* (Florence), 324.

Naples. A comparison to Chapter Four can be instructive. Camillo Tutini's political rhetoric of a vengeful anti-Spanish Vesuvius was produced by a unique historical context. The symbolism that linked the volcano to Neapolitan patriotic outrage was inextricably connected to the strife of the late 1640s, and never replicated with similar intensity. Vesuvius and science would enter an even richer period in the eighteenth century, on the other hand.

The explanations of volcanism offered by Asterio, Falcone, and Castelli were never solely naturalistic, but they privileged the scientific aspects over the religious and political ones more manifest in the sources considered in previous chapters. I believe that this justifies the risks of considering early volcanology in some measure of isolation. Historians' complete neglect of the scientific importance of the 1631 eruption also warrants this approach. The theories proposed already by the 1630s – particularly those related to “chemical ignition” of sulfur and other combustibles – were very much the basis of eighteenth-century volcanology. No shortage of recognition exists for the latter. This chapter has sought to extend our knowledge to the first half of the 1600s, and include the works of forgotten natural philosophers. The conclusion and epilogue that follows is partly a glance forward to a less threatening, but still fascinating Vesuvius.

Chapter 6

Looking Backward and Forward from 1631

Scipione Falcone, author of the *Discorso naturale delle cause et effetti causati nell'incendio del Monte Vesuvio* (1632), compiled what he felt to be the most accurate surviving record of past eruptions since the birth of Christ. The volcano's history was listed chronologically in a table illustration placed at the beginning of the portion of his work entitled "Natural Discourse" (**Figure 6.1**). The *tavola* dated past volcanic activity and counted the intervening years between bursts. Falcone numbered twenty-three different "ignitions" including the most recent of 1631, though his list was inaccurate. He mistook references to volcanism in Seneca's *Quaestiones naturales* (60s AD) as proof of another eruption just before the cataclysm of 79 AD. In fact there was none, but he also realized that his table was going to have inaccuracies of this kind. Falcone compiled the dates and sources for Vesuvius' volcanic past to the best of his ability.¹

Volcanologists today date and sequence eruptions by searching for the various strata of lava and pyroclastic material that correspond to respective occurrences. Falcone had a different method, since his table relied not on observation or collected data. It was based instead on the evidence provided by historical texts. The latter included Pliny the

¹ Falcone wrote next to the table that the eruptions preceding the birth of Christ needed to be confirmed, an effort that would take time: "Tavola del numero dell'accensioni della distanza fra l'una, e l'altra accensione; dell'anni dell'accensioni dopo la nascita di N.S. Giesù Christo; dell'Autori, ove le scriveno; e si lasciano le prededenti, come non bene accertate ne i tempi, queste anco si sottoponeno a chi ha più tempo per aggiustar li tempi dell'histoire." Scipione Falcone, *Discorso naturale delle cause et effetti causati nell'incendio del Monte Vesevo con relatione del tutto di Scipione Falcone Spetial di Medicina Napolitano* (Naples: Ottavio Beltramo, 1632), 3.

AL SIGNOR GIO. TOMASO DI FIORE MIO OSSERVANDISSI

TAVOLA del numero dell'accensioni della distanza fra l'una, e l'altra accensione, dell'anni dell'accensioni dopo la nascita di N. S. Gesù Christo; dell'Autori, oue le scrivenno si lasciano le precedenti, come non bene accertate ne i tempi; e queste anco si sottopongono a chi ha più tempo per aggiustar li tempi dell'historie.

nume ro.	dist za.	anni	
1		6	L'accensioni grandi son segnate con questo segno *
			Nelli dell'Autori, e luoghi citati.
1		6	Giovanni Boccaccio de montibus in Vesuvio, accennato da Corne-
2	16	* 81	lio Tacito lib. 15 con Seneca lib. 6 delle quest. natur. cap. 1.
3	119	100	Dione Cassio in Tito; Suetonio in Tito, 1. libro seco epist. 16. e 20.
4	4	204	Dione Cassio nell' Epitome dell' Historie Romane.
5	101	305	Sistino nell' imperio di Severo il Decimo.
6	116	321	Maratolo nel colloquio sestodecimo.
7	150	471	Il sestodecimo del Teatro della vita humana al volum. 23. lib. 1.
		*	Procopio nella guerra di Goti lib. 2. Marcellino Comite nelle
8	1	472	Croniche; Baronio all' annotationi del Martirologio a 19. Set-
			tembre; Fabio Giordano nella Cronologia.
			Sigonio lib. 14. dell' imperio Occidentale in Olibio; Procopio al
9	1	473	luogo citato.
10	39	512	Procopio al luogo citato, e lib. 3. Baronio all' stesso anno.
11	25	537	Sigonio dell' imperio Occidentale lib. 16. addotto da Cassiodoro
12	96	573	lib. 4. epist. 50. il Teatro della vita hum. vol. 23 lib. 1. pag. 394.
13	112	683	Capaccio lib. 2. dell' historie Nap. riportato da Procopio.
		*	Procopio come di sopra.
			Sigonio al lib. 1. del Regno d' Italia pag. 93. Teatro della vita hu-
14	194	879	mana to. 23. lib. 1. Capaccio al luogo citato, il Platina alla vita
15	114	993	di Benedetto II.
16	31	1024	Heremperio nell' Epitome delle Croniche.
17	13	1036	S. Pietro Damiano al tomo 3. epist. 19. e 9.
18	2	1038	Capaccio lib. 2. cap. 8. sotto Benedetto VIII.
19	11	1049	Anonimo Cassinese nelle Croniche.
20	89	1135	Leone Ostiense riportato dal Baronio tom. 2.
21	1	1130	S. Pietro Damiano al luogo citato; Croniche Cassinesi lib. 2. c. 81.
22	301	1500	Anonimo Cassinese nella Cronica.
23	31	1651	Falco Benvenuto nelle Croniche.
		*	Ambrosio Nodano lib. 1. cap. 1. e di questi il Matthiolo nel lib. 5.
			Dame veduto è seruto. (di Dioscoride cap. 83.

Figure 6.1 Scipione Falcone, Discorso naturale (1632)

Younger's two letters to Tacitus, by now the most cited sources on ancient volcanic activity. Falcone's tabulation shows how closely related natural and "civil" history

(*storia naturale* and *storia civile*) were, since the authors he referenced were the same an antiquarian and humanist would consult for the history of ancient Naples.²

Naturalists often created tables to illustrate collections of plant, animal, and mineral specimens in a way that helped the reader better grasp the volume of their collections. Falcone, a doctor and herbalist, would have been familiar with this type of illustration and its use as an organizational representation of pharmaceutical plants. In this instance, the ignition table (*Tavola del numero dell'accensioni*) he drew up presented Vesuvius in a historical fashion, but it was just a variation on schema naturalists generally put to other uses. As a preface to Falcone's explanation of why the volcano burned, the *tavola* helped establish the authoritative nature of the analysis.³ To historicize the volcano was a typical gesture after 1631, but it is important to note that the whole exercise gave little comfort to anyone.

The historical chronology of this type in fact suggests something beyond how natural philosophers began their "natural discourse," as Falcone called it. It shows that seventeenth-century scholars were keen on reflecting on both the precedents and on the future prospects of Vesuvius. The earliest eruption anyone could be certain about was the one of the Roman period, whose imagined parallels with the most recent occurrence resonated very strongly. A small measure of comfort came from knowing that the

² Falcone cited a mix of classical, medieval, and contemporary sources including: Dio Cassius, Suetonius, Procopius, Falco Beneventanus, Ambrogio Leone, and Giulio Cesare Capaccio.

³ The tabular diagram was an important tool of visual representation in natural history, and closely related to the praxis of collecting. The mass of data gathered by naturalists and medical professionals – mineralogical, zoological, botanical, and medicinal – was often structured and represented by way of the grid. See: Claudia Swan, "From Blowfish to Flower Still Life Paintings: Classification and its Images, circa 1600," in *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe*, ed. Pamela Smith and Paula Findlen (New York and London: Routledge, 2002), 109-136.

ancients had faced a similar predicament and investigated the same phenomenon. On a different level – surely touching a greater segment of Neapolitans – the procession of December 17 and San Gennaro’s miracle helped establish the eruption as a pivotal historical event, one lived and observed by the whole of the city in a moment of great drama. Later generations would have to weigh the historical importance of the eruption, live with its consequences, and expect a similar recurrence. The prospects seemed grim indeed, but only in the seventeenth century.

Even if the most erudite observers of the 1631 eruption tried to affect the Stoic calm attributed to Pliny the Elder in the face of disaster, they were fundamentally uneasy. Naples’ political, religious, and cultural elites especially represented themselves as instrumental in channeling the masses’ piety, controlling their terror, and helping the city offer a united front before San Gennaro came to its aid. This, however, masked no small measure of concern. One example in particular shows how the elite spoke to itself about the eruption. It is largely the lessening of this kind of horror among Europe’s most scholarly and learned, I would like to suggest in conclusion, that helps locate the transition from one phase of Vesuvius’ existence in the European imagination to another.

The superintendent of the roads around the volcano, Antonio Suarez Messia, erected a small memorial to the eruption under the order of the viceroy.⁴ Messia placed the inscription at the base of the volcano, near the towns of Torre del Greco and Portici, where the destruction had been terrible. This location was important for another reason,

⁴ The viceroy was the Count of Monterey, so this was presumably done before 1637. I have not been able to determine the author.



Figure 6.2 Antonio Bulifon, *Lettere memorabili* (1685)

since it was the starting point for naturalists and *curiosi* to begin their climb, as Athanasius Kircher did in 1638. This group, it seems, was probably the most important intended audience of the inscription. If Kircher's account of his exploration in the *Mundus Subterraneus* is any indication, even the most eminent naturalists of the seventeenth century were conflicted between their sense of curiosity, fear, and revulsion.⁵

Antonio Bulifon's *Lettere memoriabili, istoriche, politiche ed erudite scritte e raccolte da Antonio Bulifon* (1685) included an illustration depicting three gentlemen standing before the inscription, which was in all effects styled as a warning (**Figure 6.2**). Because of its dense and difficult Latin, this monument to posterity was surely not meant for the local population – who had died in the thousands in flows of scalding *lahar*. It was meant for the humanists, antiquarians, naturalists, and aristocrats like Capaccio, Braccini, Manso, Falcone, Castelli, and Kircher.

“Posterity, Posterity,” began the inscription, “this has to do with you.” It continued:

One day bears the torch for the second day after, so listen. Twenty times, from the shining of the sun, if history does not lie, Vesuvius burned, always with a great massacre of those who linger. So that in the future it not take those who doubt, I warn you. This mountain is gravid with bitumen, alum, iron, sulfur, gold, silver, nitre, and springs of water. Sooner or later it will ignite and give birth to a flooding sea. But before it suffers, shaking itself and the ground, it smokes, it vibrates, burns, and shakes the air. It roars horribly, bellows, thunders, and chases inhabitants from its borders. Flee while you can! Here it tears itself apart, here it bursts, and it vomits a lake of fire. It comes precipitously down, preventing late flight. If it overtakes you, it's over, you are dead!⁶

⁵ Athanasius Kircher, *Mundus subterraneus in XII Libros digestus* (Amsterdam: Johan Jansson, 1678).

⁶ The Latin reads as follows: “POSTERI POSTERI VESTRA RES AGITUR DIES FACEM PRAEFERT DIEI NUDIUS PERENDINO ADVORTITE VICIES AB SATU SOLIS NI FABULATUR HISTORIA ARSIT VESVUS IMMANI SEMPER CLADE HAESITANTUM NE POST HAC INCERTOS OCCUPET MONEO UTERUM GERIT MONS HIC BITUMINE ALUMINE FERRO SULPHURE AURO ARGENTO NITRO AQUARUM FONTIBUS GRAVEM SERIUS OCYUS IGNESET PELAGOQ INFUENTE PARIET SED ANTE PARTURIT CONCVTITUR CONCVTITQ SOLUM FUMIGAT CORUSCAT FLAMMIGERAT QUATIT AEREM HORRENDUM IMMUGIT

The inscription memorialized the terror that Neapolitans felt for Vesuvius in the decades after 1631, when it seemed to have become an implacable destroyer. It was folly to forget its fiery bosom, as previous generations had done.

These words to posterity again echoed Pliny the Younger's letters. Impenetrable to most, the verses nonetheless reflected a more general anxiety that persisted in the decades following 1631. With "the calamity of past times renewed," Vesuvius raged. Finally, "scorned, it crushed the incautious and greedy, for whom house and belongings were more important than life." The destruction that fell upon the Romans at the height of their prosperity had been visited again upon the city. The warning was that it would happen again because the volcano was gravid with bitumen and sulfur, but also because it seemed to be ignited by the passions of the city. The final lines rang out a warning that might have sounded nearly sixteen centuries earlier: "care not for your *lares*, leave your belongings, and do not tarry, flee!"⁷ There was no stronger sentiment in a time when both city and volcano seemed to be bent on self-immolation, even if one excludes the classical references few of those who died in the eruption would have grasped. It was, however, a relatively short-lived and particular historical moment after 1631 that

BOAT TONAT ARCET FINIBUS ACCOLAS EMICA DUM LICET IAM IAM ENITITUR ERUMPIT MIXTUM IGNE LACUM EMOVIT PRAECIPITI RUIT ILLE LAPSU SERAMQ FUGAM PRAEVERTIT SI CORRIPIT ACTUM EST PERIISTI ANNO SALUTIS MDCXXXI XVI KAL JANUARI PHILIPPO IV REGE EMMANUELE FONSECA ET ZUNICA COMITE MONTIS REGII PROREGE REPETITA SUPERIORUM TEMPORUM CALAMITATE SUBSIDIISQ CALAMITATIS HUMANIUS QUO MUNIFICENTIVS FORMIDATUS SPREVIT SPRETUS OPPRESSIT INCAUTOS ET AVIDOS QUIBUS LAR ET SUPELLEX VITA POTIOR TUM TU SI SAPIS AUDI CLAMATEM LAPIDEM SPERNE LAREM SPERNE SARCINULAS MORA NULLA FUGE ANTONIO SUARES MESSIA MARCHIONE VICI PRAEFECTO VIARUM" The memorial is transcribed in full in Angelandrea Casale and Felice Marciano, *Vesuvio 1631. L'eruzione alla luce di nuovi documenti* (Naples: Procaccini, 1994), 24-25.

⁷ Ibid. The *lares* were Roman domestic deities, so the suggestion here is "home."

produced this image of the volcano. Just a century later, the mountain of fire had begun to look considerably different.

Vesuvius erupted with mounting frequency in the 1700s, sometimes spectacularly. The volcano was almost continuously active between 1696 and 1737, flaring up nearly every year. There was even a large eruption in 1767 that actually raised the height of the cone, and another in 1794 that attracted much attention.⁸ Never, however, was there a cataclysm that compared to the eruption of 1631. This was in some measure because subsequent eruptions were less explosive. Ash and lava poured out of the active and now slowly growing volcano, but they did not release huge forces pent up for centuries.⁹

It was cultural changes, therefore, that softened the image of Vesuvius, despite the fact that the volcano burned more than ever. Naturalistic and scientific perspectives had a lot to do with making it appear less threatening, especially for a broader European audience. This process, as I argued in the fifth chapter, began to take shape thanks to natural philosophers Scipione Falcone and Pietro Castelli. Their speculation about subterranean heat and the inner features of the Earth, including consideration of the combustion of sulfur, bitumen, or other minerals in underground places only became a more pronounced feature in the century that followed.

⁸ A sampling of eighteenth-century sources includes: Giacinto Gimma, *Della Fisica sotterranea* (Naples, 1730); Giovanni Maria Della Torre, *Storia e fenomeni del Vesuvio* (Naples, 1768); M. Attumonelli, *Della eruzione del Vesuvio accaduta nel mese di Agosto dell'anno 1779* (Naples, 1779); Ascanio Filomarino, *Breve descrizione de' principali incendi del monte Vesuvio e di molte vedute di essi ora per la prima volta ricavate dagli storici contemporanei ed esistenti nel gabinetto del Duca della Torre* (Naples, 1794).

⁹ Volcanologists define this type of volcanic activity as “effusive” rather than “explosive,” as it results when the magma conduit is open. Antonio Nazzaro, *Il Vesuvio. Storia eruttiva e teorie vulcanologiche* (Naples: Liguori Editore, 2001), 343-347.

Evolving perspectives toward nature in the eighteenth century led to an increasingly detailed understanding of geological features, subterranean heat, and volcanic activity. To the Enlightenment minds of the eighteenth century, Vesuvius played a necessary and constructive role in the Earth's inner economy. This was a realization of no small consequence, also because it was supported by changes on the volcano itself. Naturalists, scholars, and cosmopolitan travelers on the Grand Tour actually watched the volcano *grow* during its fiery displays in the 1700s. Athanasius Kircher had intuited a century before both the rebuilding of the volcano, and more importantly its connectedness to global processes, but Vesuvius also reminded him in no casual way of the Apocalypse by fire. This type of comment would not persist on the level of European learned and scientific culture. Volcanoes were powerful, dangerous, even scary, but they were not horrible.

No eighteenth-century figure exemplifies changing attitudes toward Vesuvius more than Sir William Hamilton (1730-1803), for whom the volcano was anything but an infernal monstrosity. In 1764, Hamilton was appointed British Envoy Extraordinary to the Bourbon court in Naples. He resided in Naples for nearly forty years, an extended stay during which he studied volcanic activity with a consuming passion. Hamilton published his masterpiece on Italian volcanoes, the *Campi Phlegraei*, in 1776. Immensely researched, and illustrated by the noted Neapolitan artist Pietro Fabris, it was without probably the most important work on volcanoes in the eighteenth century.¹⁰

¹⁰ Sir William Hamilton, *Campi Phlegraei: Observations on the Volcanoes of the Two Sicilies as They Have Been Communicated to the Royal Society of London* (Naples, 1776). Hamilton's time in Naples, and his passion for volcanoes and archaeology is the object of Susan Sontag's novel *Volcano Lover: A Romance* (New York: Farrars Straus Giroux, 1992).

Hamilton's study of Vesuvius was extremely energetic, since he was reputed to have climbed to the crater no less than twenty-two times over a four-year period. His fieldwork often involved observations at close range and at considerable personal risk, earning him the reputation of being the "modern Pliny." It was less the fact that he was such an ardent explorer, however, that distinguished him from his forgotten seventeenth-century predecessors. The crucial distinction lay in the fact that Hamilton was absolutely convinced that, like all volcanoes, Vesuvius was a positive and creative force in shaping the Earth. One of the concepts Hamilton grasped, for example, was the volcanic origin of basalt, a topic of much contention and debate in this period since this type of rock was found in places far removed from active volcanoes. His research suggested, as well, that Vesuvius was proof of the existence of global central heat deeper and more continuous than the vast stores of bitumen generally theorized by seventeenth-century natural philosophers. The volcano was a good sign that geological processes were ongoing. To Hamilton, it was ultimately a place that might teach scientists how to search for other volcanoes, even those that were extinct and only identifiable by their ancient flows.¹¹

Around the same time that Hamilton was exploring Vesuvius, the Scottish geologist James Hutton (1726-97) demonstrated that magma intruded into existing layers of rock, which led him to conclude that the molten rock could only originate from deep within the Earth. Most important, he argued that volcanoes existed as safety valves to release excess heat, that they raised the surface of the earth, and that they contributed to the life of plants and animals. He wrote:

¹¹Haraldur Sigurdsson, *Melting the Earth: The History of Ideas on Volcanic Eruptions* (Oxford: Oxford University Press, 1999), 125-131.

A volcano should be considered as a spiracle of a subterranean furnace, in order to prevent the unnecessary elevation of land, and fatal effects of earthquakes; and we may rest assured that they, in general, wisely answer the end of their intention, without being in themselves an end, for which nature has exerted such amazing power and excellent contrivance.¹²

The apocalyptic suggestions were gone, deliberately erased and replaced by perspectives that emphasized the wonderful machinery of volcanoes.¹³ The difference in tone was the crucial change, not so much the vocabulary of “spiracles,” “furnaces,” or the venting to prevent earthquakes, which would have been perfectly recognizable to a seventeenth-century naturalist.

Observers of the 1631 eruption had intuited many of the things proclaimed by Hamilton and Hutton in the eighteenth century, including the idea that volcanism was a global phenomenon. The former did so, however, with a far greater sense of foreboding. Vesuvius had too many other dark connotations to be considered a spectacle of science and delight alone, as it was to Hamilton in the late eighteenth century. There was plenty of danger on the volcano in the 1700s, of course, but to the English aristocrat it was all gentleman and naturalist’s play. In a later supplement to his *Campi Phlegraei*, Hamilton

¹² Cited in Sigurdsson, *Melting the Earth*, 148.

¹³ This machinery was often compared to fireworks. Eighteenth-century pyrotechnic displays often recreated Vesuvius and Etna in virtuoso displays of “artificial” fire. These shows represented the volcano’s “natural” fire and the imagined battle between the Aristotelian elements – air, fire, water, and earth. In the mid 1700s, the Roman festival of the “China” celebrating the ancient vassalage of the Neapolitan kings to the Pope (through the ceremonial gift of a white horse) re-created the eruption of Vesuvius. As one scholar has suggested, the pyrotechnic display functioned as “a kind of ritual of exorcism, apotropaic in purpose, intended to demonstrate that science, wisely tolerated under an ‘enlightened’ monarch subdues and controls a docile Nature, and that all is well, and shall remain so, in the Kingdom of Naples.” See: Kevin Salatino, *Incendiary Art: The Representation of Fireworks in Early Modern Europe* (Los Angeles: Getty Research Institute, 1997), 56. This was strikingly different, I would submit, from Camillo Tutini’s image of Vesuvius in the *Prodigiosi portenti*.

wrote of seeing a nighttime eruption, which looked like “the most beautiful fireworks that can be imagined.”¹⁴

In 1632, Pietro Castelli made a reference to the similarities and differences between volcanic ignition and fireworks, but his *Incendio del Monte Vesuvio* concluded with grim predictions. Castelli’s ominous *prognostici* were possible because of the tight concurrence between natural causes and a greater divine causation – despite the distinctions naturalists made between the two. The ultimate endpoint, the central prediction, and the disturbing thought the volcano provoked led to one inevitable conclusion. Castelli wrote that his prognostication was that “all these repeated and lasting fires are one of the signs of the future day of universal judgment.”¹⁵

At this point, the story of Vesuvius and Naples might return to where it began with Athansius Kircher’s climb in 1638, so similar and yet different to Hamilton’s numerous ascents a century and half later. Kircher had little understanding or care for the tensions in Neapolitan life and culture that gave Vesuvius its opposite valences throughout the seventeenth century, but even he was at least on one level deeply disturbed by the volcano. Beyond the historical reflection, the curiosity about nature, and the idealization of a landscape alternately fertile and devastated, the volcano was as scary as Hell.

¹⁴ Sir William Hamilton, *Supplement to the Campi Phlegraei: Being an Account of the Great Eruption of Mount Vesuvius in the Month of August 1779* (Naples, 1779), 5; cited in Salatino, *Incendiary Art*, 57.

¹⁵ Pietro Castelli, *Incendio del Monte Vesuvio di Pietro Castelli Romano* (Rome: Giacomo Mascardi, 1632), 63.

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VITA

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