2015

Renaissance landscapes and the figuration of Giambologna's Appennino: an ecocritical analysis

BOSTON UNIVERSITY

GRADUATE SCHOOL OF ARTS AND SCIENCES

Dissertation

RENAISSANCE LANDSCAPES AND THE FIGURATION OF GIAMBOLOGNA'S *APPENNINO*: AN ECOCRITICAL ANALYSIS

by

CATHERINE WALSH

B.A., Vanderbilt University, 2000

M.A., Boston University, 2002

Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Philosophy

2015

Approved by

First Reader _____

Jodi Cranston, Ph.D.
Professor of History of Art and Architecture

Second Reader _____

Michael Zell, Ph.D.
Associate Professor of History of Art and Architecture

Third Reader _____

Keith Morgan, Ph.D.
Professor of History of Art and Architecture

ACKNOWLEDGMENTS

This dissertation owes much to many people. First and foremost, I thank Professor Jodi Cranston, my advisor, for her encouragement, patience, and generosity, which were unwavering for the duration of my time as a graduate student at Boston University. She demonstrated enthusiasm for my work, and through nuanced critique and rich questions she provoked me to sharpen my thinking about and refine my approach to this project – the best kind of scholarly guidance I could imagine. I am deeply grateful to Professor Michael Zell for his thoughtful responses to my work, and for both his rigor and kindness as a teacher. Both of these professors profoundly inspire me through their scholarship, teaching, and mentorship. In addition, my committee, Professor Keith Morgan, Professor Cristelle Baskins, and Professor Lauren Jacobi, offered helpful suggestions for this project. Carrie Anderson, Amber Ludwig Otero, Melissa Renn, and Tara Ward, fellow students in the Department of History of Art and Architecture, provided moral support, feedback on ideas for research and writing, and, most importantly, friendship. The dissertation was completed while I was teaching full-time at the University of Montevallo, where my Art Department colleagues and students frequently heartened me during the process. Andrew Battista served as a keen guide into the world of ecocriticism and its application to Renaissance culture, and he read some of the following chapters, offering many insights that helped strengthen the project.

A number of institutions fostered the research for this dissertation. The Boston University Graduate School of Arts & Sciences and Humanities Foundation awarded me a Graduate Research Abroad Fellowship, which allowed me to complete research in Italy.

The Department of History of Art and Architecture provided additional funding that allowed me to present my work-in-progress at numerous conferences. Librarians and archivists at the Folger Shakespeare Library, the Hunt Institute for Botanical Documentation at Carnegie Mellon University, and the Archivio Storico del Comune di Firenze graciously facilitated my research in their collections.

My family deserves the greatest thanks. I appreciate the camaraderie of my brother, Will, with whom I have shared many odysseys; but nothing equates to being siblings who write dissertations at the same time. Burch Tipton has been more kindhearted and understanding than I thought possible. And my ever-present canine companion, Meg (2003-2015), witnessed the composition of nearly every sentence on the following pages. Her gentle supervision and well-timed nudging ended only when she knew I was done.

This dissertation is for my parents. It is dedicated to my mother, Jackie Acree Walsh, who has provided every kind of support imaginable, including intrepid travel companionship through the Apennines and over the Apuan Alps. This dissertation also is in memory of my father, William Charles Walsh. Without their life-long encouragement, I would not have started or finished this exploration of Renaissance landscapes.

RENAISSANCE LANDSCAPES AND THE FIGURATION OF GIAMBOLOGNA'S *APPENNINO*: AN ECOCRITICAL ANALYSIS

(Order No.)

CATHERINE WALSH

Boston University Graduate School of Arts and Sciences, 2015

Major Professor: Jodi Cranston, Professor of History of Art and Architecture

ABSTRACT

This dissertation pioneers an ecocritical examination of the colossal monument *Appennino* (1580) by Giambologna (1529-1608). Because of its scale, form, and materials, the *Appennino* calls attention to the natural environment in an emphatic manner. A sculpted human figure, a representation of a mountain, and discrete passages of natural landscape are present in it. Living rock, fragments of lava and stalactites, and plant life simultaneously figure the human form and the Apennine landscape. These figurations prompt consideration of the relationships between art and nature and between illusion and materiality in Renaissance art. These interactions can be understood not only as generative processes, but also in terms of destructive ones. I argue that these art-nature and human-landscape interactions illuminate environmental concerns of the Renaissance.

A central concern of this dissertation is how the interactions between art, nature, and beholders in the Italian Renaissance reflect latent ecological anxiety. To demonstrate this, I take the *Appennino* as a point of departure and situate it within multiple frameworks: sixteenth-century natural history, botanical, and geological endeavors; early

modern reception of landscapes; art historical tropes of art-nature relationships; and Renaissance artists' engagement with nature. In Chapter One, I survey the scholarship on this monument and explain how the materials used to create it were understood, used, and valued during the Renaissance. In Chapter Two, I discuss the comprehension and experiences of mountains and caves (the environments that produced the *Appennino's* materials) in the Renaissance. In Chapter Three, I examine the multiple iterations of landscape within the monument, drawing attention to art theoretical issues such as "third nature," the "image made by chance," and tension between illusion and materiality that are manifest in the *Appennino* and that illuminate its entropic situation. In Chapter Four, I consider the multiple ways that the human figure can be understood relative to the monument and how the *Appennino's* figural form engages art history in an exceptional manner, destabilizing conventional art historical notions of form and style. Finally, I evaluate the ecological and ecocritical significance of the monument's afterlife, arguing that the *Appennino* maintains an ambivalent relationship with nature.

TABLE OF CONTENTS

LIST OF FIGURES

*All figures are illustrated in a separate administrative document, which is held by Boston University.

INTRODUCTION

Figuration and the Renaissance Landscape

> Sometimes the veins are the pleats of matter that surround living beings held in the mass, such that the marble tile resembles a rippling lake that teems with fish. Sometimes the veins are innate ideas in the soul, like twisted figures or powerful statues caught in the block of marble. Matter is marbled, of two different styles.[1]
>
> --Gilles Deleuze, *The Fold: Leibniz and the Baroque* (1988)

The *Appennino,* created by Giambologna around 1580, entangles landscape and the human form. Meant to evoke the Apennines, it is a constantly morphing man-mountain, made partially of living rock and encrusted with fragments of lava and stalactites (fig. 1.1). Because of its dynamic pose (crouching and pressing on the ground) and its materials (suggestive of fluid substances), the *Appennino* appears to be continuously figuring itself, resolving into a colossal man or dissolving into the landscape.

When Michel de Montaigne (1533-1592) visited Pratolino, Francesco I de' Medici's (1541-1587) villa and garden complex where the *Appennino* was in the midst of construction, Montaigne indicated that this colossal monument, from its inception, had a fraught relationship with its site:

> It seems as though [Francesco] purposely chose an inconvenient, sterile, and mountainous site, yes, and even without springs, so as to have the honor of sending to get water five miles from there, and his sand and lime another five miles. It is a place that has nothing level about it. You have a

[1] Gilles Deleuze, *The Fold: Leibniz and the Baroque,* trans. Tom Conley (Minneapolis: University of Minnesota Press, 1993), 4.

> view of many hills, which is the general shape of the country. . . . And they are building the body of a giant, which is three cubits wide at a rough estimate, and the rest in the same proportion; from this will pour a fountain in great abundance.[2]

In this description, written around 1580, Montaigne revealed awareness of incongruence between what the land offered and what the sculpture and garden required. Water and building materials, sand and lime, were absent and had to be obtained from sources outside of Pratolino. Montaigne also explained that the water (redirected from the Mugnone River to the site) was integral to the function of the *Appennino*, the "body of a giant" that he referenced. The terrain challenged construction at Pratolino, but once manifest, the *Appennino,* by gushing water "in great abundance," would help transform the site into a delightful, green place. Water made the figure generative*;* the artwork, Montaigne implied, could vivify the "sterile" land. Not only did the monument function as a fountain, but it also helped channel water used for domestic and agricultural work to other parts of the complex. Montaigne's response suggested that nature and the sculpted figure could interact in a contentious and cooperative manner simultaneously. Thus, in his comment, Montaigne anticipated the ecological consequence of the colossal monument: humans altered the natural environment surrounding Pratolino and the *Appennino* to build the giant, and, in turn, the *Appennino* altered nature at the site.

Because of its colossal scale the *Appennino* heightened its own engagements with nature at the site – the new, green nature it produced as well as the ancient geological material that encrusted it. Beholders, like Montaigne, cannot help but observe the

---

[2] Michel de Montaigne, *Travel Journal*, trans. Donald M. Frame (San Francisco: North Point Press, 1983), 64-65. The water originated at Monte Senario, five miles away.

relationships between the monument and the mountainous setting, local florae, and stony surfaces around and upon the figure. In some instances, these beholders became explorers of the monument, walking around it and upon it (fig 1.22). Furthermore, as a ten-meter tall structure, the *Appennino* incorporated Francesco and his guests into its form: on three levels chambers were nestled into the interior, entertaining visitors with water play, stimulating their senses of sound and touch, and fascinating them with natural curiosities and artworks installed inside (fig. 3.15). The figural depiction of the *Appennino* appealed to the embodiment of the beholders: as a sculptural figure, its volumes and voids represented the human form to beholders who, in order to discern completely the figure and its contents, engaged in ambulatory and sensory experiences around and within the figure. These beholders might have walked around, climbed inside of, and ascended and descended to different levels of the monument. While inside, especially, the aforementioned visual and tactile stimulation occurred. By exploring the figure of the sculpture, the body of the beholder engaged in the process of understanding bodily form.[3]

Resolving and dissolving, expelling in order to generate, and using the body to facilitate understanding: these are the processes that the *Appennino* iterates. They draw

---

[3] See Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Donald A. Landes (Abingdon, UK, and New York: Routledge, 2012), 100-105. Discussion of body parts enveloping each other and of understanding the body through motoricity are especially provocative for this study. On the relationship of embodied experience, "traversing" landscapes, and art, see José Ortega y Gasset, "Preface for Germans," in *Phenomenology and Art*, trans. Philip W. Silver (New York: Norton, 1975), 71. Also see Christopher Tilley and Wayne Bennett, "From Body to Place to Landscape: A Phenomenological Perspective," in *The Materiality of Stone: Explorations in Landscape Phenomenology, Volume I* (Oxford and New York: Berg, 2004), 1-32.

attention to art-nature, materiality-illusion, and human-landscape relationships. These processes and relationships underpin the analyses contained within this study, as it aims to interrogate the interaction between landscape and figuration within this monument and to suggest how that interaction has significance for Renaissance art.

I contend that the ways that landscapes are figured in sculptures like the *Appennino* and, conversely, how sculptures are figured from landscapes reflect environmental awareness and latent, ecological anxieties. As such, this project is a consideration of one work that allows investigation of a number of issues. It is not intended as a comprehensive re-evaluation of the *Appennino* relative to Renaissance sculpture, art theory, or other singular art historical contexts. It does not exhaustively engage the entirety of the body of scholarship on the monument, nor does it focus upon the context of Giambologna's *oeuvre*. Rather, this dissertation takes the *Appennino* as a point of departure. My study is intended as a critical examination of how this sculpture manifests ecological concerns and, at the same time, exploits ecology relative to the context of emerging scientific disciplines and natural history practices, engagements with art theory, and retrospectiveness of style in the late Renaissance.

Environmental awareness is tacit in Montaigne's comment, and ecological disturbance occurs because of the work of the *Appennino*; this disturbance manifests because of the way that the monument changes the environment around it. The *Appennino* figured generation, and it produced greenness at previously "sterile" Pratolino, almost an inverse of the phenomenon of the undoing of mountains. Because of widespread deforestation – in the Apennines, for example – erosion of mountainsides was

amplified, and waterways, such as the Chiana, turned marshy. In this example, the watershed shifted, the valley (Val di Chiana) became inhospitable to agriculture and habitation, and travel through parts of Tuscany and the Papal States became difficult, prompting a series of patrons to commission land reclamation and water-damming designs from Leonardo.[4] Italian Renaissance observers, from Dante to Machiavelli to Cesare Borgia, expressed concern about these conditions in the Val di Chiana, exemplifying awareness about environmental change and, in the case of Cesare Borgia, instigating treatment of it.

While beholders responded to nature (for example, the Val di Chiana) and art (for example, the *Appennino*) in ways that suggest environmental awareness or ecological anxiety, these beholders did not possess a critical idiom with which to address the ecological issues of nature and art. Because of this, and in order to clarify the aforementioned processes, relationships, and concerns that inhere in the *Appennino* and reception of it, I turn to the one of the broadest frameworks offered by ecocriticism.[5] In this dissertation, the use of ecocriticism means examining the relationships between art and nature, focusing on the material aspects of artworks and the reception of those artworks, and how they reflect damage to and by the environment.[6] The language of

---

[4] David Alexander, "The Reclamation of Val-di-Chiana, Tuscany," *Annals of the Association of American Geographers* 74, no. 4 (Dec. 1984): 527-536.

[5] For this standard and often-cited definition of ecocriticism, see Cheryl Glotfelty and Harold Fromm, *The Ecocriticism Reader: Landmarks in Literary Ecology* (Athens: University of Georgia Press, 1995), xviii-xix.

[6] Ecocriticism has been practiced consciously in literary studies since at least 1990 and has been defined as "the study of the relationship between literature and the physical environment [taking] an earth-centered approach to literary studies." See Glotfelty and Fromm, xviii. Other helpful ecocritical texts include Greg Garrard, *Ecocriticism* (London

ecocriticism also will help explain how the *Appennino* presents ecological disturbance in particular ways.[7]

Throughout the study, I use three related phrases to describe critical attitudes to nature and art: "environmental awareness," "ecological mindedness," and "ecological anxiety."[8] Environmental awareness suggests cognizance of the natural environment and its behavior, but might express a passive relationship between the beholder and the environment. Ecological mindedness suggests a critical attitude about the natural environment, one that has the potential to manifest an active relationship between the beholder and the environment. Ecological anxiety might be a particular manifestation of the latter, and it presupposes a critical or argumentative situation. The critique is bi-fold: the ecologically minded beholders and artworks discussed herein may represent critical reflections of their spatial-temporal context and its environmental practices, but they are also subject to retrospective critique for their occasional indifference to those very

---

and New York: Routledge, 2004); Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, MA: Belknap Press of Harvard University Press, 1995); and Lawrence Buell, *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Malden, MA: Blackwell, 2005). In addition, more broadly construed "green world" studies inform my methodology. See Harry Berger, Jr., *Second World and Green World: Studies in Renaissance Fiction-Making* (Berkeley and New York: University of California Press, 1988); Steven Rosendale, ed., *The Greening of Literary Scholarship: Literature, Theory, and the Environment* (Iowa City: University of Iowa Press, 2002).

[7] In practice, ecological concerns and systems of classification have been the subject of writings from Aristotle to Pliny to Albertus Magnus. While late Renaissance naturalists' work greatly influenced the development of ecology as a discipline – Ulisse Aldrovandi (1522-1605) is notable in this regard – the term was coined in the mid-nineteenth century by the German scientist Ernst Haeckel (1834-1919), when the discipline was codified.

[8] These terms reflect, but simplify, the spirit of Greg Garrard's articulation of ecocritical "positions," wherein he describes four distinct forms of environmentalism as ecocritical practices: deep ecology, ecofeminism, social ecology and eco-Marxism, and Heideggarian ecophilosophy. See Garrard, *Ecocriticism*, 16-32.

concerns. The gardens, sculptures, and paintings discussed in the following chapters reveal these multiple ecocritical attitudes – artists and beholders sometimes were aware that human behavior harmed the environment, and also sometimes they were concerned about and sought to address how damage happened.

Lawrence Buell recently discussed the lack of cohesion within the ecocritical initiative and the anxiety some practitioners have about adhering to a definitive method, or even describing the methodological practice – for example, one may identify as an ecocritic, environmental critic, or practice green cultural studies.[9] Or, one may practice ecofeminism, eco-Marxism, or Heideggerian ecophilosophy. This study purposefully does not aim to align with a particular position within ecocriticism, but to think of it as a framework for interrogating Renaissance art-nature relationships through examination of archival, literary, theoretical, and, most significantly, visual evidence from the early modern period.[10] However, this study is indebted to individual ecocritics practicing in the humanist tradition who have modeled approaches for dealing with nascent ecological concerns of the Renaissance.[11] For example, the evaluation of early modern scientific texts by the ecofeminist and intellectual historian Carolyn Merchant demonstrated how scientific disciplines were in a destructive relationship with nature and how this was made permissible by symbolically gendering "land" as female, but also how, in turn,

---

[9] Lawrence Buell, "Ecocriticism: Some Emerging Trends," *Qui Parle* 19, no. 2 (Spring/Summer 2011): 87-115. See pages 87-89 for an overview of these anxieties.
[10] See discussion in Garrard and Buell, referenced in notes 8 and 9.
[11] As distinct from evolutionary biologists and social scientists, among other types of scholars who also practice ecological advocacy through scholarship.

some of these texts reflect critical engagement with human effects on the environment.[12] And literary scholars Robert Watson and Ken Hiltner both have dealt with the connection between representational challenges and ecological anxiety in the late Renaissance and in the seventeenth century.[13] These scholars argued that in texts and images, the late Renaissance anticipated a modern, ecocritical frame of mind. In other words, the end of the sixteenth century saw a paradigm shift in terms of the understanding of how humans and nature interact. With these arguments, the scholarship of Merchant, Hiltner, and Watson on early modern culture serves as precedent for this study, which seeks to contribute to the emerging practice of ecocriticism within the discipline of art history.[14]

To return to the absence of an ecocritical idiom in Renaissance reception of nature: In order to explain the material qualities and physical situation of the *Appennino* – issues that perhaps instigated the aforementioned challenges – I draw upon Earthworks scholarship. It provides a lexicon for describing the material displacements associated with the construction and destruction of the *Appennino*.[15] Earthworks terminology seems

---

[12] See Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper & Row, 1980).

[13] Ken Hiltner, "Renaissance Literature and Our Contemporary Attitude Toward Global Warming," *Interdisciplinary Studies in Literature and Environment* 16, no. 3 (2009): 429-442; Robert Watson, *Back to Nature: The Green and the Real in the Late Renaissance* (Philadelphia: University of Pennsylvania Press, 2006).

[14] In art history, especially Americanists and scholars of the nineteenth century and Romanticism have employed ecocritical methodologies. See these select examples: Angela Miller, *The Empire of the Eye: Landscape Representation and American Cultural Politics, 1825-1875* (Ithaca: Cornell University Press, 1993); Greg M. Thomas, *Art and Ecology in Nineteenth-Century France* (Princeton, NJ: Princeton University Press, 2000); Alan C. Braddock and Christoph Irmsher, eds., *A Keener Perception: Ecocritical Studies in American Art History* (Tuscaloosa: University of Alabama Press, 2009).

[15] Specifically, Suzaan Boettger's discussion of Michael Heizer's *Displaced-Replaced* is helpful. She addresses ideas related to origins, quarries, excavation, and return. See

especially suited for characterizing the appropriation of lava and stalactites for the construction of the *Appennino*. The idea that geological, geographical, and material displacements lead to disruptions in time is crucial to understanding of the monument, especially considering the way that the *Appennino* complicates period style.

Art historical models for the analysis of the materiality and time of Renaissance art are found, respectively, in Jodi Cranston, *The Muddied Mirror: Materiality and Figuration in Titian's Later Paintings* (2010); Alexander Nagel, *The Controversy of Renaissance Art* (2011); and Alexander Nagel and Christopher S. Wood, *Anachronic Renaissance* (2010). I depend upon these texts, explicitly, throughout the dissertation's chapters.

Throughout the dissertation, George Kubler's ideas about entropy and his metaphors for understanding the relationship between art and time provide an overarching guide.[16] Especially in Chapter Three, Chapter Four, and the Coda, entropic

---

Suzaan Boettger, *Earthworks: Art and the Landscape of the Sixties* (Berkeley: University of California Press, 2002), 186-194. Also helpful: Jennifer Roberts on Robert Smithson's manipulation of time and understanding of relocation of sculpture in *Mirror Travels*: *Robert Smithson and History* (New Haven and London: Yale University Press, 2004); Pamela Lee, *Chronophobia*: *On Time in the Art of the 1960s* (Cambridge: MIT Press, 2004); Ann Reynolds, *Robert Smithson: Learning from New Jersey and Elsewhere* (Cambridge: MIT Press, 2004), especially Chapter Four, "Dirt as Disorder"; John Beardsley, *Earthworks and Beyond: Contemporary Art in the Landscape* (New York: Abbeville Press, 2006).

[16] Especially see the explanation of the erosion of objects in George Kubler, *The Shape of Time* (New Haven and London: Yale University Press, 1962), 46. He writes: "An unmistakable erosion wears down the contours of every work of art, both in its physical form, which is gradually obliterated by dirt and wear, and by the disappearance of so many steps in the artist's elaboration of his conceptions." And also on p. 19: "When an important work of art has utterly disappeared by demolition and dispersal, we can still detect its perturbations upon other bodies in the field of influence." And, p. 91: "The precursor shapes a new civilization; the rebel defines the edges of a disintegrating one."

processes can be seen to spur the figuration of landscape, to characterize the retrospection of style, and to generate the monument's critique of its own condition. Kubler's discussions of displaced style, the duration of artifacts, and the reverberation of lost imagery inform the analysis in these chapters. In tandem with Kubler's material-temporal entropy, temporal-spatial entropy is at issue here. Metaphors of folding, inspired by Deleuze, help explain the travel through space and time of the materials, images, and ideas that informed and were generated by the *Appennino*.[17] Processes of circulation and return found in the monument, its materials, and its reflections upon art history defy linear interpretive structures and either/or binary frames. Instead the multiple temporalities of the monument, its materials, and their reception histories require web-like frames that can become enmeshed, enfolded, and bended and that reveal the multiple theoretical, stylistic, and ecocritical valencies of it. For example, the displaced geological fragments that encrust the *Appennino* and that are central to analysis of the art theory, art history, and ecology of the work reflect geological time and Renaissance understandings of geological time, while they also re-present primordial time (or non-

---

Also see: Henri Focillon, *The Life of Forms in Art* (New York: Zone Books, 1989), first published 1934; Georges Bataille, "Formless," in *Visions of Excess: Selected Writings, 1927-1939*, ed. and trans. Allan Stoekl (Minneapolis, MN: The University of Minnesota Press, 1985), 31; Rudolf Arnheim, *Entropy and Art: An Essay on Order and Disorder* (Berkeley and Los Angeles: University of California Press, 1971). Arnheim's definition of entropy is also important for this study: "the processes measured by the principle of entropy are perceived as the gradual or sudden destruction of inviolate objects – a degradation involving the breaking-up of shape, the dissolution of functional contexts, the abolition of meaningful location." See p. 12. and also p. 17 for discussion of entropy and multiples.

[17] Deleuze, *The Fold*, especially "The Pleats of Matter," 3-13, and "Perceptions in the Folds," 85-100.

time) of the monument, among other ways of signaling time.[18] Each of these temporalities is measured by (or measures) a distinct kind of duration; these durations overlap; the overlapping and "unfurling" of the multiple durations of the materials require a framework of description and interpretation that does not privilege chronology.

Moreover, the lava and stalactites index travel across spaces of different sorts. Deleuze's explanation of the interpenetration of matter characterizes not only the nature of the geological and botanical matter of the *Appennino*, but also the behavior of this matter in its dissolving of conventional Renaissance hierarchies of representation. In this study, I explain how the figuration of the *Appennino* challenges landscape-figure, figure-ground, and materiality-illusion hierarchies, and in so doing, confronts beholders with the representational challenges described above. To this end, it resembles Deleuze's "porous, spongy, or cavernous" matter with "irregular passages, surrounded and penetrated by an increasingly vaporous fluid."[19]

Thus, ecocriticism, Earthworks scholarship, and entropy theory serve as co-operative methodological frameworks for this study, which also engages with the tradition of garden studies.[20] This dissertation depends upon foundational research by scholars such as Luigi Zangheri, Cristina Acidini Luchinat, and many others about the

---

[18] Especially see the discussion of folding processes as durations with no terminal, "endlessly unfurling and bending," "forever unfolding between two folds," "forever perceiving within the folds." Deleuze, 93.
[19] Deleuze, 5.
[20] Moreover, entropy theory's broad and flexible application – and its influence on ecocriticism and Earthworks scholarship – allows seamless and legitimate connections through these other components of my methodology.

site, monument, and materials.[21] Likewise, I am inspired by Claudia Lazzaro's multiple engagements with Pratolino and the *Appennino*; this study is indebted to and in conversation with her discussions of water, of "third nature," and of anachronism relative to this monument. As for theoretical and methodological positions within garden studies, Michel Conan's "poetics of gardens" characterizes my strategy in this dissertation. Conan wrote that "gardens make us discover the importance of interactions between the different forms of practice they stimulate … gardens can throw some light on the history of culture beyond the history of garden forms and their intended meanings…their history may reveal the diversity of attitudes towards nature and society from which they proceed and to which they contribute."[22] In this essay, he advocates for the cooperation of phenomenology and post-structuralism in garden studies, a position that antagonizes the usual polarization between these two modes of garden history and their practitioners.[23] Conan's "fragments of poetics" suggest the productive potential for employing reception history, social history, phenomenology, history of science, sociology, and other interpretive frames in collaboration with one another, as demonstrated through his body of scholarship. This dissertation follows suit. The chapters are organized in a manner that demonstrates the intertwined cultural context, art theoretical concepts, art historical significance, and ecocritical position of the *Appennino*. As such, methods of

---

[21] The contributions of these and other scholars are discussed in Chapter 1.
[22] Michel Conan, "Fragments of a Poetic of Gardens," *Landscape Journal* 25, no. 1 (2006): 15.
[23] For discussion of the state of the debate see Robin Veder, "Walking through Dumbarton Oaks: Early Twentieth-century Bourgeois Bodily Techniques and Kinesthetic Experience of Landscape," *Journal of the Society of Architectural Historians* 72, no. 1 (March 2013): 7-8.

phenomenology, reception history, ecocriticism, and entropy theory, as discussed above in this Introduction, are employed together in an attempt to manifest the "poetic texture" of this garden sculpture, to borrow Conan's term.[24]

Chapter One, the "The Making of Giambologna's *Appennino* and its Art History," serves as an introduction to the monument. It provides an overview of the history of the work's construction and decomposition. In addition, this chapter discusses in detail the *spugne,* or encrustations, of the monument, explaining how the term *spugne* was used in the period, where such materials were found in nature, and how they were used in garden settings during the Renaissance. This chapter also surveys the scholarship on the monument.

Chapter Two, "Mountains and Caves," provides literary, scientific, and cultural context for the *Appennino*. In this chapter, I discuss early modern reception of mountain and cave environments by artists, naturalists, writers, and other beholders to provide background against which the concerns of Chapters Three and Four can be evaluated. This chapter considers descriptions of mountains and caves found in art treatises, journals, maps, and other primary sources, as well as the understandings of mountains and caves in classical texts circulated during the Renaissance. In addition, this chapter suggests that the formalization and codification of botany and geology during this period contextualize the *Appennino*, especially in terms of embodied engagement with nature and the role of that embodiment in processing and producing knowledge. These primary resources and cultural contexts illuminate how humans experienced and understood,

[24] Conan, 3.

beheld and perceived, represented and received both natural and fabricated mountain and cave landscapes.

Chapter Three, "Landscapes in the Figure," discusses how nature mediates materiality and illusion in the *Appennino*. Traditionally, these two aspects of composition – its stuff and its content – have been understood in opposition to each other in early modern art. This chapter demonstrates that stuff and content can represent themselves together, in a cooperative manner. The chapter focuses upon the geological materials – living rock, lava, stalactites – used to create the mountain landscape that the *Appennino* represents and on the invasive plant matter that reshaped the *Appennino*. By looking at these aspects of the sculpture in the context of Renaissance art theory, I demonstrate that landscapes, landscape histories, and reflections of Renaissance art theory are manifest in the surfaces of the sculpture. This chapter explores how geology, botany, facture, and illusion can converge in three-dimensional Renaissance art and how that convergence (perhaps unexpectedly) challenges traditional understandings of art, nature, materiality, and art theory in Renaissance art.

Chapter Four, "Figures from the Landscape," suggests that the *Appennino* self-reflexively engages art history. It also considers how the physical landscape(s) that Renaissance sculptors mined for materials contributed to the figuration of human form and how the human body – artist or beholder – understood, experienced, and related to the (colossal) figure. Focusing on the *Appennino's* relationship to sculpted male figures of the sixteenth century, this chapter considers how High Renaissance sculptural ideals are reflected in the *Appennino*, a late Renaissance project.

In the Coda, I return to the record of human intervention in the landscapes of the *Appennino*, both represented and real, looking at the afterlife of the monument and the damage reflected by it. Seventeenth-century "renovations" to the grotto and eighteenth-century "restorations" to the exterior accelerated the destruction of materials and meaning but also created new possibilities for interpretation of the ecological significance of the *Appennino*, which might be seen to critically engage the pastoral. The pastoral lens focuses the relationship between human damage to nature and the *Appennino's* generative and destructive potential.

CHAPTER ONE

The Making of Giambologna's *Appennino* and its Art History

Introduction

In 1569, Grand Duke Francesco I de' Medici (1541-1587) commissioned a villa and gardens for his retreat at Pratolino, about twelve kilometers outside of Florence, Italy. Giambologna's *Appennino*, constructed around 1580, is among the sculptures, fountains, and grottoes, connected by walking paths, which were conceived to entertain visitors (fig. 1.1, fig. 1.2). The program was esoteric and required multiple encounters for full comprehension. Scholars continue to debate about its interpretation. Like the greater project, most of which is no longer extant, the *Appennino's* iconography has proved confusing, and as a structure it defies easy classification. It is a colossal fountain and an architectural space; it represents a figure and a place. Though it is similar to other large garden installations of the period in that it is fantastical and experiential, as well as in its use of materials, its appearance is singular. But, on the most basic level, this monument personifies the Apennine Mountains; in other words, the *Appennino* embodies an expansive but specific landscape. Moreover, it is situated on a hillside of the Apennines, and its base is living rock, an outcropping of mountain. Its surfaces are encrusted with fragments of lava and stalactites mined from distant caves and riverbeds (fig. 1.3). Patches of green growth creep through interstices in its form and punctuate the figure (fig. 1.4). Thus, in very tangible ways this sculpture engages with nature.

This dissertation considers how the *Appennino* engages nature in terms of its materiality and form and in terms of early modern theories of nature and art; in order to

provide background for such considerations, this chapter offers an overview of the *Appennino*. In the following discussion, I will summarize the chronology of the project, and I also will discuss the materials, preparatory models and sculptural precedent, and key art historical analyses related to the *Appennino*. Exploring the details of its materiality – the sources for its lava and stalactites, how those materials were valued during the period, how the monument was planned and constructed – alongside the interpretations of (and debates about) its iconography will lay the groundwork for exploring how this monument physically interacts with the landscape (Chapter Three) and how it also embodies ideas about the figure (Chapter Four).

Chronology

Between 1568-1578, Francesco I de' Medici (1541-1587) purchased the tracts of land where he established his retreat, Pratolino. Part of the land was wild forest, and part already was used for farming when he took possession.[25] The site is located north of Florence, along an ancient Roman road that crossed the Apennines. (Today it is known as the Via Bolognese / Via Fiorentina.) In 1569, under the direction of Bernardo Buontalenti (1531-1608), court architect, engineer, and garden designer, the development

[25] Francesco purchased much of the property from Benedetto Uguccioni, who became the superintendent of the project. The acquisitions are documented in *Possessione, filza* 4117 ("Campione di Beni stabili del Ser.mo don franc.o Medici, Gran' Duca di Toscana"), fol. 17r. For discussion of this and other supporting documents, see Webster Smith, "Pratolino," *The Journal of the Society of Architectural Historians* 20, no. 4 (1961): 155-168. Documents related to Pratolino are collected in Luigi Zangheri, *Pratolino: il giardino delle meraviglie,* 2 vols. (Florence: Gonnelli, 1987). For a bibliography on Pratolino and the *Appennino*, see Giovanni Valdré, *Pratolino e la scrittura: bibliografia storico-ragionata della Villa Medicea e della sua gente* (Florence: Alinea, 2003).

of Pratolino commenced; it proceeded for fifteen years.[26] The complex was anchored by a villa, situated between a meadow (*prato*) and a wooded area, the latter bisected by an avenue that allowed entry to the site. Many fountains and sculptures populated the grounds, and walking paths twined through the gardens and woods. Farms and forest surrounded the villa and park complex. As indicated on the map by Bernardo Sgrilli (active 1733-1755), the *Appennino* is situated on the north-south axis, aligned with other figural fountains that helped conduct water through the site: the fountain of *Jove*, followed by the *Appennino*, the *Mugnone* (located under the original entrance to the villa), and the fountain of the *Laundress* (fig. 1.2; map key numbers 6, 8, 18, and 22).[27]

The *Appennino* is found in the northern portion of the site, called the "*barcho nuovo*," or new park, in documents contemporary with its production.[28] Development of this portion of Pratolino began by 1578. Construction of the *Appennino* probably began in 1579, though reports on the date conflict. In *Vaghezze sopra Pratolino* (1579), Raffaello Gualterotti's (1543-1639) poem celebrating the park, which was written on the occasion of Francesco's wedding to Bianca Cappello, the poet implies the figure of the giant had materialized; however, a document from March 1580 suggests that the craggy niche that shrouded the *Appennino* was underway, but that the giant had not yet

---

[26] See Smith, "Pratolino."
[27] On the water system at Pratolino see Luigi Zangheri, "L'acqua a Pratolino, da elemento naturale ad artifizio 'maraviglioso,'" in *Il Giardino Storico Italiano. Problemi di Indagine. Fonti, Letterarie, e Storiche* (Florence: Leo S. Olschki, 1981), 355-362; and Claudia Lazzaro, "From the Rain to the Wash Water in the Medici Garden at Pratolino," in *Renaissance Studies in Honor of Craig Hugh Smyth*, ed. Andrew Morrogh, et.al. (Florence: Giunti Barbèra, 1985), 317-326.
[28] Smith, "Pratolino."

appeared.[29] Likewise, the precise date for the completion of the *Appennino* is unclear. Possibly it was built between 1579-1583, or not completed until 1590.[30] The interior chambers seem to have been completed in 1583. But when Montaigne visited in 1580, the grand scale of the monument and its essential characteristics were obvious to him. He wrote, "And they are building the body of a giant, which is three cubits wide at a rough estimate, and the rest in the same proportion; from this will pour a fountain in great abundance."[31] Thus, a significant amount of work had been accomplished by 1580.[32] In most publications that discuss the monument, it is dated to 1579 or 1580.[33]

The full experience Francesco intended for the gardens began changing in 1588, a year after his death, when the original sculpture program was partially dismantled. In the early seventeenth century, the frescoes in the grottoes were covered over with shells and nautical fossils. Later in the seventeenth century, during the period of Grand Duke Ferdinando (1663-1713), the "great niche" that had framed the *Appennino* disappeared from descriptions and depictions of the sculpture (figs. 1.5, 1.6, 1.7). Luigi Zangheri, an expert on Pratolino, suggested that the niche, made from a metal armature and covered, like the sculpture, with volcanic rock, fell prey to the elements. But he left open the possibility that Giovan Battista Foggini (1652-1725), the sculptor employed by Grand

---

[29] See Smith, "Pratolino," 163, note 35.
[30] See Alessandro Vezzosi and Cristina Acidini, eds., *L'Appennino del Giambologna: anatomia e identità del gigante* (Florence: Alinea, 1990).
[31] Montaigne, *Travel Journal*, 65.
[32] For discussion of documents from 1580 that attest to work on the *Appennino*, see Smith, "Pratolino," 163-164.
[33] For example, the following scholars suggested a production period of 1579-1580: Bardeschi, Ciuffoletti, Holderbaum, Zangheri. Avery listed 1580 as the date in his catalogue of Giambologna's sculptures. Bush stated 1580-1581. Wiles was less precise, with 1580s.

Duke Ferdinando, destroyed it. Either way, at the same time as the niche's elimination, the entrance to the rear of the work was covered by Foggini's dragon sculpture (fig. 1.8). Also, the upper level rooms were closed off, but the lower grottoes were still accessible.[34] These interior rooms were renovated with new fountains and automata around new iconographic schemes.[35] Such alterations to the *Appennino* changed its appearance and accessibility, but the original character of the park was essentially intact, if slightly shifted, until about the mid-eighteenth century. By 1754, though, "Pratolino has had its day," an English visitor wrote, while he acknowledged that fountains still functioned.[36] By 1798, according to a German visitor, the entire site was in ruin.[37] In 1819, Grand Duke Ferdinand of Lorraine overhauled the site, remaking it in the "English" style and demolishing the original villa.[38] Today, the *Appennino* is one of only a few original structures that survive.

But like the larger garden program, the *Appennino* itself suffered deterioration. In 1764, the architect Giovan Battista Ruggieri reported that the pipes carrying water to the

---

[34] For the summary, see Luigi Zangheri, "Trasformazioni dell'Appennino tra barocco e romantico," in *Risveglio di un Colosso: Il restauro dell'Appennino del Giambologna*, ed. Cristina Acidini Luchinat (Florence: Alinari, 1988), 22. Also see Zeffiro Ciuffoletti, ed., *Pratolino, Villa Demidoff: Storia, Arte, Natura* (Florence: Alinari, 1990), 50-51, for a brief description of the seventeenth- to nineteenth-century transformations of the *Appennino*.

[35] In the so-called "belly," the new scheme included the "fountain of the witch"; in the lower grottoes fountains of Hercules, Narcissus, and the Satyr could be found. See Marco Dezzi Bardeschi and Luigi Zangheri, "L'Appennino del Giambologna," in *Il Concerto di Statue,* ed. Alessandro Vezzosi (Florence: Alinea, 1986), 63-64.

[36] Quoted in Smith, 166. See *Letters from Italy in the Years 1754 and 1755, by the Late Right Honorable John Earl of Corke and Orrery,* ed. John Duncombe (London, 1773), 74.

[37] Smith, 166. See Ernst Moritz Arndt, *Brunchstücke aus einer Reise durch einen Theil Italiens im Herbst und Winter 1798 und 1799,* 2 vols. (Leipzig, 1801), I, 200-202.

[38] Smith, 166.

monument did not work, and the three remaining interior grottoes were severely damaged. The interior ceiling was rotting and most of the grotto ornaments, including the wall encrustations, or *spugne*, made of fragments of lava, stalactites and other spongy stones, were lost. Looking at the exterior, Ruggieri also noted that a number of *spugne* were missing and that there were many cracks on the monument.[39] Over the course of the eighteenth, nineteenth, and early twentieth centuries, a series of interventions – "restorations" and renovations – were executed. Marco Dezzi Bardeschi and Zangheri note the particular consequence of the 1877 work, which they say altered the physiognomy of the *Appennino* to suit late nineteenth-century tastes.[40] The original hands and feet were replaced in this effort.[41] In addition, the head of the beast crushed by the giant's hand was transformed from a dragon to a "lizard," while the basin in front was converted to a water lily pond surrounded by an iron fence. The monument underwent significant conservation during the 1980s. A major campaign commenced in 1984, and the mossed-over giant was cleaned, invasive mosses, algae, and other plants were removed, and the armature also was repaired. In addition, the problematic aftereffects of a series of "interventions" from the previous two centuries were addressed. (Well-meaning caretakers had, for example, filled in gaps and crevices with concrete, which actually made the work more susceptible to water damage than it would have been if left in its initial state.)[42] The monument continues to be cleaned periodically. Again in 2011

[39] Bardeschi and Zangheri, 64.
[40] Bardeschi and Zangheri, 64.
[41] Ciuffoletti, *Storia, Arte, Natura*, 50.
[42] On the restoration campaign, see Mariachiara Pozzana, "La struttura e l'esterno" and "I restauri della struttura e del rivestimento esterno," in *Risveglio di un colosso: Il restauro*

a campaign commenced to treat the exterior of the sculpture; upon the writing of this chapter, in Summer 2014, it was still underway.

Through its repeated remaking by patrons and artists, and its deterioration from exposure to weather, the *Appennino* accumulated a lengthy renovation and conservation history.[43] Some instances within its history of change were purposeful, such as the addition of Foggini's dragon to the back of the figure; Foggini's dragon is, in turn, connected to an obvious and relatively well documented alteration, the disappearance of the "great niche," which may have been due to accident or artistic ambition.[44] Perhaps Foggini, as court artist, sought to leave his mark on the sculpture. Other transformations remain unseen today, such as the Baroque renovation of the interior chambers, which are not accessible to beholders. Nonetheless very little of the Baroque material even survives. The grotto accessed from ground-level behind the figure seems to be the only space

---

dell'Appennino del Giambologna, ed. Cristina Acidini Luchinat (Florence: Alinari, 1988), 110-131.

[43] For discussion of eighteenth- and nineteenth-century efforts, see Bardeschi and Zangheri. For recent efforts, see the reports and essays in the following sources: Marco Dezzi Bardeschi and Alessandro Vezzosi, eds., *Il Ritorno di Pan. Ricerche e progetti per il future di Pratolino,* exh. cat. (Florence: Alinea, 1985); Cristina Acidini Luchinat, ed., *Risveglio di un Colosso: Il restauro dell'Appennino del Giambologna,* (Florence: Alinari, 1988); Alessandro Vezzosi and Cristina Acidini, eds., *L'Appennino del Giambologna: anatomia e identità del gigante* (Florence: Alinea, 1990); Luigi Zangheri, "Pratolino: historica y restauraciones," in *Felipe II: el Rey íntimo. Jardin y Naturaleza en siglo XVI* (1998), 467-485; Luigi Zangheri, "Restauri e interventi alle fabbriche di Pratolino," in *Pratolino tra passato e presente,* ed. Alessandro Belisario, Paolo Grossoni, and Luigi Zangheri (Florence: Alinea, 1999), 9-15.

[44] The so-called "great niche" was recorded in late sixteenth- and early seventeenth-century representations, for example in Giovanni Guerra's 1598 drawing and in Stefano della Bella's 1653 etching, but it is absent from the anonymous eighteenth-century Albertina drawing, the 1799 engraving by A.L. Castellan, and Le Blanc's mid-nineteenth century engraving. These are reproduced in *Risveglio di un Colosso*, 16, 23, 42.

where a hint of the seventeenth-century design remains (fig. 1.9).[45] Erosion of the encrustations on the exterior of the *Appennino* is challenging to trace, as well. While reports like Ruggieri's documented noticeable material loss, surface degradation brought about by natural causes unfolds over the course of centuries, like the formation of the encrustations (stalactites and other porous stones) might take millennia. Thus, unfolding over durations of differing scales, structural, decorative, and material deterioration and consequent remaking complicate understanding of the form, iconography, and historiography of the *Appennino*.

Materials

The encrustations of the *Appennino* shed light on its social, theoretical, and technical significance. These exterior surfaces reflect contexts of travel, courtly collections, and political trade; theories about art-nature relationships; and technical directions for creating garden grottoes during the early modern period. Though sixteenth-century descriptions of the *Appennino* do not identify explicitly the sources of its encrustations of lava and stalactites, Giorgio Vasari (1511-1574) offered insight into likely sources. In his introduction to the *Lives of the Artists* (1550, 1568), Vasari noted ideal sites for mining stalactites (*colature d'acque petrificate*). Two of them were in Tuscany: the river Elsa, which flows southwest of Florence, and Monte Morello, about

[45] See Bardeschi and Zangheri, and Ciuffoletti, *Storia, Arte, Natura*.

six miles northwest of Pratolino.[46] Vasari wrote about how his contemporaries were inspired by but also surpassed the work of ancient grotto designers:

> The moderns, always varying them [fountains], have added to the inventions of the ancients, compositions of Tuscan work, covered with stalactites from petrified waters, which hang down resembling roots, formed in the lapse of time of congelations of such waters as are hard and are charged with sediment. These exist not only at Tivoli, where the river Teverone petrifies the branches of trees, and all objects that come in contact with it, turning them into gum-like exudations and stalactites; but also at the lake Piè di Lupo [Lugo or Luco], where the stalactites are very large; and in Tuscany at the River Elsa, whose water makes them clear so that they look like marble, glass, or artificial crystals. But the most beautiful and curious of all are found behind Monte Morello also in Tuscany, eight miles from Florence. Of this sort Duke Cosimo has had made in his garden at Olmo near Castello the rustic ornaments of the fountains executed by the sculptor Tribolo.[47]

Vasari's commentary draws out three key ideas associated with stalactites relative to sculptural application in garden sculptures and fountains. First, these formations were suggestive of other natural forms, for example "roots." The stalactites had

---

[46] *Vasari on Technique*, trans. Louisa S. Maclehose (London: J. M. Dent & Co., 1907), 87-88. See Vasari-Giuntina, Ch. V: "Sì come le fontane che nei loro palazzo, giardini et altri luoghi feccero gl'antichi furono di diverse maniere (cioè alcune isolate con tazze e vasi d'altre sorti, alter allato alle mura con nicchie, maschere o figure et ornamenti di cose maritime, alter poi per uso delle stufe più semplici e pulite, et alte finalmente simili alle salvatiche fonti che naturalmente surgono nei boschi), così parimente sono di diverse sorti quelle che hanno fatto e 'l fanno tuttavia i moderni, i quali, variandole sempre, hanno alle invenzioni degli antichi aggiunto componimenti di opera Toscana, coperti di colature d'acque petrificate che pendono a guise di radicioni fatti col tempo d'alcune congelazioni d'esse acque ne' luoghi dove elle son crude e grosse; come non sola a Tigoli, dove il fiume Teverone petrificata i rami delg'alberi e ogn'altra cossa che se gli pone inanzi, facendone di queste g[r]omme e tartari, ma ancora al lago di Piè di Lupo che le fa grandissime, et in Toscana al fiume d'Elsa, l'acque del quale le fa in modo chiare che paiono di marmi, di vitriuoli e'allumi. Ma bellisime e biz[z]arre sopra tutta l'altre si sono trovate dietro monte Morello, pure in Toscana, vicino otto miglia a Fiorenza. E di questa sorte ha fatti fare il duca Cosimo nel suo giardino dell'Olmo a Castello gli ornamenti rustici delle fontane, fatte dal Tribolo scultore."

[47] *Vasari on Technique*, 87-88.

representational potential. Also, the material nature of Vasari's stalactites was, at least in terms of surface quality, malleable – the stalactites could "look like marble, glass, or artificial crystals."[48] Second, Vasari's brief explanation of the generation of stalactites attests to the common confusion about the geological processes that produced them. While he understood that the process of formation was long and that sediment was transformed into stalactites, he also defined these forms as "petrified waters," petrified "branches of trees," and other objects, likewise petrified. That is, he saw them not as deposits of sediment propelled by water through cave ceilings or other natural supports, but rather as sediment-laden water caught or frozen in time. Vasari's stalactites, though materially static and hard, were "perpetually unfurling" temporally.[49] Vasari's (mis)understandings essentially reflect both the growing interest in geological study and, alongside it, the persistence of confusion about such processes through the late sixteenth century. Furthermore, knowledge about and archaic attitudes toward these processes were visualized in settings such as the gardens that Vasari mentioned in the passage above. Third, Vasari made clear that stalactites were valued for their size, beauty, and "curiosity"; because of these qualities the stalactites warranted collection and use in sculptural applications. They were seen as "precious" and "marvelous."[50] Stalactites were nature's works of art, and they also were materials for making art.

---

[48] An account in the Codex Barberini of one of the giant *spugne* at Pratolino echoes this perception of malleability. See Zangheri, *Pratolino*, vol. I, 152.
[49] See Deleuze, 93, and discussion on pages 10-11 above.
[50] Philippe Morel, "Mannerist Grottos in Sixteenth-Century Italy," in *Sixteenth-Century Italian Art,* ed. Michael W. Cole (Malden, MA: Blackwell, 2006), 130.

In *Istoria delle Pietre* (1597), Agostino del Riccio discussed the properties, sources, and uses of similar materials. He wrote about a variety of stones, among them Carrara marble, travertine, *pietra serena,* corals, precious stones, and, of interest for this study, *spugne*, which is a broad term that could refer to stalactites, among other mineral deposits. The term "*spugne*" has been used to mean several related, but slightly different, things from the Renaissance forward. Frequently, it is translated as "sponge(s)," meaning stone that appears sponge-like and porous. In the sixteenth century, porous stones included a variety of materials, such as marine "sponges," limestone deposits, volcanic rock, and stalactites. Thus, in sixteenth-century descriptions, like those of the materials used on the *Appennino* and in contemporaneous grottoes, the use of this term often seems to be a catch-all for craggy, porous rock encrusted onto plastic surfaces – perhaps used if the beholder was unsure if they were looking at stalactites, lava, marine fossils, or other similar materials. Sometimes the term referred to plaster forms that imitated these natural materials. At least by the eighteenth century, beholders had connected the processes of volcanic eruption and the production of lava to the creation of *spugne* in caves around Vesuvius and referred to this kind of substance as *spugne di lava*;[51] in other words, by this point, the term sometimes had a specific meaning rather than a catch-all use. In addition, in modern art historical and conservation literature, some *spugne* are sometimes described in technical terms as "calcareous concretions," indicating their calcium-based composition. In this study, especially in the following discussion and in Chapter Three, the term *spugne* is used in the broad sense, to encompass all the kinds of porous rocks

[51] Giuseppe Maria Megatti, *Racconto storico-filosofico del Vesuvio* (Naples: Giovanni Simone, 1752), 120, 454, 672.

that encrusted the *Appennino*; these chapters include specific discussions of stones of volcanic origin or those comprised of volcanic material, as well as of stalactites, mentioned above. This is similar to the way that the term has been used in scholarship on the conservation of the monument.[52]

In *Istoria delle Pietre,* Agostino, like Vasari, mentioned specific sites for harvesting materials. But Agostino also associated particular colors and qualities of *spugne* with particular sites. In summary, he wrote that *spugne cotognine* of various greyish colors, as well as white and yellow, can be found at Val di Marina (south of Florence); "blushed" (reddish) *spugne* are found near Radicofani, in the state of Siena; large *spugne* were said to be found in the cave of Santa Caterina in Corsica. The most beautiful *spugne* that Agostino had seen, of a milky white color, were supposedly brought from Hungary by Grand Duke Francesco.[53] Not only did he import *spugne* from distant

---

[52] Sometimes volcanic fragments are also called "tufa," which is a more specific term, and sometimes rocks derived from riverbeds are, too. Tufa also is sometimes defined by its calcareous nature. But this term was not used in any sixteenth-century descriptions of the *Appennino* that I reviewed, only in modern texts. In modern texts, the term "lava" is used frequently to describe the encrustations on the *Appennino*, but since this exact term does not appear in the sixteenth-century descriptions that I have consulted, I use it to help describe the *spugne*, not as a substitute for that term, as the implication from reviewing these texts is that frequently, but not always, *spugne* was intended to describe lava.

[53] See Chapter CII in Agostino del Riccio, *Istoria delle Pietre* [1597], ed. Raniero Gnoli and Attilia Sirnoni (Turin: Umberto Allemandi, 1996), 129-130, for the following entry on *spugne:* "Le spugne sono ornamento delle fonti, di qui nasce che i signori molto adornano i suoi belli giardini con le spugne. In particular mi par che molto si sia dilettato a adornar le fonti il Gran Duca Cosimo, così il Gran Duca Francesco, poiché si vede quella bella villa tanto famosa di Pratolino adorna di tante fonti e con arte mirabile si vedono congegnate insieme tante spugne, che paiono commesse dalla madre natura; in particulare vi si veggono le spugne cotognine, che si cavano in Val di Marina, che pendono in colore alquanto bigiccio, ma altri colori si veggono in loro diversi, come bianchi, gialli, e d'esse si trovano gran saldezze appresso a Firenze, al luogo nominato di sopra.

sources, but also Francesco sent such materials to his peers in foreign lands. Francesco, in response to a request for "ornament of shells, porous stone [*spugne*] and other … products for fountains and grottoes," [54] offered these items to Wilhelm V, Duke of Bavaria, who was in the process of planning his "secret grotto" in Munich.[55] In his correspondence, though, Francesco lamented their scarcity and explained to Wilhelm that it was necessary to obtain such things from "distant lands." Francesco confessed that one

---

"Le spugne, che si cavano appresso a Radicofani, nel fioritissimo stato di Siena, sono alquanto rossette e si veggono in opera alle fonti di Pratolino; infra l'altre spugne in detto Pratolino vi se ne vede una grandissima, che fu donata al Gran Duca Francesco da' signori Lucchesi, che è la più bella e la maggiore che sia in quelle belle grotte al presente.
"Le spugne bianche, che si trovano nei condotti dell'acque di Siena, sono molto belle e queste ancora sono in opera alle grotte di Pratolino.
"Una spugna, la più bella che io abbi visto, mi par quella che è alla grotta de' Pitti, in testa all'ultima grotta piccola, che dicono esser stata portata d'Ungheria al Gran Duca Francesco, che per memoria la messe in questa bellisima grotta nominata: è una spugna grande, bianca lattata, che molto adorna quella grotta.
"Le spugne grandi dicono che si cavano dalla grotta di Santa Caterina in Corsica; così appresso agli scogli del mare ed in molti luoghi si trovano delle spugne, come dicono in Villa Magna, come sarò meglio informato, metterò in questo libro assai luoghi dove si ritrovi assai spugne, perché ce ne fusse gran copia d'esse, molti adornerebbero le fonti, che non possono."

[54] Excerpt from a letter sent from Francesco I de' Medici to Wilhelm V von Wittelsbach, 30 November 1581. BIA: The Medici Archive Project, Doc ID# 13826 (Archivio di Stato di Firenze, Mediceo del Principato 257, folio 84). "Duolmi bene che la domanda sua delli ornamenti di chiocciole, spugne et di altri varii scherzamenti da fontane et grotte mene habbi trovato quasi del tutto sfornito, tante ne ho consumate in queste mie fontane et caverne di Pratolino; et di simili cose, et massime delle marine, ne habbiamo strettezza perché in queste bande la nature ne produce pochissime, et bisogna haverle di Portogallo, et di altri lontani paesi, mettendole insieme a poco a poco lunga patientia et con l'occasione hor d'una nave et hor di un altra; con tutto ciò ne mando a V. E.ccza quella più quantità che nella scarsezza che io mi trovo m'è stato possibile, et la prego ad accettare il mio buono animo, et se la mi mandasse qualche mostra, et saggio di quello che ella particolarmente desideri, tanto poterei più sforzarmi di ritrovarlo, et provederlo..."

[55] On Wilhelm's correspondence with Francesco I, and the grotto fountain, which is built of such materials, see Susan Maxwell, "The Pursuit of Art and Pleasure in the Secret Grotto of Wilhelm V of Bavaria," in *Renaissance Quarterly* 61, no. 2 (2008): 429-431.

reason he was low in supply was that he used many in his fountains and caves at Pratolino. This exchange between Francesco and Wilhelm suggests that *spugne* held diplomatic value in the period,[56] while the anecdote about the stone from Hungary implies that the material could serve as a travel souvenir, or perhaps a secular relic reminding the collector of a pilgrimage of personal or political significance.

Furthermore, Agostino's catalogue of *spugne* and their sites suggests that the material was valued not just for its beauty and because of its size, as Vasari explained, but that its coloration was also important.[57] While Vasari's recommendations for sources of *spugne* focus on sites in Tuscany, and a few others on the Italian peninsula, Agostino's comments reveal that to obtain desirable coloration or size, trade or travel further afield was sometimes necessary. Perhaps the most important theme of his text, though, is that most of the examples he lists can be found at Pratolino and in other Medici gardens. Vasari likewise mentioned the garden of Castello and its Medici patronage. Stalactites or *spugne* of particular size, color, texture, and general "beauty" were valued, and thus both

---

[56] According to Barbara Marx, gifts of this sort from the Medici court to northern (especially German) courts should be seen in light of shared interests in mining, as well as indicative of the gratitude of Cosimo I and Francesco I for the support of the Dresden court relative to their recently gained Grand Ducal title. In addition, Francesco I was related by marriage to the Bavarian court, through his first wife Joanna of Austria. Among other items, including military implements, exotic objects, and works of art, rock and mineral samples were exchanged. For example, samples of Tuscan marble were sent as gifts. Furthermore, inventories document that the objects came from around the world – India, China, North Africa, the Near East, Central and South America – and were meant to reflect the Medici influence and their trade networks. See Barbara Marx, "Medici Gifts to the Court of Dresden," in *Studies in the Decorative Arts* 15, no. 1 (2007-2008): 46-82. Also see Thomas DaCosta Kaufmann, "Remarks on the Collections of Rudolf II: The Kunstkammer as a Form of Representation," *Art Journal* 38, no. 1 (1978): 22-24.

[57] Further discussion of the reception of these kinds of materials during the period is found in Eugenio Battisti, *L'Antirinascimento: con una appendice di manoscritti inediti* (Milan: Feltrinelli, 1962), 164-165, 182-183.

authors saw fit to celebrate the Medici dukes' possession of these materials and uses of them in garden fountains and sculptures. At the same time, we might see Pratolino as an index of *spugne*, charting exemplary and diverse samples and reflecting the knowledge, travel, and resources required to obtain them.

Vasari, Agostino, and Francesco all signaled that variety of some sort (color, size), along with curiosity or singularity, could be found in ideal *spugne*. This attitude represented a shift relative to prior perception and uses of the material. As Philippe Morel explained, in the first half of the sixteenth century the use of *spugne* was imitative of that in ancient Roman grottoes: "The antiquarian characterization of the artificial grotto in Rome in this period [the first half of the sixteenth century] – setting for a statue, pastoral evocation, humanist cult of muses – equally affected the type of rock-work that was employed."[58] Ancient Roman sources like Ovid, Pliny, and Vitruvius described the material (rock-work) as pumice (*pumex*); Theophrastus claimed that pumice could be made from a combustive process or from sea foam, while Vitruvius understood *pumex* to be volcanic in origin. In fact, the ancient sources misidentified the composition of the material, which modern scientific analysis has shown to be calcareous concretions rather than pumice.[59] Nevertheless, early sixteenth-century patrons and practitioners sought out materials that would approximate the antique descriptions, and so used pumice in their

---

[58] Morel, 117. For more discussion of the visualization of scientific notions and the relationship to antiquity in mannerist grottoes, also see Cristina Acidini Luchinat, "Rappresentazione della natura e indagine scientifica nelle grotte cinquecentesche," in *Natura e artificio; l'ordine rustico, le fontane, gli automi nella cultura del Manierismo europeo* (Rome: Officina, 1981), 144-153.
[59] Morel, 117.

grottoes in essentially decorative schemes, mixed with shells or mosaic, evoking ancient settings.[60]

According to Morel, "the humanist preoccupation [with imitating antiquity] soon underwent a change that translated into a concern for novelty and diversity in the choice and composition of materials."[61] In tandem with the introduction of new materials, like stalactites, Morel traces a new interest in invention, as opposed to imitation, and in the art of nature producing nature, as opposed to art imitating nature.[62] The interest in *spugne* with various colors and surface qualities – from white to red to gray, from "milky" to rustic – should be viewed in light of the art theoretical shift observed by Morel.

Spugne function in garden and grotto settings in multiple ways.[63] Commonly, *spugne* encrust walls, hang from ceilings, and serve as architectural articulations inside and outside of grottoes. For example, at the Grotta Grande in the Boboli Gardens, *spugne* articulate the triangular pediment and rounded arch and hover above the columns on the exterior of the grotto (fig. 1.10); inside, *spugne* encrust an opening between two chambers, and they also articulate arches on the walls (fig. 1.11). To use Morel's term,

---

[60] Morel, 117.
[61] Morel, 117.
[62] Morel, 121.
[63] For discussion of the uses, meaning, and conservation of these materials in grottoes, see the essays in *Arte delle Grotte: per la conoscenza e la conservazione delle grotte artificiali: atti del convegno, Firenze, Palazzo Pitti, Rondò di Bacco, 17 giugno 1985,* ed. Cristina Acidini Luchinat, et.al. (Genoa: Sagep, 1987). For an overview of sixteenth-century grottoes, including those of the *Appennino*, and their relationship to classical and Renaissance literary references, see Naomi Miller, *Heavenly Caves: Reflections on the Garden Grotto* (New York: George Braziller, 1982), 35-58. For the relationship of grotto schemes to ideas about natural history and geology, see Małgorzata Szafrańska, "The Philosophy of Nature and the Grotto in the Renaissance Garden," *Journal of Garden History* 9, no. 2 (1989): 76-85.

spugne "carpet" the exterior of the Grotticina di Madama in the Boboli Gardens (fig. 1.12), and similarly cover broad swaths of wall inside of the Grotto of the Animals at Castello and around the Mugnone fountain at Pratolino (fig. 1.13, fig. 1.14). Multiple grottoes at Pratolino, mostly lost, likewise incorporated *spugne* in these ways, as described in a print by Stefano della Bella (fig. 1.15). Justus Utens' lunette of Pratolino suggests the encrusted appearance of the entrance to the six grottoes housed underneath the villa (fig. 1.16); the partially preserved Grotto of Cupid has an encrusted interior (fig. 1.17). Similar applications are found at the Villa d'Este in Tivoli: for example, rocky material covers the wall behind the Diana Ephesus, and it also forms outcrops in the area around and below her (fig. 1.18). In these instances, the *spugne* serve decorative purposes when they outline the form of an arch, doorway, or pediment. But they also evoke forms and textures found in natural caves. In many of these examples, the *spugne* were part of a fountain system, with water seeping or trickling over their surfaces, further approximating dripping stalactites in natural caves.

The *spugne* around and below the Diana fountain at Tivoli not only evoke such material qualities, but they can be seen as representing a rocky cave environment; the encrustations, joined together and piled upon one another, figure natural landscape elements. Garden designers and artists used *spugne* to represent mountains, also. These *monte di spugne* were found, for example, in the Grotto of the Flood and the Grotto of the Steam Room at Pratolino (now both are lost).[64] Giant *spugne* were installed in gardens and grottoes as stand-alone works (fig. 1.19). In addition to figuring nature – mountains

[64] Morel, 119.

and caves – *spugne* were employed to depict figures in landscape settings, like in the Grotta Grande of the Boboli gardens. Here, landscape scenes comprised of fresco painting and encrustations suggest pastoral subjects – for example, a river god reclines against an urn, spilling water, and a shepherd wanders through the landscape (fig. 1.20, fig. 1.21). The late sixteenth-century developments that Morel traced in terms of material, form, and inventiveness can be seen in these examples wherein *spugne* represent nature and figure human form.

The *Appennino* participates in this new tradition, but also represents a singular expression within it (fig. 1.1). Rather than mostly contained within the grotto, or within a fountain or nymphaeum, as in the examples above, the *spugne* were found both inside and outside the *Appennino*. They encrusted grottoes, evoking cave-like spaces, and figured the hair/stream passages on the exterior of the monument. Rather than a clump of *spugne* attached together to represent a mountain, on the *Appennino* the encrustations describe a figure and personify a mountain. While the Grotta Grande representations described above typify the application of *spugne* as relief sculpture, to be read as two-dimensional form against a wall, the *spugne* that figure the Apennines are part of a three-dimensional complex that encourages ambulation and shifts the ocular perspective of the beholder. Thus, relative to applications in other sixteenth-century gardens, the *spugne* on the *Appennino* challenge norms. In doing so, these encrustations dissolve boundaries between static/active, human/landscape, and interior/exterior.

Models

When visitors behold the *Appennino's* exterior, both the beholder and the work are completely separated from the mural context. The figural monument is not contained in a room, but instead is surrounded by the outdoor environment; the beholder's experience is not guided or constrained by walls, or other architectural framework. Instead, being outside allows the beholder to move freely around and relatively far away from the work, though the figure also invited close-looking (fig. 1.22). While its separation from the mural context *allows* beholders to move around it, the scale of the monument, discussed at length in the following chapters, *requires* circumambulation for complete apprehension of the figure.

By the fifteenth century, Italian sculptors had begun to liberate sculpted figures from flat, architectural support. In his panel of the *Sacrifice of Isaac* (1401) for the Baptistery competition, Brunelleschi almost doubled the shepherd in the foreground upon himself; the torso is simultaneously implied and obscured, and the face is veiled by a turn towards the illusionistic space of the panel (fig. 1.23). In another relief panel, Jacopo della Quercia's *Expulsion of Adam and Eve from Paradise* from the Fonte Gaia in Siena (1414-19), Adam, reacting against the force of the winged figure pushing him out of the garden, strides in one direction but sharply twists his torso and turns his head in the other; to "read" him, the spectator needs to do a double take, so to speak (fig. 1.25). Each of these examples involved mural decoration: the panels are incorporated into doors or a fountain front, and each involved varying degrees of relief.

Still participating in the frontal tradition, sculptures that are completely three-dimensional are situated in niches around the exterior of Orsanmichele. Nanni di Banco's *Four Crowned Martyrs* (1410s) and Donatello's *Saint Mark* involve contrappostal positioning and considerations of the spectators' perspective, *but* each of these figures privileges one viewpoint, insisting upon a kind of one-to-one frontal relationship with the viewer (fig. 1.25, fig. 1.26). Even Michelangelo's *David* (1501-04) engages this tradition. Today visitors to the Accademia can walk around it, like beholders at its original site in the Piazza della Signoria; but if it had been installed in its intended location, about forty feet high on the façade of the Duomo, spectators would again have been confined to one, frontal perspective. We only need to recall the canonical comparison of the Davids—Donatello, Michelangelo, and Bernini—to note the shift between frontal and experiential sculpture that evolved from the mid-fifteenth century to the turn of the seventeenth century (fig. 1.27, fig. 1.28).

Thus, relative to earlier figural sculpture, the *Appennino* is an emphatic expression of the completely rounded and fully discoverable form. Furthermore, in the context of the history of garden design, it exemplifies the later-sixteenth century impulse to encourage "active rather than passive" relationships between beholders and garden programs, as Elisabeth Blair MacDougall observed: "They could only be experienced through movement… Pratolino, with its series of fountains, statue groups, grottoes and pools, suggests an itinerary was planned by which a theme could be revealed in a succession of episodes. It might be termed a form of narrative with continuity provided

by the spectator confronting different experiences in succession."[65] Experts on Pratolino doubt that a literal and cohesive narrative existed in the original design and sculptural program. However, MacDougall's suggestions resonate with the relationship of the *Appennino* to developments in Renaissance sculpture and to the possible experience of the monument*:* that beholders could fully comprehend the site only by moving around it and that they constructed meaning based upon (an infinite number of) itineraries, unfolding through time.[66] Both temporal and bodily "unfurling" were possible: unfurling of short duration, the time it would take a person to circumambulate the monument, and that of a longer duration, the perpetual time of the monument's life.[67]

Though no extant Renaissance sculpture compares with the *Appennino* in terms of scale or exact use of materials, personified mountains were common in sixteenth-century painting and sculpture. Perhaps inspired by a passage from Virgil's *Aeneid,* sculptures of

---

[65] Elisabeth Blair MacDougall, "Ars Hortulorum," in *Fountains, Statues, and Flowers: Studies in Italian Gardens of the Sixteenth and Seventeenth Centuries* (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 1994)*,* 99.

[66] James Elkins noticed "curious drifting" in the scholarship on gardens, in part due the dimensionality and subjectivity referenced here. See James Elkins, "On the conceptual analysis of gardens," *The Journal of Garden History* 13, no. 3 (1993): 189-198. Also see, on movement in gardens, Małgorzata Szafrańska, "Place, time and movement: a new look at Renaissance gardens," *Studies in the History of Gardens & Designed Landscapes: An International Quarterly* 26, no. 3 (2006): 194-236; Michel Conan, "Introduction: Garden and Landscape Design, from Emotion to the Construction of Self," in *Landscape Design and the Experience of Motion*, ed. Michel Conan (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2003), 1-33; John Dixon Hunt, "'Lordship of the Feet': Toward a Poetics of Movement in the Garden," in in *Landscape Design and the Experience of Motion*, ed. Michel Conan (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2003), 187-213; Karen Lang, "The Body in the Garden," in *Landscapes of Memory and Experience*, ed. Jan Birksted (London and New York: Spon Press, 2000), 107-127.

[67] Deleuze, 93.

Atlas, like that at the Villa Mattei, frequently represented mountains in Italian gardens.[68] Mount Parnassus also was a popular subject, appearing in fountains at Tivoli, Bomarzo, Pratolino, and the Villa Medici in Rome (fig. 1.29).[69] And representations of the Apennine Mountains were repeated in Medici imagery. Detlef Heikamp located visual origins for the *Appennino* in the frescoes by the circle of Raphael in the Sala di Costantino in the Vatican (for Pope Clement VII), in which a bearded older man personifies the Apennines; and Heikamp also pointed out the allegorical representation of the Apennines in the Palazzo Vecchio from about 1555.[70] (Also in the Palazzo Vecchio, the Apennine Mountains are celebrated as a prominent background in the *Siege of Florence*.) Ammannati's truncated bronze *Apenines* at the Villa Medici at Castello, made in the 1560s under the patronage of Cosimo I de' Medici, is the only extant sculpted

---

[68] See Claudia Lazzaro, *The Italian Renaissance Garden: From the Conventions of Planting, Design, and Ornament to the Grand Gardens of Sixteenth-Century Central Italy* (New Haven: Yale University Press, 1990), 148. This description from the *Aeneid* might have influenced garden sculptures of mountains: "….Now aloft, [Mercury] saw / The craggy flanks and crown of patient Atlas, / Giant Atlas, balancing the sky / Upon his peak – his pine-forested head / In vapor cowled, beaten by wind and rain. / Snow lay upon his shoulders, rills cascaded / Down his ancient chin and beard a-bristle, / Caked with ice." Virgil, *The Aeneid*, trans. Robert Fitzgerald (New York: Vintage Classics, 1990), 104. Book IV, lines 335-343.

[69] See Claudia Lazzaro, "The Villa Lante at Bagnaia: An Allegory of Art and Nature," *The Art Bulletin* 59, no. 4 (December 1977): 553.

[70] See Detlef Heikamp, "Les merveilles de Pratolino," *L'Oeil*, no. 171 (March 1969): 16-27; and Detlef Heikamp, "Pratolino nei suoi giorni splendidi," *Antichità Viva*, No. 2 (1969): 14-34. A casual survey of frescoes in the Palazzo Vecchio on a recent visit confirmed the ubiquity of this type of figure – perhaps dozens, most representing river gods, accompanied by urns or cornucopias, bearing similar physical attributes, reclining or crouching in the landscape. The ever-presence of these forms in the Palazzo Vecchio and a partial catalogue are discussed in Una d'Elia, "Giambologna's Giant and the Cinquecento Villa Garden as a Landscape of Suffering," *Studies in the History of Gardens and Designed Landscapes: An International Quarterly* 31, no. 1 (2011): 23, note 64.

precedent that allegorizes the Apennines (fig. 1.30). Working as fountains, both Giambologna's and Ammannati's versions participated in a larger irrigation scheme within their respective gardens, and both of these gardens are located in the foothills of the Apennines, the former further from Florence and higher in elevation. In part, the iconography of both works signaled the idea that the water they propelled had its genesis in the Apennines, though, as discussed below and in Chapter Three, this is only one aspect of the iconography. In this respect, these two works relate to the tradition of personified river gods, especially sculpted river gods installed in fountains – for instance, the *Mugnone* fountain, also at Pratolino (fig. 1.14); the *Arno* and *Mugnone* with *Monte Asinaio* in the grotto at Castello; the *Tiber* and *Arno* at the Villa Lante, Bagnaia (fig. 1.31); and the *Tiber* and *Arno* at the Villa Giulia, Rome, among others. Situated among the preceding works of Medici patronage and other courtly commissions, the *Appennino* exemplifies broad traditions relative to the personification of nature and the iconography of fountain sculpture, as well as the representation of mountains in both of these contexts.

Three clay models for the *Appennino* exist today. They are held in the Victoria and Albert Museum, London; the Museo Nazionale del Bargello, Florence; and the Musée de la Chartreuse, Douai (figs. 1.32, 1.33, 1.34). Albert Brinkmann explained how these *bozzetti* evidence a shift in concept from river god to mountain; subsequently, art historians have concurred that, based upon these models, Giambologna first conceived of the work as a crouching river god.[71] More specifically, Herbert Keutner posited that the

[71] Albert Brinckmann, *Barock-Bozetti*: *Italienische bildhauer,* Vol. I (Frankfurt am Main: Frankfurter Verlags-Anstalt, A.G., 1923-25), 76-79.

sculpture began as a personification of the Nile.[72] In his study of the *bozzetti*, Charles Avery affirmed this idea: the London, Florence, and Douai models, respectively, illustrate Giambologna's development of the work from a personification of the Nile to the final configuration of the Apennine-man.[73] Recently, Volker Krahn characterized the Bargello *bozzetto* as the pivotal study, wherein the shift to the mountain occurred, resulting in the marriage between the mountain and the man (the rocky background has been added), and a kind of figuration of the man by the mountain, whereas previously the work was conceived only as a personification.[74] Krahn's observation hints at the theories of natural history that are discussed in Chapter Two, and his suggestion of figuration anticipates the way this study explores the generation of form(s) by the *Appennino*. That a clay model, with its primordial material nature facilitating seamlessness between landscape substance and figural substance, inspires such an observation seems logical. Together with the overall shift already from river god to mountain-man-allegory, the Bargello *bozzetto* further underscores the changing-of-form and slippage of meaning inherent in the *Appennino*.

---

[72] See Herbert Keutner, "Giambologna a Pratolino," in *Il giardino d'Europa: Pratolino come modello nella cultura europea*, ed. Alessandro Vezzosi (Milan: Mazzotta, 1986), 55-60.

[73] See Charles Avery, *Giambologna: The Complete Sculpture* (London: Phaidon, 1993), 221-223, and cats. 183, 184, 185.

[74] On the relationship between the Bargello *bozzetto* and the river god, also see Volker Krahn, "Modello dell'Appennino," cat. 47, in *Giambologna: gli dei, gli eroi*, ed. Beatrice Paolozzi Strozzi (Florence: Giunti, 2006), 245. Also see Vezzosi and Acidini, eds., *L'Appennino del Giambologna*.

Meanings

Since its creation, the *Appennino* has been understood as an incarnation of the Apennines: two early writers on the monument, Francesco De Vieri and Filippo Baldinucci referred to it as such.[75] Visiting Pratolino in 1593, Claude-Enoch Virey recognized the figure as the "god of the Apennines," a giant half-man, half rock.[76] But also early beholders recognized iconographical multivalency in the figure: [77] De Vieri suggested that the *Appennino* also recalled the ancient Giants who confronted, and who were consequently struck down by, Jupiter.[78] In 1624, Solomon De Caus reported that he had seen a giant Cyclops at Pratolino.[79] Baldinucci wrote that the figure could also represent Jupiter Pluvius, the rain-producing Jupiter.[80] Later beholders continued to assign varied identifications. In the nineteenth century, Francesco Inghirami saw in the

---

[75] See Filippo Baldinucci, *Notizie dei professori del disegno da Cimabue in qua,* Vol. VII in *Opere* (Milan: Società tipografica de'Classici italiani, 1808-12), 103-104.
[76] Quoted in Alessandro Vezzosi, "Le fortune dell'Appennino e il restauro del mito," in *Risveglio di un Colosso: Il restauro dell'Appennino del Giambologna* ed., Cristina Acidini Luchinat (Florence: Alinari, 1988), 38. From the diary of Claude-Enoch Virey, *Vers itineraires chemin faisant de Venise à Rome*.
[77] The first hand accounts are complied in Zangheri, *Pratolino*. Key early modern responses are discussed in Vezzosi, "Le fortune dell'Appennino," 38-44. For a concise summary of the varied interpretations, including early modern responses and critical art historical reception, see Cristina Acidini Luchinat, "L'Appennino dal modello all'opera compiuta," in *Risveglio di un colosso: Il restauro dell'Appennino del Giambologna* (Florence: Alinari, 1988), 13-21.
[78] Francesco de Vieri, *Delle maravigliose opera di Pratolino & d'Amore* (Florence, 1586), 29.
[79] Quoted in Vessozi, "Le fortune dell'Appennino," 39. From *Les Raisons des Forces Mouvantes* (1624).
[80] Baldinucci, 103-104.

figure Homer's Polyphemus.[81] In his early twentieth-century lament over the ruin of Renaissance Pratolino, Patrizio Patrizi mentioned that the colossal sculpture could represent either the Apennines or Jupiter Pluvius.[82]

Like the identification of the figure, the overall project at Pratolino has generated many distinct interpretations, from those drawing out references to literature and art theory, to those emphasizing its connection to Francesco's personality.[83] Most evaluations of the *Appennino* have centered around its iconography and its meaning in the context of the site of Pratolino specifically and of Medici patronage more generally. In his seminal 1969 article, Heikamp argued that Florentine allegorical representations of the Apennines, including the *Appennino*, evoke Medici granducal success, as they imply points of generation for the various rivers and waterways in the Medici realm – the Arno and Mugnone rivers could be traced back to the Apennine Mountains.[84] Representations of these important rivers' sources within Medici spaces like palaces, gardens, and churches could be understood as an attempt to visualize, or even claim, Medici command over the waterways. Zeffiro Ciuffoletti placed the singular design of the park (and the role of the *Appennino*) within the context of Francesco's "psychological contradictions…non-conformism…and introversion," but also underscored the ways that the scheme celebrated the Medici family, virtually legitimating its dynastic claims. In

---

[81] Francesco Inghirami, *Monumenti per l'intelligenza della storica della Toscana* (Fiesole: Poligrafica Fiesolana dai torchi dell'autore, 1834), t. CXLV.
[82] Patrizio Patrizi, *Il Giambologna* (Milan: L. F. Cogliati, 1905), 113-115.
[83] For a concise summary of the varied interpretations see Cristina Acidini Luchinat, "L'Appennino dal modello all'opera compiuta."
[84] Heikamp, "Les merveilles de Pratolino," and Heikamp, "Pratolino nei suoi giorni splendidi,"14-34.

this framework, Medici imagery is located in relatively concrete mythological references, once seen in the now-lost sculptures, and in more abstract connections, for example between water, the "protagonist" of the park, and the efforts of Cosimo I to combat pirates in the Mediterranean.[85] These analyses also are related to claims of political success, suggesting that through their beneficent rule, the Medici provided amply for their subjects, bringing water for irrigation and controlling waterways of trade, while at the same time safe-guarding their realm through maritime presence.

While the iconography of the *Appennino* might be connected to notions of political ascendancy and territorial claims that were visually iterated in multiple places, some of which were public spaces, the monument is located within what were the relatively private grounds of Pratolino, which contained a host of fountains, sculptures, and automata situated in designed landscapes and grotto spaces. The decade-plus project was not Francesco's first personal commission to involve a complex scheme and collection of artworks, but in many ways it complemented and amplified previous patronage at the Palazzo Vecchio. Francesco committed a "fit of patronage both self-indulgent and practical" when, in 1569-1570, he commissioned the paintings, sculptures, and decorative elements for his *studiolo,* as Larry J. Feinberg observed.[86] The *studiolo* served as a space wherein Francesco collected and displayed materials and knowledge related to his alchemical and pharmaceutical endeavors.[87] The decorative scheme was

---

[85] Ciuffoletti, "Il Giardino delle meraviglie," in *Storia, Arte, Natura*, 18-22.
[86] Larry J. Feinberg, "The Studiolo of Francesco I Reconsidered," in *The Medici, Michelangelo, and the Art of Late Renaissance Florence* (New Haven and London: Yale University Press, 2002), 47.
[87] Feinberg, 47.

conceived by Giorgio Vasari and Vincenzo Borghini in large part to visualize connections between art and nature, but also to visualize organization of natural curiosities, antique and Renaissance objects, and alchemical ingredients that Francesco stored in the space.[88] At Pratolino, and in the *Appennino* especially, these connections manifested physically, and some similar materials (such as coral) were used for decoration, as discussed in Chapter Three. In addition, both projects could be understood as reflections of Francesco's "introversion,"[89] and both contrast the patronage legacy of his father, Cosimo I de' Medici (r. 1537-1574), who was celebrated for commissioning many public sculptures, fountains, and church decorations.[90]

In terms of social-historical investigations, the *Appennino* has been situated as a relic of labor and financial exchanges at Pratolino, as well as in relation to activities like hunting and entertaining at Pratolino. Temporally, the construction of the *Appennino* coincided with the marriage of Francesco de' Medici to Bianca Capello, who wed in 1579. Patrizi emphasized the link between the timing of the marriage and the production of sculptural works at the site, positing that Francesco's infatuation with and impending marriage to Bianca inspired him to commission the works at Pratolino as a sort of homage to her. Patrizi insinuates a flurry of creative activity in anticipation of and/or

---

[88] The iconography of the *studiolo* and its relationship to the *Appennino* is discussed in detail in Chapter Three, 143-144. Also see references on pages 95, 151, and 156.
[89] See Ciuffoletti, "Il Giardino delle meraviglie," 18-22. See also Luciano Berti, *Il principe dello studiolo: Francesco I dei Medici e la fine del Rinascimento fiorentino* (Pistoia: Maschietto, 2002).
[90] For an overview of the patronage of Cosimo see Janet Cox-Rearick, "Art at the Court of Duke Cosimo I de' Medici (1537-1574)," in *The Medici, Michelangelo, and the Art of Late Renaissance Florence* (New Haven and London: Yale University Press, 2002), 35-45.

celebration of the union. More broadly, Webster Smith looked at Pratolino (and the *Appennino*) in relationship to other Buontalenti-designed Medici villa projects, especially Castello.[91] D.R. Edward Wright deconstructed what he viewed as a "hierarchized opposition of Art versus Nature [as imposed by Italian garden studies]" and instead focused on the social and economic implications of hunting at Pratolino and the role that the area around the *Appennino* played in hunting ceremonies.[92] Suzanne Butters revealed a regrettable aspect of the social history of Pratolino in her study of the physical efforts necessary to erect the mountain, contracts for service, and the issue of forced labor.[93]

Other scholars have attempted to make sense of the varied early modern descriptions – from allegorical Apennines, to mythological Giant, to Cyclops, to Jupiter Pluvius. Instead of focusing on the relationship to a river god or the reference to rivers' origins, Christina Acidini Luchinat, through a review of sixteenth-century descriptions, illustrates the allegorical-mythological multivalency of the sculpture, which could be viewed either as a personification of the mountain range (and, again, by inference as embodying the territorial claims of the Medici) or as a reference to the Graeco-Roman myth of the Gigantomachy.[94] Ultimately, Luchinat posits that the sculpture

---

[91] Smith, "Pratolino," and Webster Smith, "Studies on Buontalenti's Villas" (PhD diss., New York University, 1958).
[92] D.R. Edward Wright, "Some Medici Gardens of the Florentine Renaissance: An Essay in Post-Aesthetic Interpretations," in *The Italian Garden: Art, Design and Culture*, ed. John Dixon Hunt (Cambridge, UK and New York: Cambridge University Press, 1996), 34-59.
[93] Suzanne Butters, "Pressed Labor and Pratolino: Social Imagery and Social Reality at a Medici Garden," in *Villas and Gardens in Early Modern Italy*, ed. Mirka Benes and Dianne Harris (Cambridge, UK and New York: Cambridge University Press, 2001), 61-87.
[94] Acidini Luchinat, "L'Appennino dal modello all'opera compiuta," 13-17.

simultaneously refers to the Gigantomachy and to the Apennine mountains, which, for her, are here inextricable.[95] Carlo Del Bravo suggests a more abstract interpretation: the colossus (and, overall, the garden at Pratolino) could represent Empedocles' allegory of friendship and hatred.[96] Philippe Arnaud offers perhaps the most open-ended interpretation, drawing out simultaneous references to mythology, legend, and pastoral. Reminding us of the early modern conception of the Apennines as a chain of "terrifying" mountains, he suggests that we understand the figure as an Olympian god or Titan representing an embodiment of terrors; as a personification of catastrophe; or as comic relief.[97] These multiple, layered iconographical interpretations further underscore the multivalence of the *Appennino* and demonstrate that, in terms of content as well as style, it has been difficult to define.

Of these iconographical studies, those that allow for malleability in meaning are most compelling, while those that restrict the symbolic import of the *Appennino* to the political realm or to narrowly defined mythological imagery are less so. As Claudia Lazzaro has noted, twentieth-century interpretations equate "taming nature" with a desire to demonstrate domination over the land (and, by extension, political success), a formula that she argues does not fit Renaissance notions.[98] Lazzaro points to textual evidence

---

[95] Acidini Luchinat, "L'Appennino dal modello all'opera compiuta," 17.
[96] Carlo Del Bravo, "Francesco a Pratolino," *Artibus et Historiae* 8, no. 15 (1987): 37-38.
[97] "*Les Apennins étaient considérés et pour longtemps, comme une chaîne de montagnes terrifiantes*." Philippe Arnaud, "L'Apennin: Renaissance d'un Géant," *L'Estampille / L'Objet d'Art*, 273 (1993): 64.
[98] Lazzaro sees such interpretations as the result of Fascism's influence in the twentieth century, and she finds that primary sources and documents from the Renaissance do not support such an interpretation. See Lazzaro, "Gendered Nature," 248-250; and Claudia Lazzaro, "Politicizing a National Garden Tradition: The Italianness of the Italian

from the early modern period, wherein, she explains, "nature is accorded a respect and reverence at odds with the idea of man's domination."[99] During the Renaissance, the garden was characterized as female, whereas not until Mussolini's Fascist regime did garden writers describe the Italian garden as male, at the same time that they started to apply metaphors of military domination.[100] This study does not aim to clarify one particular iconographical or allegorical interpretation of the monument, but allows for the multiple possibilities of conceptualization and meaning relative to the *Appennino* articulated previously by scholars.

While evaluations of this sculpture have addressed its (ultimately ambiguous) iconography, its place in the social history of Renaissance villa culture, and its relationship to the history of Medici patronage, for this dissertation the most helpful analysis of the *Appennino* comes from garden studies literature that explores the ways the monument relates to the designed landscape and nature surrounding it. The comprehensive study of Pratolino by the garden and landscape historian Luigi Zangheri is invaluable.[101] Importantly, he compiled a huge number of documents and texts related to Pratolino, reproducing them or quoting them at length. In addition, Zangheri addressed the iconographical program at Pratolino. In an earlier overview of Pratolino, Webster

---

Garden," in *Donatello Among the Blackshirts: History and Modernity in the Visual Culture of Fascist Italy* (Ithaca: Cornell University Press, 2005), 157-169.

[99] Lazzaro, "Gendered Nature," 248.

[100] Lazzaro, "Gendered Nature," 249.

[101] See note 25.

Smith detailed the chronological development of the site, the buildings on it, and the fountains, grottoes, and statuary, including the *Appennino*.[102]

More recently, Hervé Brunon evaluated, among other issues, the cultural imagination of nature in the sixteenth century and the pastoral at Pratolino.[103] His extensive study of Pratolino situates the *Appennino* in relationship to a range of contexts. In part, Brunon seeks to resolve allegorical and scientific theories of the monument – Aristotelian theories of the elements, microcosm/macrocosm relationships, poetic and material incarnation of Pratolino, and allegories of the Earth all might be embedded in the work. Recent essays by Una d'Elia and Luke Morgan both examined undersides of the *Appennino*, mournfulness and monstrosity, respectively.[104] D'Elia took up concerns allied to an extent with Brunon's discussion of pastoral, wherein she made provocative associations between Renaissance nostalgia for antiquity and reinvention of ancient river god types, pastoral poetry, and the *Appennino*. Morgan emphasized the corporeal cavity, experiential nature, and grotesque evocation of the *Appennino*. In distinct ways, each of

---

[102] Webster Smith, "Pratolino," 155-168.

[103] Hervé Brunon, *Pratolino: art des jardins et imaginaire de la nature dans l'Italie de la seconde moitié du XVIe siècle* (PhD diss., University of Paris I: Panthéon-Sorbonne, 2001), 5 vols. On the *Appennino* relative to Aristotelian theories of the earth and climate, see 517-518; on its poetic incarnation of a stony shepherd from the anonymous eclogue on Pratolino from c. 1580-1587, see 718-727 and 804-809; on its relationship to the *non finito* and metamorphosis of Michelangelo's *Slaves* in the Boboli gardens, see 722-723; on the monument as allegory of the earth see 737 ff; on its Chastel-ian "ecological intuition" see 737-738. Also see Hervé Brunon, "La forêt, la montagne et la grotte: Pratolino et la poétique pastorale du paysage à la fin du xvi^{e} siècle," *Mélanges de l'École française de Rome. Italie et Méditerranée*, CXII, 2 (2000): 785-811.

[104] D'Elia, 1-25; Luke Morgan, "The monster in the garden: the grotesque, the gigantic, and the monstrous in Renaissance landscape design," in *Studies in the History of Gardens and Designed Landscapes: An International Quarterly* 31, no. 3 (2011): 167-180.

these scholars calls into question the conventional twentieth-century tendency to see an art-nature hierarchy in Renaissance gardens.

As noted above, Lazzaro previously suggested that modern interpretations of Renaissance gardens in this hierarchical manner are flawed. In her multiple contributions to the understanding of Pratolino and the *Appennino*, Lazzaro offers alternatives to this (potentially anachronistic) and rigid methodology.[105] She draws out the way the *Appennino* relates to the pastoral nature of Pratolino, connecting the evolution of Giambologna's design for the colossal mountain-man to images of river gods in pastoral literature.[106] For Lazzaro, the early *bozzetti* represent the River Nile, derived from Sannazaro's description of a river god inside a cave in *Arcadia*; the realized *Appennino* represents a "radical rethinking" of the personified river and/or mountain.[107] Again, the singularity and inventiveness of Giambologna's project are emphasized. More broadly, Lazzaro posits that concern with ecology is reflected in the Renaissance acknowledgement of *terza natura,* or "third nature," a collaboration between human artifice and nature's art, "an unstable binary," in late sixteenth-century gardens.[108] Her

---

[105] Lazzaro, *Italian Renaissance Garden,* 132-165; Lazzaro, "Gendered Nature," 246-273; Lazzaro, "Wash Water," 317-326.
[106] Lazzaro, *Italian Renaissance Garden*, 132-140, 148-150.
[107] Lazzaro, *Italian Renaissance Garden*, 150. More concretely, she also traces the relationships between water from the Mugnone, the main water source for Pratolino, the series of water features in the gardens, and the agricultural and domestic activities like irrigation and laundry at Pratolino. For the way the *Appennino* fits into this scheme, see "Wash Water," 319-321.
[108] Lazzaro, "Gendered Nature," 247-248. This essay also considers how the sculpted mountain and, specifically, its *gagliardo* ("difficult" or "forced") pose represent male-ness and the sexuality of nature. These observations are important to Chapter Four, which builds upon them but also looks more broadly at the relationship of the man-mountain to sixteenth century figural sculpture.

suggestion that Renaissance spectators acknowledged the production of a "third nature" (in addition to the existing forest that was tamed and the sculptures and fountains that evoked nature) in gardens like Pratolino is a point of departure for considering the intersections of natural history and art theory in the context surrounding the monument, as well as for exploring the material nature of stuff that generated third nature (*spugne*). Implicit in her argument is the idea that an ecological condition, wherein this art-nature collaboration dissolves or conflates traditional etiological notions, emerges as a result of garden projects. This argument is fundamental to mine, which expands upon the idea that ecological awareness is manifest in the Renaissance and explains how the mountain, particularly, embodies that awareness. In regard to the garden studies literature discussed above, the following chapters are inspired by Lazzaro's scholarship especially, but also by the recent suggestions of Brunon (about ecology) and Morgan (about corporeality); in these chapters I aim to demonstrate how the ecological-environmental and corporeal-material threads intertwine in the *Appennino*.

In addition to acknowledging a "third nature" within gardens, Renaissance beholders demonstrated a newfound willingness to experience nature first-hand. As the following chapter explains, in the Renaissance, particularly in the sixteenth century, trepidation about "wild nature" subsided and curiosity about its contents escalated. Naturalists engaged with nature and brought it back into the library, cabinet, *studiolo*, grotto, academy, and museum. With these acts of exploration, collection, and interrogation of natural materials like stalactites or plants, for example, boundaries of nature/culture, human/landscape, and exterior/interior dissolved. The *Appennino* is

suggestive of the disintegration of such dyads, as the monument itself slips between representation of human and non-human forms and, in so doing, invites close-looking and even corporeal investigation. Beholders climbing onto or into the *Appennino* mimicked the activities of naturalists who climbed mountains or explored caves in order to study and collect nature.

At the same time that engagement with nature facilitated and reflected environmental awareness, the collection, organization, cataloguing, and display of nature's specimens imposed unnatural order upon them.[109] Better understanding of nature often required its fragmentation and reframing by amateurs and academics alike; in turn, violent or terrifying natural events intrigued beholders and sometimes illuminated understanding of the environment. Mountains and caves served in multiple of these capacities – as sites for exploration and collection, and as things that demonstrated or exemplified how nature worked. In the following chapter, I consider various ways that mountains and caves were understood, encountered, and used during the early modern period. Journals, maps, and treatises reveal not only growing comprehension of mountains and caves, but also the exploitation of these natural environments by humans in the pursuit of industry and art. While it would be wrong to equate early modern reception of such human-nature interactions with modern and post-modern

[109] On this phenomenon and its pernicious effects relative to the modern environmental movement, see William Cronon, "The Trouble with Wilderness: Or, Getting Back to the Wrong Nature," *Environmental History*, 1, no. 1 (Jan. 1996): 7-28; and William Cronon, "The Trouble with Wilderness: A Response," *Environmental History*, 1, no.1 (Jan. 1996): 47-55. For examples of sixteenth-century collecting practices, cataloguing systems, and (museum) display plans, see especially the projects of Ulisse Aldrovandi, Samuel Quiccheberg, and, slightly later, Ferrante Imperato. Aldrovandi and Imperato are discussed in the following chapter.

environmentalism, it is possible to identify a nascent environmental awareness or ecological mindedness. The following discussion draws out such attitudes that were embedded in the kinds of primary sources listed above, and in this effort acknowledges tensions between beholders' desires to comprehend, utilize, transform, and re-present the nature of mountains and caves.

CHAPTER TWO

Encountering and Representing Mountains and Caves in the Renaissance

Introduction: Mountains and Caves in the Renaissance Landscape

> …behind these fertile and smiling hills, the Apennines showed their rugged and inaccessible peaks, whence we could discern those very torrents rush foaming down, which, after having exhausted their original power and fury, modified themselves into the gentle streams which refreshed and adorned the valleys beneath us. Among the distant heights we could every now and then discern rich and fertile plains, many of which appeared to be of considerable extent. I do not conceive that any description, either on paper or on canvas, could at all convey to the eye or the mind the surpassing loveliness of the scenery.[110]
>
> --Michel de Montaigne

> Drawn by my eager desire, wishing to see the great manifestation of the various and strange shapes made by formative nature, I wandered some way among gloomy rocks, coming to the entrance of a great cavern, in front of which I stood for some time, stupefied and incomprehending such a thing. . . Suddenly two things arose in me, fear and desire: fear of the menacing darkness of the cavern; desire to see if there was any marvellous thing within.[111]
>
> --Leonardo da Vinci

Views and experiences of mountains and caves inspired travelers like Michel de Montaigne, artists like Leonardo da Vinci (1452-1519), and other Renaissance humanists

---

[110] Montaigne, *Works of Michael de Montaigne, Comprising His Essays, Journey into Italy, and Letters*, Vol. IV, ed. O.W. Wight, trans. W. Hazlitt (Boston: Houghton, Mifflin, and Company, 1859), 350.

[111] Leonardo da Vinci, BL 115r, quoted and translated in Martin Kemp, *Leonardo da Vinci: Marvellous Works of Nature and Man* (Cambridge, MA: Harvard University Press, 1981), 98-99.

and naturalists to record their encounters. Often these encounters prompted emphatic responses from the beholders, as illustrated by the passages above. These quotations are representative of reactions found in a survey of early modern texts, in which it appears that mountains and caves, as phenomena experienced in nature, elicited admiration, curiosity, and, at times, fear. With their surfaces exposed, mountains inspired wonder and sometimes trepidation, but could be described in terms that reflected a sense of comprehension, a sense that they were mappable. Caves seemed simultaneously wondrous and dangerous for some beholders, but were less comprehensible and more mysterious than mountains.

The passages from Montaigne's travel journal and Leonardo's notes draw out the relational, but at times diametric, characteristics of mountains and caves. Montaigne wrote about the Apennine Mountains, the so-called "spine" of Italy, while traveling through the countryside around 1580. According to Montaigne's description quoted above, the mountain landscape was so discernable that he could trace the graduated tempering of the streams that begin furiously and become gentle as they near the valleys. This passage reflects what Montaigne was able to see: the peaks and the valleys, the shifting nature of the streams, and the broader context of the countryside (the "rich and fertile plains" that punctuate the mountain landscape). Conversely, the cave that Leonardo confronted was not easy to see into or to describe from his vantage point at its entrance.[112] Its environs were characterized by gloom and darkness. And, instead of

[112] It is not clear that Leonardo's passage was inspired by a particular visit to a particular cave – it might have been hypothetical and theoretical in nature – but it probably reflects

being about what he has observed at a distance, Leonardo's notes are about what could be revealed to him if he moved closer. These two descriptions highlight contrasting qualities of "loveliness" and "menacing darkness," and also the descriptions indicate that different viewing distances are privileged in each instance. Montaigne looked from afar at the mountains, while Leonardo got close to the cave; the mountains' scenery was perhaps better comprehended from a distance, while the cave's demanded an intimate encounter. The issue of distant viewing versus close looking translates to beholders' experiences with Renaissance art, also – especially with artworks comprised of smooth and rough passages and with large-scaled artworks. These different viewpoints relative to mountains and caves might be understood as analogues for beholders' spatial relationships with colossal sculpture: in order to view completely figures like Giambologna's *Appennino* (fig. 1.1) and its relationship to its site, beholders must look from a distance, but in order to understand the material qualities of the work (like the character of the encrustations or the types of plants punctuating the sculpture), beholders must practice close looking.

In addition to illustrating different attitudes towards mountains and caves and different viewing practices, these two accounts both demonstrate that natural formations were viewed with an aesthetic imperative during the period. Both Montaigne and Leonardo frame their views of nature in terms of art. Leonardo alludes to the theoretical idea of nature-as-artist and appreciates "marvellous" natural curiosities. His text also implies that the artist-explorer takes risks to discover images (or objects) made in nature.

---

first-hand knowledge of caves. Kemp, for one, suggests this. See Kemp, *Marvellous Works*, 98-99.

Leonardo's evocation of the cave setting calls up tropes of safekeeping and secrecy, and of revelation and knowledge that are manifest in other period texts that describe caves in relationship to representation. For Montaigne, accurate description of nature in either visual or textual medium is ultimately impossible: he cannot imagine that art could do justice to the view of nature he experiences. Together, then, Leonardo's and Montaigne's descriptions call attention to two issues of Renaissance art theory that are addressed in this dissertation: the image found in nature, "made by chance," and the competition and collaboration between art and nature.

Renaissance artists such as Cennino Cennini (c. 1370 – 1440), Leon Battista Alberti (1404-1472), and Leonardo echoed and amended ideas about chance imagery that had been suggested by Pliny and other classical writers. In pieces of marble, clods of earth, and other materials in their raw states, Renaissance and classical beholders observed representational imagery including both landscapes and figures. Taking pause and looking closely at the shapes and textures of these kinds of natural surfaces yielded results similar to Leonardo's cave experience. In addition to relating to the issues of scale and viewpoint discussed above, the "image made by chance," found in nature and seen by Renaissance artists and beholders, instantiated attentiveness to nature and perhaps even an expression of environmental awareness within the reception of Renaissance art. Renaissance artists and beholders also observed the collaboration between art and nature, which could result in *terza natura,* or "third nature," often manifest in Renaissance garden grottoes. When Renaissance beholders acknowledged

this phenomenon, they likewise displayed attentiveness to nature, and perhaps even to ecological disruptions caused by the entangling of art and nature in garden settings.[113]

The ways that the ideas of the "image made by chance" and "third nature" relate to beholders' encounters with nature thus embody two key concerns of this dissertation: how environmental awareness surfaces in the reception and theories of Renaissance art, and, building upon that, how latent anxiety about ecological distress may be found in sixteenth-century sculpture. In order to provide context for discussion of these concerns, this chapter draws attention to the ways that mountains and caves were characterized in travel journals, correspondence, poetry, art treatises, scientific texts, maps, and other primary sources, like those by Leonardo and Montaigne discussed above. This chapter argues that at the same time that both mountains and caves inspired responses related to visual comprehension and physical exploration, beholders' receptions of the material natures of mountain landscapes reflect an intersection of ecological awareness and art theory.

Perception, Knowledge, and Theories of Mountains and Caves

Leonardo's and Montaigne's descriptions of landscapes are suggestive of art theories central to this study, and these descriptions relate to an important aspect of social and environmental context for this study: engagement with Apennine scenery indicated a shift in the way that such formations were perceived during the early modern period. Scholars have already discussed how medieval reception of mountains reflected a

[113] The ideas of the "image made by chance" and "third nature" are discussed in depth in Chapter Three, where examples, quotations, and bibliography are provided.

mixture of reactions, including fear, suspicion, and awe. Beholders of natural phenomena tended to focus on what could be examined up close – on things that could be held, touched, and possessed. Things that could be related to human scale easily were more accessible and thus provided the benchmarks for visual description. Things that exceeded comparison with human scale were more difficult to comprehend. Mountains, especially, proved challenging. By some measures, they represented dangerous landscapes.[114] Generally, in the Greco-Roman mythological tradition, mountains were known as the primeval home of giants, and then as virtual stepping-stones for the giants in their battle against the gods.[115] Mountains also were known as legendary homes to monsters, and this notion was expressed on European world maps throughout the early modern period.[116] Beholders also perceived real mountain topography as treacherous. The Apennines, for example, were known as terrifying mountains.[117] Thus, because of perceived peril, mystifying content, exceptional scale, and beholders' lack of full

---

[114] On the different attitudes towards mountains in the medieval and Renaissance periods, see Walther Kirchner, "Mind, Mountain, and History," *Journal of the History of Ideas* 11, no. 4 (Oct. 1950): 416-426. For an overview of western and non-western ancient ideas of mountains and shifting perceptions during the early modern and Romantic periods, see Yi Fu Tuan, *Topophilia: A Study of Environmental Perception, Attitudes, and Values* (Englewood Cliffs, N.J.: Prentice Hall, 1974), 70-74. On the shifting perceptions of mountains in the late medieval period see Reinhard Steiner, " 'All foreground without distance': The Rise of Landscape in Late Medieval Painting," in *Place of Landscape*, ed. Malpas, 207-219.

[115] See Robert Pogue Harrison, *Forests: The Shadow of Civilization* (Chicago and London: University of Chicago, 1992), 3-12.

[116] Chet Van Duzer, "*Hic sunt dracones*: The Geography and Cartography of Monsters," in *The Ashgate Research Companion to Monsters and the Monstrous*, ed. Asa Simon Mittman and Peter J. Dendle (Surrey, UK and Burlington, VT: Ashgate, 2013), 387-435.

[117] Arnaud, 64.

comprehension, mountains traditionally were kept at a distance physically and in visual representations.

By the early Renaissance, trepidation about mountains began to dissipate.[118] As Reinhard Steiner suggested, the early modern shift in attitude about mountains could be illustrated by comparing the depiction of mountains in the scene of "The Temptation of Christ on the Mountain" from Duccio's *Maestà* (fig. 2.1) with Ambrogio Lorenzetti's *Effects of Good Government in the City and the Country* (fig. 2.2).[119] To understand Steiner's point, it is helpful to elaborate upon the concept of "mountain" in these works. In the first example, the mountains in the foreground and the middle distance are rendered at a comparable size, with a similar level of detail, and with similar treatments of color, light, and shadow. Duccio's representation describes the mountains as devoid of plant life, comprised solely of stone. Relatively wide swathes of light grey and light brown indicate faceted slopes, ridges, and peaks. Thinner passages of dark greys, dark browns, and blacks suggest narrow and deep crevices or parts that are cast in shadow. Duccio's mountains read like a sign for "mountain," a synoptic whole described in dramatic terms as steep, bare, and craggy. The austere rocky surfaces serve well the

---

[118] Though still in the seventeenth century mountainous terrain was understood to harbor threats. For example, John Evelyn's description of his travel to Fontainebleau evokes this notion, though the dangers here are not mythical or mystifying, but identifiable humans and animals: "through a forest so prodigiously encompassed with hideous rocks of whitish hard stone heaped one on another in mountainous heights, that I think the like is nowhere to be found more horrid and solitary. It abounds with stags, wolves, boars, and … a lynx … had devoured some passengers. On the summit of these gloomy precipices, intermingled with trees and shrubs, the stones hanging over, and menacing ruin, is built an hermitage. In these solitudes, rogues frequently lurk and do mischief…" See John Evelyn, *The Diary of John Evelyn*. 3 vols. (London and New York: Macmillan, 1906), 88-89.

[119] Steiner, 207-219.

subject of Duccio's painting. In the Lorenzetti fresco, the mountains appear in the middle ground and background, and they are characterized in more nuanced terms. A range of yellows, greens, blues, and browns describes the hillsides and valleys. The slopes appear gentler, and in some passages they are especially verdant and fruitful. Lorenzetti depicts agricultural practices, with human figures working the slope in the foreground and the valleys in the middle ground. Lorenzetti's mountains seem more naturalistic and accessible, less menacing and threatening.[120] Humans have a productive relationship with these mountains.

Despite their differences, which, according to Steiner, highlight a shift in visual description of mountains, these images both illustrate how mountains' appearances reflected ecological and topographical changes – consequences of population growth and economic expansion during the medieval and Renaissance periods. Burgeoning urban centers and maritime industries required great quantities of wood for building, thus contributing to the noticeable deforestation of Italy, and of the Apennines in particular, during the early modern period. In addition, opaque layers of forest were shorn away by livestock and replaced by agriculture such as olive groves and vineyards. Wooded areas that previously masked the form and ground of mountains gave way to clean-cut slopes and stony exposures: as the geologist Gian Battista Vai pointed out, "the Apennines—

[120] Michael Baxandall framed the depiction in terms of agricultural history. He suggested that the appearance of Lorenzetti's landscape was related to poor crop production in the southern *contado* of Siena in the year that the fresco was completed and that it suggested the importance of accessibility to that land. See Michael Baxandall, "Art, Society, and the Bouguer Principle," *Representations* 12 (1985): 32-43.

showed much better exposures of rocks and strata than today."[121] Another way of characterizing the deforestation of these mountains is to say that their material nature, which had been obscured in large part by trees and other plants, was revealed.

The transformation of the mountain landscape and exposure of its underlying (stony) material had implications for travelers' views, for description and depiction of mountains, and for the nascent discipline of geology. With the veil of greenery partially lifted, the characteristics of these rocky formations were visually and physically more accessible. Concerning the primordial nature of mountains and the menacing prospect of giants (or other mystifying dangers) lurking upon them and hidden by greenery, deforestation perhaps tempered these legendary threats and attendant trepidation of beholders. From a physiological perspective, being able to see clearly the shapes and colors of surfaces inspired a greater confidence about visual knowledge of mountains. Perhaps because of this new accessibility and optical clarity, observation and investigation were spurred: better intellectual comprehension thus became possible.

Knowledge and understanding of mountains and their material natures were codified through the emerging disciplines of geology, botany, and mineralogy.[122] Geological theories were developed to explain the process of mountain formation, and also geological terminology could be used to describe discrete parts of mountain and cave

---

[121] See Gian Battista Vai, "The Scientific Revolution and Nicholas Steno's twofold conversion," in *The Geological Society of America Memoirs 203* (2009): 191. Also, for the case of deforestation related specifically to Venetian land management and architectural and shipbuilding needs, see Karl Appuhn, *A Forest on the Sea: Environmental Expertise in Renaissance Venice* (Baltimore: Johns Hopkins University Press, 2009).

[122] The first treatise on the origin of mountains, *De Montium Origine* by Valerius Faventies, appeared in 1561. See Sigurdson, 87.

environments (like lava, stalactites, and blocks of stone), which in turn were used in sculptural and architectural projects.[123] Mountains were used as botanical research laboratories, with naturalists botanizing at sites like Monte Baldo to collect specimens. The botanical specimens they collected were sometimes cultivated in private gardens where they were part of a larger (artistic) design and/or served scientific purposes. In turn, naturalists planted experimental specimens on Monte Baldo, as it was considered a perfect natural laboratory.[124] Mineralogists theorized the materials that miners extracted from mountain interiors, which in turn were used in artistic applications and also collected for their aesthetic qualities.[125] At the same time, artists and art theorists

---

[123] See Gian Battista Vai and William Cavazza, "Ulisse Aldrovandi and the Origin of Geology and Science," in *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell (Boulder, CO: Geological Society of America, 2006), 43-63.

[124] On Monte Baldo as a "theater of experimentation," see Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley and Los Angeles: University of California Press, 1994), 182. For an overview of the development of botanical study and the practice of naturalists in the Renaissance see Brian W. Ogilvie, "The Many Books of Nature: Renaissance Naturalists and Information Overload," in *Journal of the History of Ideas* 64, no. 1 (Jan. 2003): 29-40.

[125] Key texts on the nature and uses of minerals, fossils, and stones written in the sixteenth century include the following: Vannoccio Biringuccio, *De la pirotechnia* (1540), Pietro Andrea Mattioli, *I discorsi* (1544), Georgius Agricola, *De Natura Fossilium* (1546), Conrad Gessner, *De Rerum Fossilium Lapidum et Gemmarum* (1565), Bernard Palissy, *Discours Admirables* (1580), Ulisse Aldrovandi, *Musaeum Metallicum* (posthumously published in 1648), Agostino del Riccio, *Istoria delle Pietre* (1597), Ferrante Imperato, *Dell' historia naturale* (1599). Some of these studies were in part inspired by the authors' collections of geological phenomena, representative of trends during the period to collect for both scientific and aesthetic purposes. Some (in particular Mattioli's) were inspired by engagement with ancient authors like Dioscorides. For an overview of geological collecting in the early modern period, see Hugh Torrens, "Early Collecting in the Field of Geology," in *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. Oliver Impey and Arthur MacGregror (Oxford and New York: Clarendon Press, 1985), 204-213. For an overview of mineralogical studies during the Renaissance see Annibale Mottana, "Italian

discussed the physical properties of stones and metals and the technical processes through which these materials – quarried from mountains, caves, and mines – could be transformed into paintings and sculptures. For example, in the introduction to the *Lives of the Artists*, Vasari discussed the qualities of a variety of stones used for sculpture and which geographical areas produced them; how to grind stones for pigment; and where to procure stalactites for encrustations in grottoes.[126] And in his treatise *Dell' oreficeria* (1568), Benvenuto Cellini (1500 – 1571) explained how to transform gemstones into jewelry.[127] The materials, vocabularies, and experiences of mountains and caves for botanists, geologists, and mineralogists overlapped and began to expand to include those of Renaissance artists and art theorists.

In addition, some Renaissance artists' work – in visual and textual formats – directly engaged these three scientific disciplines. Notably, mountains and caves stirred geological theorizing by Leonardo, who explained his observations in paintings and in his notes. For example, the Louvre *Virgin of the Rocks* (fig. 2.3) accurately represents a grotto comprised of several types of rock matter with surfaces shaped by various geological processes, all of which are perceptible to modern geologists.[128] In his

---

Gemology during the Renaissance: A step toward modern mineralogy," in *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell (Boulder, CO: Geological Society of America, 2006), 1-22.

[126] See *Vasari on Technique*, 87-89.

[127] Benvenuto Cellini, *Due trattati, uno dell' oreficeria, l'altro della scultura* (Milan: Dalla Società Tipografica de' Classici Italiani contrada del Cappuccio, 1811). This text was partially published in 1568 in Florence.

[128] Ann Pizzorusso, "Leonardo's Geology: The Authenticity of the 'Virgin of the Rocks,'" *Leonardo* 29, no. 3 (1996): 197-200. Indeed, Leonardo's geological work, especially on trace fossils, might be characterized as precocious by twenty-first century

writings, too, Leonardo explored many facets of geology, especially in the pages of the *Codex Leicester*. He also wrote about how mountains were shaped by rivers. Martin Kemp suggested that the landscape background of the *Mona Lisa* (fig. 2.4) represents this theory, articulated in the *Codex Urbinas*:

> The configuration of the mountains called the 'Chain of the World' is generated by the courses of the rivers born from the rain, snow, hail and ice melted by the rays of the summer sun, which in melting accumulate in many small rivulets flowing from diverse directions into larger rivers, growing in magnitude as they acquire motion, until they meet together in the oceanic seas, always cutting away from one bank and accumulating on the other until they achieve the size of their valleys.[129]

Renaissance art theorists similarly observed the phenomenon of erosion on mountains. Both Alberti and Leonardo noted how mountains recorded the passage of time and the effects of weather, which, in turn, altered mountains' forms.[130] For Leonardo, mountains also served as tangible examples for color theory.[131] The

---

geologists; for example see Andrea Baucon, "Leonardo da Vinci, the Founding Father of Ichnology," *Palaios*, 25, no. 5/6 (May-June 2010): 361-367.

[129] Quoted and translated in Martin Kemp, *Marvellous Works*, 257.

[130] Leon Battista Alberti, *On the Art of Building in Ten Books [De re aedificatoria]*, trans. Joseph Rykwert, Neil Leach, and Robert Tavernor (Cambridge, MA: The MIT Press, 1988), 16. Alberti wrote that fluctuations in temperature are often responsible for eroding stone. And, Leonardo noted that, over time, rains reshape mountains and valleys. See Leonardo da Vinci, notation from *Codex Atlanticus*, 160 v.a., in *The Notebooks of Leonardo da Vinci*, trans. Edward MacCurdy, (Old Saybrook, CT: Konecky & Konecky, 2003) [first published 1906], 309-310.

[131] Leonardo da Vinci, *The Alps*, drawing at Royal Windsor Library, No. 12, 414, with notations on mountains in Cecil Gould, "Leonardo da Vinci's Notes on the Colour of Rivers and Mountains," *The Burlington Magazine for Connoisseurs* 89, no. 534 (September 1947): 239-238. Leonardo describes the way that distance and time of day affect the qualities of the colors of mountains, which relates to his own concerns about technique; of particular interest to this investigation are his ideas about *sfumato* and the notion that mountain surfaces can be understood in malleable and transformative terms. This holds special relevance for this dissertation, as it connects the physical aspects of the mountain with materials handling.

multivalence of mountains for Renaissance artists and theorists underscores how the landscape not only recorded and reflected history, but also how its mutability – whether manifest in temporary visual effects brought about by atmospheric conditions, or in permanent alterations caused by erosion – informed artists' techniques and understandings of materials.

Mountains not only fascinated scientists and artists like Leonardo, for whom they fostered scientific inquiry and discovery, as well as theories of art, but mountains also produced media and materials of Renaissance art. Perhaps the most vivid example of a Renaissance artist procuring materials from the mountain landscape is that of Michelangelo Buonarroti (1475 – 1564), who was known for his extended visits to quarries in Carrara and Seravezza, where he participated in the work of excavating blocks for sculptural and architectural projects.[132] Michelangelo's contemporary, Bartolomeo Ammannati (1511-1592) also was involved with these quarries, and in his role as sculptor

[132] On Michelangelo's journeys to quarries such as Carrara and Seravezza to select marble see Paola Barocchi and Renzo Ristori, ed., *Il Carteggio di Michelangelo* (Florence: Sansoni, 1965); Christiane Klapisch-Zuber, *Les maitres du marbre: Carrare 1300-1600* (Paris: S.E.V.P.E.N., 1969); Michael Hirst, "Michelangelo, Carrara, and the marble for the Cardinal's Pietà," *The Burlington Magazine* 127, no. 984 (March, 1985): 152-159; L.B. Ciulich, "Michelangelo, Marble and Quarry Expert," in *The Genius of the Sculptor in Michelangelo's Work*, ed. Denise L. Bissonette and Maurizia Binda (Montreal: Montreal Museum of Fine Arts, 1992), 169-178; Caterina Rapetti, *Michelangelo, Carrara e "i maestri di cavar marmi"* (Florence: All' insegna Del Giglio, 2001); and Eric Scigliano, *Michelangelo's Mountain: The Quest for Perfection in the Marble Quarries of Carrara* (New York: Free Press, 2005). Summaries of some of the visits are found in William E. Wallace, *Michelangelo: The Artist, the Man and his Times* (Cambridge, UK: Cambridge University Press, 2009). Documents from about 1515-1518 suggest that Michelangelo managed all aspects of the work at Carrara, as well as the shipment of the material from the quarry; see Ciulich, 171. Other sculptors including Andrea Sansovino (1427-1529), for instance, might have been inspired to personally visit quarries following Michelangelo's example; see Klapisch-Zuber, *Les maitres du marbre*, 220-221, and Hirst, "Michelangelo, Carrara," 156.

and architect for the Medici court Ammannati managed multiple aspects of the operations at Seravezza from its re-opening in 1563.[133] Renaissance sculptors like Michelangelo and Ammannati, among others, privileged pure white marble because of apparent associations with antique sculpture.[134] In an effort to evoke and compete with antique works, these artists sought material free of obvious geological marks and directed stonecutters at these quarries to procure blocks with a particular quality and composition. For example, in 1518, according to his stonecutters, Michelangelo requested marble that was "free of veins and imperfections," and in 1521 he demanded marble that was "white, without veins or other markings."[135] In short, Michelangelo wanted material that was unlike that of *Bacchus* (fig. 2.6) but that had affinity with the block for the *Pietà* (fig. 2.7).

With gestures like these, avoiding marble that evidenced the mineral composition of its mountain origin through veining or other aspects of mineral composition or stratification, Michelangelo suppressed the material origins of the work in ways that implicated both time and place. He sought material that did not belie its connection to the

---

[133] But Ammannati seems to have relied largely on correspondence for procuring marble for projects like the Neptune Fountain, for example. See Felicia M. Else, "'La maggior porcheria del mondo': documents for Ammannati's Neptune Fountain," *The Burlington Magazine* 147, no. 1228 (July 2005): 487-491. For references see note 7, p. 487.

[134] On the escalation of the trend in the sixteenth-century, see Nicholas Penny, *The Materials of Sculpture* (New Haven and London: Yale University Press, 1993), 54-58.

[135] These phrases are representative of language found among the letters and contracts of Michelangelo from the early sixteenth century. They are found in two contracts, numbered XLI, dated 1 June 1519, and XLVIII, dated 22 April 1521. See *Le Lettere di Michelangelo Buonarroti, edite ed inedite coi ricordi ed i contratti artistici,* ed. G. Milanesi (Florence, 1875), 685. "Li quali marmi s' àranno ad cavare in Finochiaia della Cappella, iurisdictione e vicinanza di Pietrasanta, de' più belli che sono in detto loco, netti di vene e di peli, per pregii che fe' maestro *Allixandro di Giovanni di Bertino* da Septignao, ogni excusatione e cavillatione remossa." And: "…siano di marmot vivo et non cotto, bianco et senza vene, machie et peli alcuni."

larger mountain matrix – whether at Carrara or Seravezza (place) – nor, to the naked eye, its geological time, as traced through the veins and supposed "imperfections." Avoiding or suppressing these geological markers facilitated the production of sculptures that could persist outside of spatial-temporal frameworks, or perhaps that referenced antique frameworks, works that could "linger," to borrow terminology from Alexander Nagel and Christopher Wood.[136] But intrinsic to the act of destabilizing geological time, in turn, is engagement with it. By choosing material that was "white, without veins or other markings," Michelangelo acknowledged that natural traces (of time) appeared in (raw) sculptural materials and that in order to make sculptures appear atemporal, he had to avoid or suppress these traces.

Though many Renaissance sculptures may have suppressed geological history (through the material qualities described above and through technique that effected smooth polish), paintings and drawings of the period foregrounded it. The relationship between geology and two-dimensional art in the Renaissance is discussed in recent scientific literature. Vai and other geologists and historians of geology argue that depictions of landscape in works by Jan Van Eyck (1395-1441), Albrecht Dürer (1471-1528), Giovanni Bellini (1430-1516), Andrea Mantegna (1431 – 1506), Leonardo, and other Renaissance artists correctly and painstakingly recorded the appearance of geological phenomena such as rock strata, faults, and weathering, as well as larger formations like cliffs, mountains, and river beds, prior to formal scientific investigations

[136] Alexander Nagel and Christopher S. Wood, *Anachronic Renaissance* (New York: Zone Books, 2010), 13.

of these things in the seventeenth century.[137] For example, Giovanni Bellini (1430 – 1516) frequently represented rocky outcroppings that revealed geological record in his paintings such as the Frick *Saint Francis in the Desert* (fig.2.8) and the London *Saint Jerome Reading in a Landscape* (fig. 2.9). Vai and Gary D. Rosenberg posit that these kinds of artworks directly influenced the practice of geology. They view the precise articulation of rock formations like those found in these paintings as an early analogue to methodical textual description. Their research suggests that Renaissance art reflected environmental awareness and that, in doing this, it anticipated scientific discourse.

Perhaps these depictions of geological phenomena were informed by environmental change spurred by human activities such as deforestation, mining, and quarrying. For example, in Mantegna's painting *Madonna delle cave (Madonna of the Quarries)* (fig. 2.5), exposures of rock strata appear in the jagged, halo-like exposure behind the Virgin and child. Like Duccio's mountains discussed above, Mantegna's rocky forms might reflect how representation of nature changed due to newly-exposed landscape features such as these. The activity of quarrying also is depicted in the background of this painting – workers are extracting material from the mountain, and some blocks appear to have been rough-cut in the shape of columns while other blocks are scaled smaller. The depicted quarrymen carry out the kind of work that made the

[137] Vai, "Scientific Revolution"; David Branagan, "Geology and artists of the fifteenth and sixteenth centuries, mainly Florentine," in *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell (Boulder, CO: Geological Society of America, 2006), 31-42; Gary D. Rosenberg, "The measure of man and landscape in the Renaissance and Scientific Revolution," in *The Revolution in Geology from the Renaissance to the Enlightenment: Geological Society of America Memoir 203*, ed. Gary D. Rosenberg (Boulder, CO: Geological Society of America, 2009), 13-40.

geological record visible. Thus, the content of some Renaissance paintings reveals the intersection of geology and art: the depicted strata expose geological record, and the depicted quarries suggest the human and artistic engagement with it.

At the same time that the depicted rocks represent geological record and suggest early Renaissance beholders' awareness of it, the rock formation helps convey themes of generation, death, and primordial nature or timelessness within the painting. While the depiction of rocks appears painstakingly accurate, the largest rock formation seems unreal: behind the head of the Virgin is a halo-like shape. Has nature recognized the divinity of the Virgin and Christ, and as a result, from a constellation of "various and strange shapes" like those that Leonardo described, formed a halo, signaling to the beholder the exceptional character of the subjects?[138] The outcropping (or quarry exterior) serves as a throne and dais, with the platform pooling out under the Virgin's robes, again signaling the specialness of the subjects. The outcropping foregrounds the Virgin and child; but the cave or quarry entrance, situated beside the Virgin's left arm, draws the beholder's gaze into the formation itself. The opening in the rocks could suggest a womb or a tomb, reminding beholders of the Biblical accounts of Christ's birth, death, and resurrection. The quarrying inside this space looks like an excavation, evoking archaeological digging and related notions of archaic, even primordial, origins. The depiction suggests tension between the empirical representation of nature and the otherworldly figures within it. Art and nature at once collaborate and compete within Mantegna's landscape: the painstakingly rendered rocks simultaneously create an

[138] Professor Jodi Cranston suggested this idea to me and inspired the analysis that follows it.

ethereal, atemporal setting and appear to document geological history. By doing this, art and nature allow this painting to obscure time, like the sculpture discussed above. But the painting foregrounds, rather than suppresses, geological record of mountains and caves to accomplish this. Each of these efforts to obscure time, in turn, presents knowledge about mountain formations and their geological facets, knowledge that was created, in part, due to the transformation and even damage to the mountain landscape during the early modern period.

Encountering Mountains

From a survey of primary texts, it is clear that mountains functioned in practical ways for Renaissance artists and writers. They provided the materials for domestic life, commercial trade, and visual art. Mountains served as chorographical markers, cultural boundaries,[139] and archives of historical events.[140] Mountains also doubled as military

[139] For example, different dialects, currencies, social customs, measurement systems, religious practices, and laws developed from one to the next Apennine locale, even if only separated by a few kilometers. That is, mountains effectively caused population centers to develop an insular quality, or *campanilismo*. See Evelyn Welch, *Art in Renaissance Italy: 1350-1500* (Oxford and New York: Oxford University Press, 2000), 16-17.

[140] Petrarch explained how mountains cued remembrance of historical events when he discussed the Alps in his letters; he characterized them as a kind of monument to Hannibal's campaign against Italy. He refers to the story that Hannibal, the Carthaginian general, was able to invade Italy by using vinegar to break through the Alps. See Francesco Petrarca, *Rerum familiarium libri*, I-VIII, trans. Aldo S. Bernardo (Albany: State University of New York Press, 1975), 176-177. A well-known account of Hannibal's campaign is found in Livy's *History of Rome* [Titus Livius, *Ab urbe condita*], Book XXI.

fortifications and territorial boundaries.[141] Renaissance artists, naturalists, and writers described these functions in letters, diaries, treatises, and other texts that document encounters with mountains. In addition, these kinds of texts reveal that mountains were places for introspection, places from which to view, and places to explore and gather knowledge of nature. They were places for visualizing thought processes, whether meditative or scientific.

Perhaps the most iconic description of mountain climbing in the Renaissance, Francesco Petrarch's (1304-1374) 1336 letter about his ascent of Mount Ventoux evokes a number of these functions of mountains. In it, Petrarch explains the mountain as a (personal) geographical reference point; a place for meditation, reflection, and retrospection; and a pastoral landscape. Petrarch wrote this about his experience climbing:

> Today, led solely by a desire to view the great height of it, I climbed the highest mountain of this region which is appropriately called Windy Mountain [Mount Ventoux]. . . . This mountain visible from any direction has always been in my sight. . . . It is a steep mountain with rocky and almost inaccessible cliffs. . . . The only obstacle was the nature of the place. We came across an elderly shepherd on a slope of the mountain who made every effort with many words to keep us from continuing our

[141] Petrarch explained how mountains marked territorial limits when discussing the Pyrenees as "the boundary between Gaul and Spain." See Petrarca, 176-177. The Apennine Mountains also appeared as a protective boundary to beholders. In 1527, Marco Foscari, a Venetian ambassador who traveled to Florence, wrote that the city was "most strong and by nature most fortified …. through the harshest mountains and the narrowest and most difficult vales and passes for at least fifty miles, so that any army with artillery must take at least eight days in their transit." Marco Foscari, "Relazioni . . . de Fiorenza, 1527," in *Relazioni degli ambasciadori veneti al Senato*, ed. A. Segarizzi, iii.1 (Bari, 1916), 9-13. Quoted and translated in John Larner, "Romagnol Appennines in the Renaissance," in *City and Countryside in Late Medieval and Renaissance Italy: Essays Presented to Philip Jones*, ed. Trevor Dean and Chris Wickham (London and Ronceverte, WV: Hambedon Press, 1990), 147.

> climb, saying that fifty years earlier, driven by a like youthful motivation, he had climbed to the very top and had brought back from there nothing but repentance, weariness, and his body and clothing torn by stones and bushes, and that no one had been known before or since to dare undertake a similar climb.[142]

This account has been canonized as a pivotal moment in the early modern period – a moment representative of the shift from medieval to Renaissance – because of Petrarch's apparent desire to experience nature, according to Jacob Burckhardt, "for its own sake."[143] In this vein, it also illustrates the changing attitude towards mountains described above in the introduction to this chapter. Petrarch's task is intellectually inspired and physically rigorous.[144] Curiosity propelled him up the mountain; arduousness characterized his journey; and even the warnings of a local shepherd did not deter him. In this vein, the letter has been interpreted as Petrarch's personal meditation on the struggle to reconcile the active and contemplative. The mountain served as a site for reflection on this theme.[145]

---

[142] Petrarca, 172.
[143] See Jacob Burckhardt, *The Civilization of the Renaissance in Italy*, trans. S.G.C. Middlemore (London and New York: Penguin, 2004), 192-194.
[144] Climbing mountains was also associated with health. For example, both local villagers and the Aragonese court were reported to have climbed Vesuvius seeking cures or well-being. See Ambrogio Leone, *De agro Nolano denique montibus Vesuvio* (Venice: Ioannis Rubri Vercellani, 1500), v. This is contextualized in Sean Cocco, *Watching Vesuvius: A History of Science and Culture in Early Modern Italy* (Chicago and London: University of Chicago Press, 2012), 36. And, mountains were known as places to find refuge from unpleasant climate and the disease it generated. See Ian D. Whyte, *Landscape and History Since 1500* (London: Reaktion Books, 2002), 31.
[145] Robert M. Durling, "The Ascent of Mt. Ventoux and the Crisis of Allegory," *Italian Quarterly* 18, no. 69 (Summer 1974): 7-28. Also see Meredith J. Gill, "Petrarch's Pocket," in *Augustine in the Italian Renaissance: Art and Philosophy from Petrarch to Michelangelo* (Cambridge and New York: Cambridge University Press, 2005), 94-106.

Like Montaigne's account, Petrarch's letter also describes how he perceived and related to nature. Petrarch's report of climbing the "rocky and almost inaccessible cliffs" prefigures Montaigne's more distant view of "rocky and inaccessible peaks." But Montaigne's relationship to the mountain image was the inverse of Petrarch's: Montaigne extolled his view of the summit, among other aspects of the scenery, while Petrarch used the summit as a vantage point from which to view.

While Petrarch's interest in climbing might be forward-looking or precocious for his historical period, retrospection guided his encounter with the mountain: Petrarch wrote that reading Livy's *History of Rome* (begun c. 30 BCE) inspired him to attempt the climb, so that he might comprehend the feats of Greek and Roman warriors, and that once he reached the peak, his thoughts turned to his own past and his nostalgia for Italy. The presence of the penitent shepherd evokes a pastoral aspect of the mountainside and further amplifies Petrarch's mourning of his absence from his homeland. Thus, Petrarch's account contains a number of tropes of the experience of mountains: they serve as sites of meditation, help register historical events (both recent and ancient), host pastoral figures, and visualize knowledge.

Petrarch was not the only early Renaissance writer to comprehend a mountain's meditative and metaphorical potential: Dante Alighieri (1265 – 1321) responded similarly to mountain imagery,[146] as did the late fourteenth-century Florentine humanist Coluccio Salutati (1331 – 1406), to cite two relatively contemporaneous examples. Salutati, like Petrarch, entangled the meditative and revelatory significance of mountains. Salutati

[146] Gill, 94. On Dante's appreciation of views from mountains, see Burckhardt, 193.

similarly found mountains helpful for meditative prayer, but instead of valuing his experience of climbing to San Miniato al Monte or Fiesole as a communion with nature, Salutati emphasized how he gained a better and more complete view of culture (Florence) by ascending mountains.[147] Rather than framing nature in pictorial terms, Salutati framed architecture in this way.[148] Still, like Petrarch, he understood mountain climbing as a way to gain perspective and as a means to visual knowledge.

For Pope Pius II (Enea Silvio Piccolomini, 1405 – 1464), the Apennine Mountains facilitated views of Tuscany that allowed both the appreciation of natural beauty and that of the exceptional nature of Florence. In his *Historia Austrialis* (after 1452), Pius recorded the experience of Emperor Frederick III of Austria upon the Apennines:

> When Frederick had reached the peak, he first gazed at the sea below him, pointed out to his companions that some were sailing in that direction leading to Africa, or that direction to Spain, and he pointed out with his finger where Sardinia, where Corsica, where the Balearic Islands, and the

---

[147] "Let us climb the hill dedicated to the holy blood of the Blessed Miniato on the left bank of the Arno, or the two-peaked mountain of ancient Fiesole, or any of the surrounding ridges from which every cranny of our city of Florence can be fully seen. Let us climb up, pray, and look down on the city walls jutting upward to the heavens, on the splendid towers, vast churches, and the splendid palaces. …" Coluccio Salutati, *De seculo et religione* [1381] quoted in Michael Baxandall, *Giotto and the Orators: Humanist observers of painting in Italy and the discovery of pictorial composition, 1350-1450* (Oxford and New York: Oxford University Press, 1971), 67.

[148] Alternatively, the sixteenth-century writer on agriculture and villa life, Agostino Gallo characterized mountains as charming scenery, to be viewed from the grounds of a villa, from where one could appreciate the "effects of the aurora, the sun, the beauty of the sky, the order of the stars and phases of the moon, the serenity of the air, the height of the mountains and charms of the hills." See Agostino Gallo, *Le dieci giornate della vera agricoltura a piacere della* villa (1564 & 1572), 166v. Quoted and translated in Denis Cosgrove, *The Palladian Landscape: Geographical Change and Its Cultural Representations in Sixteenth-Century Italy* (University Park, Pennsylvania: Penn State University Press, 1993), 111.

> supreme island, Sicily, were located. After they had reached a hill, having climbed over the higher mountain ridges, from where one could see Florence, all Germans were filled with admiration beyond measure.[149]

Ascending mountains meant expanding a worldview, in physical and metaphorical senses.[150] The mountain peak was a place from which to encounter culture or empire from afar and where beholders could gain perspective about achievements, accumulations, or acquisitions in terms of city-building, travel and trade, or geographical terrain.

If the willingness of Petrarch, Salutati, and Pius to climb in order to reflect represented a shift from the medieval mindset, the pilgrimages of sixteenth-century naturalists represented an increasing interest within the Renaissance to use experience to aid comprehension of nature. The Petrarchan ascension of the mountain – even if it resulted in satisfaction of the physical feat and appreciation of visual imagery – was rooted in the religious and moral. For naturalists, humanists, and artists of the late fifteenth and sixteenth centuries like Francesco Calzolari (1521-1600), Ulisse Aldrovandi (1522 – 1605), and Leonardo, travel to and on mountains—even if it could be linked to spiritual transformation—was inspired by a quest to reconcile practical and academic knowledge, by a concern to correct erroneous information that had been recorded in

---

[149] Quoted in Albrecht Classen, "Mountains as a Novel Staging Ground in Late Medieval and Early Modern Literature: Felix Fabri's *Evagatorium* (1493), Aeneas Silvio Piccolomini's *Historia Austrialis* (after 1452), and Emperor Maximilian's *Tewrdank* from 1517," in *Medievalia et Humanistica No. 39: Studies in Medieval and Renaissance Culture: New Series* (Rowman & Littlefield, 2013), 9-10.
[150] Classen, 9-11.

Roman and medieval texts, and by a desire to collect information and specimens.[151] These goals were the particular motivations for mountain visits, but the broader impetus stemmed from larger shifts within intellectual communities:[152] emphasis on studying specifics of nature rather than universal Nature,[153] and emphasis on direct sensory observation, rather than reliance upon others' descriptions and/or predictions.[154] In these pursuits, mountains were platforms for learning, no longer places to fear.

---

[151] These suggestions are inspired by Findlen's chapter "Pilgrimages of Science," in *Possessing Nature*, 155-193. But also this section further develops and amplifies some of her points. Regarding the religious versus the intellectual, Findlen points out that some naturalists of the sixteenth and seventeenth centuries also used expeditions as a way to marry the humanist imperative with spiritual revelation. See pp. 162-163. Her key example is the seventeenth-century German Jesuit naturalist Athanasius Kircher (1601-1680).

[152] Aldrovandi, along with Luca Ghini (c.1490-1556) and Andrea Cesalpino (1519-1603), made significant contributions relative to these shifts: Ghini perhaps initiated the practice of creating an *herbarium*; Aldrovandi was the earliest naturalist to strive for a globally encyclopedic *herbarium*; and Cesalpino authored a seminal theoretical study on botany, *De plantis libri XVI* (1583), in which he initiated the scientific classification of flowering plants. Cesalpino dedicated his treatise to Francesco I de' Medici, whose court he served for a period as the director of the Pisa botanical garden. See Agnes Arber, *Herbals: Their Origins and Evolution, A Chapter in the History of Botany, 1470-*1670 (1912; reprint Cambridge, UK, and New York: Cambridge University Press, 1986). Ghini had previously served as the director of the garden at Pisa, and Aldrovandi also circulated at the Medici court and was a frequent correspondent of Francesco I de' Medici on botanical matters. Thus, the milieu in which the *Appennino* was conceived had already a rich tradition of botanical investigation and innovation, and of overlap between art and botany.

[153] Findlen, 165.

[154] The uses of *autopsia* (direct sensory observation) relative to *observationes* (case histories) as epistemological and pedagogical tools in sixteenth-century medicine, astronomy, philology and natural history are discussed in Gianna Pomata, "Observation Rising: Birth of an Epistemic Genre, 1500-1650," in *Histories of Scientific Observation*, ed. Lorraine Datson and Elizabeth Lunbeck (Chicago and London: University of Chicago Press, 2011), 45-80. In the Renaissance, the text *De Plinii ac plurium aliorum auctorum in medicina erroribus* [Ferrara, 1492] by Nicolao Leoniceno (1428-1524) spurred direct observation of nature in botanical studies at the same time that it enraged some readers for its critique of Pliny. On this see Alaine Touwaide, *Ancient Botany from Byzantium to*

In pedagogical terms, Renaissance naturalists' mountain explorations were early versions of curricular field trips.[155] Such field trips led to sensory understanding of natural phenomena like volcanic eruption.[156] Relative to fieldwork and its attendant

---

the West (Dumbarton Oaks, 2000). On the way that botanical illustrations derived from botanizing expeditions related to the broader trend of experience-as-investigation, see Claudia Swan, "The Uses of Realism in Early Modern Illustrated Botany," in *Visualizing Medieval Medicine and Natural History, 1200-1550*, ed. Jean Ann Givens, Karen Reeds, and Alain Touwaide (Aldershot, UK, and Burlington, VT: Ashgate, 2006), 239-249. Also see the section on "Printed Herbals and Descriptive Botany," in David Landau and Peter Parshall, *The Renaissance Print, 1470-1550* (New Haven: Yale University Press, 1994), 245-259.

[155] Findlen, 166.

[156] On the connection of *phenomenae* to sensory experience in the late sixteenth century, see Pomata, "Observation Rising." And as an example, consider Montaigne's lamentation that he missed such an opportunity to experience the volcano called Pietra Mala, near Bologna: "…having omitted, when on my way from Loian, to visit the top of a mountain about two miles out of the road, whence, in stormy and wet weather, you can in the night-time see flames issue, which rise to a great height; and I was told that when the eruption is particularly strong, there are pieces of money sometimes thrown up, with a figure on them. We ought to have gone and seen this." This description is one among many sixteenth-century accounts of the sensory experience of mountain climbing and the spectacular nature of volcanic eruption, several more of which are discussed in Chapter 3. See Montaigne, *Works,* 282. Writing in the seventeenth century, the English traveller John Evelyn articulated how physical experience, collecting, and the understanding of the material nature of mountains worked together: "Approaching the hill, as we were able with our mules, we alighted, crawling up the rest of the proclivity with great difficulty, now with our feet, now with our hands, not without many untoward slips which did much bruise us on the various coloured cinders, with which the whole mountain is covered, some like pitch, others full of perfect brimstone, others metallic, interspersed with innumerable pumices (of all which I made a collection), we at the last gained the summit of an extensive altitude. …" Evelyn wrote this during a period when better understanding of volcanic processes had been achieved, and when geological investigation was better codified than it had been in the time of Aldrovandi, Calzolari, and Imperato. His description, in layman's terms, belies these developments, certainly. Though it is a product of a slightly later and better-informed milieu relative to the core period with which this study is concerned, the passage vivifies and encapsulates how encountering the mountainside (or volcano slopes) in person, physically, aided understanding of them. See John Evelyn, *Diary and Correspondence of John Evelyn, F.R.S.*, Vol. I, ed. William Bray (London: George Bell & Sons, 1906), 159-160. Evelyn's text was composed between 1641 and 1706, and first published in 1818.

visual experience, volcanic mountains also were places to gather geological evidence and to observe geological phenomena. Volcanoes such as Vesuvius and Etna were viewed with awe from afar during eruptions; they were examined at close range, with naturalist-explorers peering into the bubbling craters; and specimens of volcanic eruption were gathered, to be included in curiosity cabinets, natural history collections, and grotto installations.[157] In this vein, caves, mines, and mountainsides served as places to document and to collect.

Encounters with mountains within the framework of documentary and collecting missions led to better understanding of all manner of organic species. For example, mountains were platforms for the study of botany: in addition to understanding the behavior of plants in natural habitats, naturalists collected samples for circulation (in *herbaria*) and for transplanting (in gardens), made illustrations to document what they had viewed, and catalogued the information they gathered. Within Western Europe, Italy was the premier place for botanical expeditions; and within Italy, Monte Baldo, situated north of Verona, was the iconic locale to visit. Experiences like the famous botanizing expedition to Monte Baldo in 1554 embodied the kind of experiential learning described above. Calzolari memorialized the trip in his treatise *Il viaggio di Monte Baldo* (1565), which describes the range of participants' expertise, from Aldrovandi (who had little experience in nature, but much academic preparation) to Luigi Anguillara (1512-1570) (who had more hands-on experience as prefect of a botanical garden, but less formal

[157] The experience of volcanic eruptions and the understanding of lava fragments are discussed in depth in Chapter 3.

academic knowledge).[158] (Thus, in this case, the concern of reconciling academic and practical knowledge was represented in the investigators' own backgrounds, not just in the turn from the library or garden to nature.) Images of plants were produced and evaluated on expeditions to mountainsides like the ones that Aldrovandi and his peers completed to Monte Baldo.[159] In relationship to botanical research, the production of these images represented an intersection of environmental awareness, scientific inquiry, and visual art. In sum, expeditions to mountains not only facilitated learning, but also produced knowledge of nature in textual and visual forms.

Beginning with Erwin Panofsky, art historians have made claims about the relationship between visual documentation, or representation, and the development of botany, as well as other scientific disciplines: Panofsky claimed that increasingly naturalistic representation was directly influential upon the codification of anatomy, botany, and paleontology, among other disciplines.[160] David Landau and Peter Parshall

---

[158] For discussion of the group dynamics and how the ascent of Monte Baldo might be compared with Petrarch's ascent of Mont Ventoux, see Findlen, *Possessing Nature,* 180-184.

[159] Illustrations of plants encountered on early botanizing expeditions were made by the naturalists themselves; later naturalists employed artists to accompany the expeditions and make illustrations in the field; some naturalists (like Aldrovandi) also commissioned artists (like Jacopo Ligozzi, 1547-1627) to make depictions of specimens after they were brought back from the field.

[160] Erwin Panofsky, "Artist, Scientist, Genius: Notes on the Renaissance-Dämmerung," in Wallace K. Ferguson, ed., *The Renaissance* (New York: Harper and Row, 1962), 121-182. The following texts also offer key discussion: William M. Ivins, Jr., *Prints and Visual Communication* [1953](reprint, Cambridge, Massachusetts: MIT Press, 1969); James Ackerman, "Early Renaissance 'Naturalism' and Scientific Illustration," in *Distance Points: Essays in Theory and Renaissance Art and Architecture* (Cambridge, Massachusetts: MIT Press, 1991), 185-207; Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven: Yale University Press, 1992).

employed and amplified this argument relative to printed botanical depictions, such as herbals that were used as field guides during the Renaissance.[161] And more recently, Therese O'Malley and Amy R.W. Myers have posited that "visual thinking was part of the construction of knowledge gained through the processes of description," and Claudia Swan has argued that "...naturalistic images of plants closed the gap between textual knowledge of nature and the experience of it."[162] These scholars suggest that more than aiding description and propelling codification – things that are essentially about documenting and organizing – representation was crucial to the processes of knowledge, to thinking about disciplines like botany.

Building upon these arguments about botanical illustration, I suggest that the epistemological function of mountains relative to natural history practices and the nascent disciplines of botany and geology is found in art of the period. The mountain was a matrix where planes of evidence, experience, time, and space intersected and, in turn, inspired investigation and interpretation of the natural world through the lens of visual art. Plant specimens abounded, rock strata were viewable, and samples of both botanical and geological natures were collected. Drawings were made on botanizing expeditions on mountains and prints were taken on the expeditions to compare with living specimens.

---

[161] David Landau and Peter Parshall, *The Renaissance Print, 1470-1550* (New Haven and London: Yale University Press, 1994), 245-253.

[162] Therese O'Malley and Amy R.W. Myers, "Introduction," in Therese O'Malley and Amy R.W. Myers, ed., *The Art of Natural History* (New Haven and London: Yale University Press, 2008); Claudia Swan, "Illustrated Natural History," in Susan Dackerman, ed., *Prints and the Pursuit of Knowledge in Early Modern Europe* (New Haven and London: Yale University Press, 2011), 186-191. On the idea that images (botanical illustrations) mediated experience and text, see Swan, "The Uses of Realism in Early Modern Illustrated Botany," 244.

Thus, not only did botanizing trips result in the production of art, but also they involved the evaluation of art's fidelity or usefulness as a guide, through the observation of nature relative to art. Representation was at the core of the cognitive process of botanical investigation, and mountainsides served as sites for this processing.

Leonardo's writing about encounters with mountains and their materials reveals close looking and deep engagement with the etiology of the earth and of mountains. As discussed in the introduction to this chapter, Leonardo addressed theories of mountain formation relative to rivers and erosion multiple times within his notes, and his paintings reflect these ideas at the same time that they accurately record geological phenomena, according to contemporary geologists. In addition, he wrote about the formation of fossils, fossil deposits in mountains, and how these events were connected to – embedded within – the formation of mountains.[163] While Leonardo wrote about a number of different kinds of fossils – fish, shells, and leaves, for example – his comments about shell fossils have inspired especially rich discussion by art historians and historians of science because of the "correctness" of his interpretation of them, relative to modern scientific knowledge and standards.[164]

---

[163] For discussion of the development of Leonardo's thinking about fossils, see Kemp, *Marvellous Works,* 311-312.

[164] Leonardo's writing on shell fossils is frequently invoked in literature on paleontology and geology, and the history of those disciplines, as well as in literature on the intersections of art and science, of course. Explications of his writing on fossils, thus, abound. The following citations are relatively recent publications in English. They are representative of the large bodies of literature, which also include many introductory texts on biology, botany, and other earth sciences, as well as numerous articles and essays: Donald R. Prothero, *Bringing Fossils to Life: An Introduction to Paleobiology* (New York and Chichester, UK: Columbia University Press, 2013); Michael J. Benton and David A.T. Harper, *Introduction to Paleobiology and the Fossil Record* (Chichester,

Probably Leonardo was writing about shell fossils found near Verona on Monte Bolca (a place famous in the sixteenth century for its fossils) where many of the naturalists discussed above also gathered specimens:

> In course of time the level of the sea became lower, and as the salt water flowed away this mud became changed into stone; and such of these shells as had lost their inhabitants became filled up in their stead with mud; and consequently during the process of change of all the surrounding mud into stone, this mud also which was within the frames of the half-opened shells, since by the opening of the shell it was joined to the rest of the mud, became also itself changed into stone; and therefore all the frames of these shells were left between two petrified substances, namely that which surrounded them and that which they enclosed.
>
> These are still to be found in many places, and almost all the petrified shellfish in the rocks of the mountains still have their natural frame round them, and especially those which were of a sufficient age to be preserved by reason of their hardness, while the younger ones which were already in great part changed into chalk were penetrated by the viscous and petrifying moisture.[165]

In this passage and in others on the nature of fossils, Leonardo makes three key observations: that shell fossils ended up in mountain landscapes over the course of deep time,[166] not because of one finite incident like the biblical deluge;[167] that the fossils

---

UK, and Hoboken, NJ: John Wiley & Sons, 2009); Martin J.S. Rudwick, *The Meaning of Fossils: Episodes in the History of Palaeontology* (Chicago and London: University of Chicago Press, 2008).

[165] MacCurdy, *The Notebooks of Leonardo da Vinci*, 311-312. (Paris Ms. F (2177), 79r)

[166] The term "deep time" was coined by writer and journalist John McPhee in *Basin and Range* (New York: Farrar, Straus and Giroux, 1981), 21. On this idea also see Stephen Jay Gould, *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time* (Cambridge: Harvard University Press, 1987). While the term did not appear until the late twentieth century, the articulation of the concept can be traced at least to the eighteenth century; see the work of Scottish geologist James Hutton, *Theory of the Earth; or an Investigation of the Laws observable in the Composition, Dissolution, and Restoration of Land upon the Globe* (1788, 1795). The observations by Leonardo (and the representations discussed in previous sections of this chapter) perhaps anticipate Hutton's understanding of geological time, though Renaissance writers and artists did not

themselves were formed during a long span of time and as a result of geological processes; that the shell and the impression it made in the mud-turned-rock layer together represent a series of positives and negatives related to the form that previously inhabited it. These observations attest to the way that encountering the mountain facilitated understandings of time and of both broad and particular geological machinations for Leonardo.[168] Leonardo understood fossils as biological and historical records, and perhaps even as part of an entropic cycle of earth-moving.

Stony materials, including fossils like those Leonardo described, along with minerals and *spugne* gathered in mountain environments, found their way into study collections, especially those found in *studioli* and *kunstkammern* (where *herbaria,* collections of preserved botanical specimens, might also be found), and into works of art in grottoes. The relationship between geological specimens and art shared some commonalities with that of botanical specimens – naturalists compared descriptions and

---

possess the same clear and concise critical idiom with which to describe the idea of deep time.

[167] The origin of fossils was debated during the sixteenth century. Some naturalists maintained that fossils were moved to mountains like Monte Bolca by the biblical deluge; while others were willing to reject this long-standing notion, they disagreed about the correct explanation. One popular explanation was that fossils spontaneously generated in the earth. Leonardo is notable for understanding that fossils were much more slowly and prehistorically moved by shifts in the earth. Aldrovandi overviewed the debate in *Historia Fossilium* (c. 1580) and *Museum Metallicum* (published posthumously in 1648). See Baucon, "Leonardo da Vinci," 361-362; Vai, "Scientific Revolution," 188-190; N. Morello, "The question on the nature of fossils in the 16th and 17th centuries," in G.B. Vai and W. Cavazza, eds., *Four Centuries of the Word Geology: Ulisse Aldrovandi 1603 in Bologna* (Bologna: Minerva Edizioni), 127-151.

[168] On the significance of Leonardo's discussion of fossils in the greater context of his writings about the earth, see Stephen Jay Gould, "The Upwardly Mobile Fossils of Leonardo's Living Earth," in *Leonardo's Mountain of Clams and the Diet of Worms: Essays on Natural History* (New York: Harmony Books, 1998), 17-44.

representations of fossils ("figured stones," in the Renaissance jargon), for example, with specimens kept in their cabinets.[169] And, like with botanical specimens, collecting, cataloguing, and visually analyzing helped resolve scientific questions about the minerals, fossils, and other stones – the very material natures of mountains.[170]

At the same time, collectors and artists prized the delightful (but also uncanny?) ability of such natural curiosities to serve representational purposes: in addition to the ability of the artist to represent nature faithfully, the ability of nature to make art was probed. Some Renaissance collectors viewed the shell fossils as "jokes of nature," representations made by nature, as one sixteenth-century observer put it, "as a likeness in stone of living things."[171] Stony materials containing such chance images were prized as curiosities, collected, and displayed in similar contexts as the botanical specimens and

---

[169] At least by 1565 this practice was conceptualized by the German mineralogist Conrad Gesner, who originated in textual format the "direct comparison of figures and specimens," when he compared descriptions and depictions of a clam shell fossil by the German natural historian Christopher Encelius and the French naturalist Guillaume Rondelet. On the significance of this for scientific inquiry, see Stephen Jay Gould, "Both Neonate and Elder: The First Fossil of 1557," *Paleobiology* 28, no. 1 (Winter, 2002): 1-8. Imperato and Aldrovandi used collections as vehicles / places to test knowledge in this manner, also. See Findlen, *Possessing Nature*, 232-235.

[170] In the late Renaissance, following the late-fifteenth and early-sixteenth century pictorial observations discussed in the introduction to this chapter, naturalists produced methodical textual descriptions of geological specimens and phenomena, and these descriptions often conformed to structures found in botanical catalogues. For example, in writing about geological specimens, Aldrovandi used categories similar to those in his own botanical writings when he described minerals in the text *Musaeum Metallicum*. On Aldrovandi and other Renaissance naturalists and the relationships between their writing on botany and writing on geological matter, see W.R. Albury and D.R. Oldroyd, "From Renaissance Mineral Studies to Historical Geology, in the Light of Michel Foucault's 'The Order of Things,'" *The British Journal for the History of Science* 10, no. 3 (Nov. 1977): 187-215.

[171] Paula Findlen, "Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe," *Renaissance Quarterly* 43, no. 2 (Summer 1990): 292-331.

other geological material discussed above. This understanding of fossils casts nature as artist, material, and subject of art.

Alternatively, fossil imprints suggested to artists that nature could be simultaneously the subject and the matrix for art: the image of the imprint of nature was still the subject, as with "jokes of nature," but the material *thing* served in the same way that a woodblock or a metal plate could. Thus, beginning in the fourteenth century, fossil imprints inspired a method for documenting plant specimens: nature printing.[172] In addition to botanical illustration, nature printing was a technique used to capture the likenesses of plants. In this technique, the inked plant directly replicated itself on a sheet of paper, representing exactly its own linear characteristics, such as veins. Perhaps the most famous example of the technique is the *Salvia* (sage) print within Leonardo's notes in the Codex Atlanticus (fig. 2.10).[173] As Reeds suggested, fossil imprints (or other images made by nature, like animal tracks or leaf impressions on stones) might have inspired the first nature prints because of a perceived authenticity or fidelity to the actual natural thing.[174] Rather than accident, chance, or spontaneity, fidelity to nature and the

---

[172] A nature print is made by inking the plant specimen and pressing it onto a sheet of paper. For a brief overview of the technique and in-depth discussion of Leonardo's *salvia* image, see Karen M. Reeds, "Leonardo da Vinci and Botanical Illustration: Nature Prints, Drawings, and Woodcuts ca. 1500," in *Visualizing Medieval Medicine and Natural History, 1200-1550*, ed. Jean Ann Givens, Karen Reeds, and Alain Touwaide (Aldershot, England, and Burlington, Vermont: Ashgate, 2006), 208.

[173] The authorship of the print is debated. For a summary of the discussion, see Reeds, "Botanical Illustration."

[174] Reeds, "Botanical Illustration," 205-208. Reeds argues that for Leonardo, nature printing fell short: in the example of the sage leaf, the impression does not accurately reflect the way that light behaves within this kind of plant material, and Leonardo's notes accompanying the image underscore this. He explains that the image represents the negative of the leaf, and he provides instructions for printing a positive image.

ability to replicate the image concerned Leonardo and others who used this method inspired by the fossil record. What could be truer to life than an image of nature, made by nature? In this endeavor for faithful representation, the botanical or animal specimen figured itself.

Mountains, therefore, not only facilitated understanding of botany and geology because they provided a wealth of specimens and sites for field observations, but also because they provided the matrices for producing and processing knowledge. In part, the production of spiritual knowledge (for Petrarch), scientific knowledge (for Leonardo, Aldrovandi and other naturalists), and a hybrid geo-spatial knowledge (for Pius II and his companions) was possible because of the shift in appearance and perception of mountain landscapes and willingness on the part of humans to engage them closely. Moreover, the interactions between Renaissance artists, naturalists, and other beholders with mountains complicated the conventional understanding of mountains in the nature-culture ontological framework. Traditionally mountains were understood as part of "wild" nature, which, as an intellectual and cultural construct could serve as a thing against which to define culture. But as the discussion in this section demonstrates, the views, sites, experiences, and materials of mountains for many Renaissance beholders became entangled with culture. This entanglement then emerged visually in art making and collecting contexts, redoubling the mountain's epistemological significance.

Mapping and Mining

Cartography of the sixteenth century also reflected the shifting attitude about mountain and cave landscapes and interest in visualizing knowledge about them. Indeed,

the broader culture of mapmaking and map collecting reflected the shift. Between 1400 and 1600, the number of maps in circulation increased exponentially, suggesting a widespread and growing interest in knowledge about the mappable world and attesting to the greater accessibility and affordability of these maps due to printmaking technology.[175] In 1570, Abraham Ortelius produced the first "modern" atlas, *Theatrum orbis terrarum*, which was considered "the most prized geographical possession of the sixteenth century."[176] Maps were collected for consultation, but also for display or safe-keeping in cabinets or *studioli*; in addition, the garden theorist Agostino del Riccio suggested that formal garden beds be shaped into "beautiful patterns in the forms, variously, of pyramids, maps, dragons, stars, and other *fantasie*," which suggests an affinity between the garden and cabinet, as John Dixon Hunt pointed out.[177] Large-scale maps, formed from hedges, might have allowed corporeal apprehension of topographical and geographical knowledge, mediated by art and complementary to the experience naturalist-explorers had on mountainsides. This fanciful idea suggests a sculptural analog to large-scale painted maps found at palaces throughout Italy in the sixteenth century.

---

[175] See David Woodward, *Maps as Prints in the Italian Renaissance: Makers, Distributors & Consumers* (British Library, 1996), 2, 38-39. Also see Whyte, *Landscape and History*, 50-55.

[176] Jerry Brotton, *Trading Territories: Mapping the Early Modern World* (London: Reaktion Books, 1997), 177. Ortelius' atlas was not static, but rather was frequently updated – even within its first year of production, four editions had been made, and by 1612, forty-two editions in six languages (plus Latin) existed. It was a dynamic project, and its characteristics outlined above attest to the culture of curiosity and attendant interest in maps. Also see Francesca Fiorani, *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy* (New Haven and London: Yale University Press, 2005).

[177] See John Dixon Hunt, *Garden and Grove: The Italian Renaissance Garden in the English Imagination, 1600-1750* (Philadelphia: University of Pennsylvania Press, 1996), 75.

For example, Pope Gregory XIII (1502 – 1585) commissioned the Gallery of Maps at the Vatican; a room of maps of the world was painted at the Villa Farnese at Caprarola; and a cycle of maps of the world was painted on the doors of Cosimo I de' Medici's (1519 – 1574) Guardaroba Nuova (his private study) at the Palazzo Vecchio. As Francesca Fiorani has argued, these large-scale painted maps demanded corporeal engagement in the way they are installed in their architectural surroundings: for example, the Vatican maps ask beholders to put themselves within a microcosm of the world at the same time that they look down upon or across the depicted terrain and enact a walk through it.[178] The maps, which represent the regions of early modern Italy (fig. 2.11), were "arranged as they would appear in an imaginary walk along the Apennine spine of the Italian peninsula."[179] Just like actual mountains served as places from which to view for the writers discussed earlier in this chapter – Petrarch, Salutati, Pius II, and Montaigne – imagined mountains governed the perspective of beholders as they encountered the representation of Italy in north-south geographical sequence. Walking through and around these artworks, beholders gained understanding of the mapped relationships between represented geographical elements, inhabiting the space of mountain representations. These beholders were *in* the represented/mapped landscapes.

In sum, by the late sixteenth century, maps were ubiquitous. They appeared in collections of curiosities and as part of courtly decoration; they were made at a range of scales, from small to colossal, and in multiple media. The commissioning, production, collecting, and engagement with maps, broadly sketched here, provides a framework for

[178] Fiorani, 10.
[179] Fiorani, 2.

understanding the significance of representations of mountains and how these representations signal understandings of mines and caves, the insides of mountains.

On drawn and printed maps, shifting approaches to mountain landscapes can be traced by observing the simple representation of mountains in earlier examples and the increasingly complex representation of them in later examples. For instance, on a mid-fifteenth century *mappa mundi* by Giovanni Leardo (dates unknown), mountains are indicated by nearly identical, simple outlines, which are curvilinear, and these shapes are filled in with schematic representations of trees and perhaps other natural materials (fig. 2.12). This kind of treatment contrasts with that on the late-sixteenth century map of the commune of Florence made by the engraver Giovanni Antonio Magini (1555-1617), where hills and mountains are represented with similar organic, naturalistic shapes, shaded with regular linear pattern (fig. 2.13). While the particular profiles and relative heights of specific mountains are not detailed, Magini varies the amplitude of the mounds and the weight of the line in shaded areas to suggest steeper ranges or rolling hills. Magini's representation of mountains is more complex than Leardo's, suggesting a more nuanced understanding of them, or that it was more important to convey more nuanced information about them. Leonardo's drawn maps of Tuscany and central Italy reveal a similar interest: he used ink washes to create gradations in tone that suggest the topographical character of mountains (fig. 2.14).[180] Whether a flat outline or more dimensional and shaded volume, whether suggested through engraved lines or ink wash,

[180] Martin Kemp and Daniel Arasse have noted the modernity and inventiveness of Leonardo's approach to mapping and depicting mountains. See Kemp, *Leonardo da Vinci*, 218-224; and, Daniel Arasse, *Leonardo da Vinci: The Rhythm of the World* (New York: Konecky & Konecky, 1998), 210-217.

these linear descriptions are suggestive of the way that mountains look – are shaped – in the real world. That is, in each of these examples, the signal for "mountain" is iconic, as opposed to indexical or symbolic.[181]

Mountains carried meaning in multiple ways on Renaissance maps. For one, they often aligned with geopolitical boundaries in geographical representations. In addition, mountains often signaled "wealth" on early modern maps, since valuable resources could be found in mines or caves within mountains.[182] For example, multiple maps in Cosimo's Guardaroba Nuova were accompanied by text cataloguing the gemstones that could be harvested in particular mountain ranges (rubies and diamonds in the mountains of India; gold, silver, and other metals in the mines of Arabia).[183] Relative to sculptural materials, particular colors and types of marbles were associated with particular mountains, as expressed, for example, in Michelangelo's correspondence and contracts concerning quarries at Carrara, Pietrasanta, and Seravezza.[184] Later topographical maps, like Carlo Mazzoni's 1764 map of the area around Pietrasanta, even included numeric labeling and a textual key indicating what color of marble could be found at specific mountain sites like Mount Altissimo and Cappella.[185] Thus, on some early modern maps, representations of mountains acted not just as descriptors of geographic boundaries or topographic relief, but also stood as symbols of valuable materials and indices of mining

---

[181] Fiorani, 7.
[182] Anthony Miller, "Vindicating Vulcan: Renaissance Manuals of Mining and Metallurgy," in *What Nature Does Not Teach: Didactic Literature in the Medieval and Early Modern Periods*, ed. Juanita Feros Ruys (Turnhout: Brepols, 2008), 464.
[183] Fiorani, 68-70.
[184] See note 133.
[185] Ciulich, 176.

sites. In serving descriptive and symbolic functions, these maps required bodily engagement, whether with tracing by fingers or with ambulation around rooms and down corridors, or with opening and closing of cabinets and drawers decorated by the maps. Representations of mountains, especially, functioned to encourage this kind of engagement, and in so doing they facilitated understanding of the topographical qualities, geographical contexts, spatial relationships, and material values of mountains.

During the Renaissance, new methods for mining precious metals were developed, and as a result many medieval mining sites were revived.[186] The so-called "mining renaissance" was centered in central Europe (especially in the area of modern Germany), but Italian metallurgists developed new expertise and theories, too. Innovations in technique appeared beginning in the mid-fifteenth century, and a number of treatises on mining were published in the first half of the sixteenth century.[187] According to the Italian metallurgist Vannoccio Biringuccio (1480 – c. 1539), it was man's duty to extract from the earth the kinds of precious materials described above, which were indicated on maps by representations of mountains. In his influential treatise on metalworking, *De la pirotechnia* (1540), Biringuccio argued the imperative of

---

[186] Martin Lynch, *Mining in World History* (London: Reaktion Books, 2002), 19-25. For example, the technique of liquation allowed silver to be extracted from copper, and was first documented in the mid-fifteenth century in Nuremburg. On the role of mining relative to the larger economic situation in medieval and Renaissance Europe, see Harry A. Miskimin, *The Economy of Later Renaissance Europe, 1460-1600* (Cambridge, UK: Cambridge University Press, 1977), 28-32.

[187] See notes 126 and 127, above.

mining.[188] He was pointedly opposed to the kind of anguish that Pliny had about the rape of nature.[189] In the *Natural History*, Pliny wrote:

> For in some places the earth is dug into for riches, when life demands gold, silver, silver-gold and copper, and in other places for luxury, when gems and colours for tinting walls and beams are demanded, and in other places for rash valour, when the demand is for iron, which amid warfare and slaughter is even more prized than gold. We trace out all the fibres of the earth, and live above the hollows we have made in her, marveling that occasionally she gapes open or begins to tremble – as if forsooth it were not possible that this may be an expression of the indignation of our holy parent! We penetrate her inner parts and seek for riches in the abode of the spirits of the departed, as though the part where we tread upon her were not sufficiently bounteous and fertile.[190]

Instead, Biringuccio rationalized mining. For example, he argued that nature made gold appealing to man, thus it cannot be "sinful" to mine it.[191] Another influential writer on mining, the German scholar Georgius Agricola (Georg Bauer) (1494-1555) dedicated most of the first book of *De re metallica* (1556) to defending the practice of mining by refuting long-standing arguments against it, pointedly engaging Pliny's argument in his

---

[188] This discussion is indebted to the analysis of Anthony Miller in "Vindicating Vulcan."
[189] Ovid and Lucretius, too, among a number of other ancient writers, decried mining. And Pliny also warned against the quarrying of stone from mountains: "We quarry these mountains and haul them away for a mere whim; and yet there was a time when it seemed remarkable even to have succeeded in crossing them. Our forefathers considered the scaling of the Alps by Hannibal and later by Cimbri to be almost unnatural. Now these selfsame Alps are quarried into marble of a thousand varieties. Headlands are laid open to the sea, and nature is flattened. We remove the barriers created to serve as the boundaries of nations, and ships are built specially for marble. And so, over the waves of the sea, Nature's wildest element, mountain ranges are transported to and fro . . . When we think of these things we feel ourselves blushing prodigiously with shame even for the men of former times." See Pliny the Elder, *Natural History,* Vol. X, Books XXXVI-XXXVII, trans. D. E. Eichholz (Cambridge, MA and London: Harvard University Press, 1962), 3-5. (Book XXXVI, I.1-I.4).
[190] Pliny the Elder, *Natural History,* Vol. IX, Books 33-35, trans. H. Rackham (Cambridge, MA and London: Harvard University Press, 1962), 2-5. (Book XXXIII, I.1).
[191] Miller, "Vindicating Vulcan," 453.

own. This kind of reasoning implies that sixteenth-century writers and their readers were conscious of the potential damage to nature, but also it reflects that Biringuccio and Agricola eschewed the consequences, probably on behalf of industrial-economic interests.

The anti-mining rhetoric of ancient writers like Pliny continued to be influential during the early modern period, and also Renaissance writers and lawmakers expressed concern about it.[192] In *De re metallica*, Agricola summarized their complaints about mining:

> But besides this, the strongest argument of the detractors is that the fields are devastated by mining operations, for which reason formerly Italians were warned by law that no one should dig the earth for metals and so injure their very fertile fields, their vineyards, and their olive groves. Also they argue that the woods and groves are cut down, for there is need of an endless amount of wood for timbers, machines, and the smelting of metals. And when the woods and groves are felled, then are exterminated the beasts and birds, very many of which furnish a pleasant and agreeable food for man. Further, when the ores are washed, the water which has been used poisons the brooks and streams, and either destroys the fish or drives them away. Therefore the inhabitants of these regions, on account of the devastation of their fields, woods, groves, brooks, and rivers, find great difficulty in procuring the necessaries of life, and by reason of the destruction of the timber they are forced to greater expense in erecting buildings. Thus it is said, it is clear to all that there is greater detriment from mining than the value of the metals which the mining produces.[193]

Agricola answered this argument by claiming that the wealth accrued from mining was in fact worth the environmental consequences, and that this wealth could be used to replenish trees, fowl, and other animals. He also asserted that metals, available because

---

[192] For an overview, see Merchant, *Death of Nature*, 29-41.

[193] Georgius Agricola, *De re metallica* [1556], trans. Herbert Clark Hoover and Lou Henry Hoover (New York: Dover, 1950) [reprint 2013], 8. (Originally published in 1912 by *The Mining Magazine*, London.)

of mining, are useful for the arts, and thus mining is justified: "Again, the metals are of use to painters, because they yield certain pigments which, when united with the painter's slip, are injured less than others by moisture from without."[194] In essence, the conservation of paintings trumps the conservation of the earth for Agricola. Agricola continues:

> Further, mining is useful to the architects, for thus is found marble, which is suitable not only for strengthening large buildings, but also for decoration. … In truth, even the works of art, elegant, embellished, elaborate, useful, are fashioned in various shapes by the artist from the metals gold, silver, brass, lead, and iron. How few artists could make anything that is beautiful and perfect without using metals?[195]

Deforestation, soil and water pollution, and the death of faunae could be justified, according to Agricola, in part because of artistic production – particularly sculpture – that was possible because of mined materials. His treatise sets ecological awareness and human creativity in a complicated relationship relative to art theory of the period. Art was understood as the product of a generative process, even a process that paralleled (and that might produce work that rivaled) that of nature. But the creation of art, as Agricola admitted, depended upon destruction of nature.

The Medici court, among other royal, banking, and municipal interests, stood to benefit from the arguments of Biringuccio and Agricola, both in terms of wealth accrued from mines and from the production of works of art made with metals and marble.[196]

---

[194] Agricola, 19.
[195] Agricola, 19-20.
[196] Agricola did in fact benefit financially. He personally invested in mining, and was one of the wealthiest persons in Chemnitz, where he lived, in 1542. See Pamela O. Long, "The Openness of Knowledge: An Ideal and Its Context in 16th-Century Writings on Mining and Metallurgy," *Technology and Culture* 32, no. 2.1 (April, 1991): 336.

Cosimo promoted mining as a centerpiece of his economic policy.[197] He encouraged the development of mines throughout his territory; he brought mining experts from Germany to Florence; and he corresponded with his agent in Venice about progress in his Tuscan mines and to make inquiries about mining techniques.[198] Cosimo already had placed Francesco in charge of some mining operations, and during his own reign as grand duke Francesco continued to promote mining.[199] He, too, exchanged reports about mining in Medici territories and sought advice from central European experts; for instance, in a letter of March 15, 1582, Francesco thanked his correspondent, Wolfsherr zum

---

[197] Richard A. Goldthwaite, "Artisans and the Economy in Sixteenth-Century Florence," in *The Medici, Michelangelo, & the Art of Late Renaissance Florence*, ed. Cristina Acidini Luchinat (New Haven and London: Yale University Press, 2002), 86. Though, Goldthwaite writes, the mining initiatives were not especially fruitful in economic terms, even if they were highly promoted by Cosimo (and later Francesco).

[198] For example, in a letter of December 3, 1556, Cosimo wrote to his agent Piero Gelido: "Si è ricevuto le dua vostre nel una delle quali era la nota di quella pietra la qual se non ci venissi persona a domandar a posta li cavatori di essa li quali sono todeschi una parte e l'altra italiani, ma contadini di montagnie, saria impossible a noi il trovarla perché bisogneria persona espressa … Habbiamo ben scoperto una buona quantità di cave di nuovo a Campiglia le quali sono richissime di piombo e tengono ancor d'argento e in [quale medesimo] luogo vie [vi è] una infinita di cave vechie d'argento e di rame, ma come diciamo bisognieria ci fussi persona propria sul luogo. Quanto alla marcassati noi non intendiamo quello, voglia dir marcassita aurea perchè se vuol dir marcassita di cave d'oro di quale non ne habbiamo, ma se vuol di di [sic] color d'oro non cene manca … Habbiamo ancora della vena e pezzuoli d'oro trovati in un fiume del nostro stato, ma non habbiamo mai potuto trovar donde sia la vena, el fiume e piccolo e ne mena assai, nel qual fiume si trova il cinabrio natural e trasparente…" BIA: The Medici Archive Project, Doc. ID# 9471 (Archivio di Stato di Firenze, Mediceo del Principato 521a, folio 314). Also see this letter, from Cosimo to his agent Piero Gelido: BIA: The Medici Archive Project, Doc. ID# 9474 (Archivio di Stato di Firenze, Mediceo del Principato 639, folio 318).

[199] Francesco is known for his interests in mining and metallurgy. He also sent advisors, such as the director of his botanical garden, into the mountains to search for gemstones such as jasper and rock crystal. Lucia Tongiorgi Tomasi and Gretchen A. Hirschauer, eds., *The Flowering of Florence: Botanical Art for the Medici* (Washington, D.C.: National Gallery of Art, 2002), 59.

Rosembergh, for information about a "more efficient" mining process.[200] Other documents suggest that Francesco and his agents actively sought to protect Tuscan mining rights from foreign consultants.[201] The decorative program in his *studiolo* in the Palazzo Vecchio and the mineralogical contents inside of its cabinets visualize Francesco's interest in mining, as did the frescoes of miners that originally covered the interior grottoes of the *Appennino*.[202] The frescoes, in this context, suggested that the *Appennino* itself could be understood as symbolic of the kind of wealth contained in mountains for Francesco, its patron. In a similar way that representations of mountains could signal wealth on maps, this monumental and completely dimensional mountain could operate within the landscape of Pratolino.

Mountains also could be found as markers (along with rivers, streams, castles, forests, and zoological and botanical images) in chorographical projects, depending upon the location and scope of the property to be represented. That is, in chorography, they helped explain the character of the mapped place, distinct from objective data that might describe it.[203] Chorographical projects of the period also attest to the increasing curiosity

---

[200] BIA: The Medici Archive Project, Doc. ID# 14080 (Archivio di Stato di Firenze, Mediceo del Principato 257, folio 121).
[201] BIA: The Medici Archive Project, Doc. ID# 14084 (Archivio di Stato di Firenze, Mediceo del Principato 257, folio 122).
[202] In the early seventeenth century, the paintings of miners in the grottoes were covered over with shells and nautical fossils. See Zangheri, "Trasformazioni dell'Appennino," 22. Also see Ciuffoletti, *Storia, Arte, Natura*, 50-51. Also, these paintings supposedly were inspired by Agricola's treatise. See Heikamp, "Les merveilles," 23. See discussion of the images and contents in the *studiolo* in Chapter 3, 139-140.
[203] For discussion of the distinctions between geography and chorography in the Renaissance, see Fiorani, 98-102.

about nature in early modern Europe.[204] Like the perspectival views of landscapes that were common in pictorial interpretations (discussed in Chapter Three), the chorographical uses of landscape elements, like mountains, helped beholders become attentive to experience. But rather than theorizing the experience of seeing, the latter could serve the experiences of space and motion. Thus, the chorographical context, like that of the paintings, travelogues, and geographical projects outlined already in this chapter, illustrates engagement with mountain imagery and one way that it could be crucial for guiding embodied experience of the landscape.[205]

Not only on geographical and chorographical maps, but also in Renaissance depictions of landscape, mountains often functioned as organizational or ordering devices. Easily located within the landscape, they helped orient the relationships between other natural features, like rivers, and between man-made roads and towns, and the visitor or viewer. In this capacity, depictions of mountains were usually generalized, not individualized. For example, the large-scale maps that Critoforo Sorte created of the Venetian territories depicted mountains as synoptic guideposts, not as particularized features within the landscape.[206]

Likewise, the *Appennino* generally stands for the Apennine mountain range, rather than representing any one specific peak. As a colossal *thing* in the Pratolino landscape, it also might be understood similarly as a signpost for the early modern visitor

---

[204] Landau and Parshall, *The Renaissance Print*, 244.
[205] See Introduction, 3, note 3.
[206] See Juergen Schultz, "New Maps and Landscape Drawings by Cristoforo Sorte," *Mitteilungen des Kunsthistorischen Institutes in Florenz,*" 20 (1976): 119. Sorte's mode of depicting mountains on these maps was likely derived from Raphael's.

to Pratolino. We need only to read Francesco de' Vieri's 1587 description of Pratolino, in which he explains in numbered order how to experience the park and that the *Appennino* falls fourth on the itinerary, or to consider Bernardo Sgrilli's 1742 map (fig. 1.2) that also numbers the park's attractions and that suggests it is almost centered on the *Appennino*.[207] (The original Medici villa, no longer extant, was located slightly downhill from the Prato dell' Appennino, but directly across from it.) Thus, while it has been interpreted as an expression of man controlling nature,[208] the monument might also fruitfully be understood as an aide for centering or guiding the beholder's experience at Pratolino.

The *Appennino* serves as a hybrid and dimensional cartographic tool, with affinity to multiple kinds of maps, relative to the Pratolino landscape. In addition to serving as an ordering device or reference point for readers of Vieri's description or Sgrilli's depiction, the *Appennino* allowed beholders who engaged closely with the exterior of the sculpture to shift their perspective relative to the grounds of the park, and perhaps to gain more or different ocular knowledge. When Francesco I de' Medici entertained guests in the upper grotto, they could look out of openings and survey the grounds below (3.15), being both in the represented (sculpted) landscape and above the physical landscape, similar to the beholders of the Vatican map gallery. In both cases, beholders could imagine that they were surveying realms of varying scales – a Medici estate, a province or region, or the entirety of the Italian peninsula. But significantly, those experiencing the views from the

---

[207] Francesco de' Vieri, *Delle marauigliose opere di Pratolino* (Florence, 1586); *The Itinerary of Fynes Moryson* [1617], (Glasgow: Glasgow University Press, 1907); Bernardo Sgrilli, *Descrizione della regia villa, fontane, e fabbriche de Pratolino* (Florence, 1742); and Giuseppe Zocchi, *Vedute delle ville e d'altri luoghi della Toscana* (Florence, 1744).

[208] See discussion in Chapter 1.

Appennino did not depend only on representation and imagination. Living nature was the object of contemplation, while it also comprised the structure from which it was viewed; it was the matrix of experience, knowledge, and art. The outcropping of living rock (built up with bricks and plaster), lava and stalactites, and plant growth mediated the embodied beholder's apprehension of the form of the mountain (and caves and mines) relative to the landscape of Pratolino. Like the specimens kept behind the map-decorated cabinets in Cosimo's Guardaroba Nuova, the exterior could be seen as indexical of the place(s) represented by the monument; at the same time, the geological and botanical material on the *Appennino* symbolize the culture of curiosity, quest for knowledge, and intersections of art and science relative to the milieus of botany and geology, both at the Medici court and in sixteenth-century Italy at large. The monument could be seen as iconic of its own locale (the Apennines). And the interior could be seen as symbolic of wealth, with its pictorial references to mines and its collection of exotic and fascinating objects, some of which were found in caves. In multiple ways, then, the *Appennino* mapped not only place(s), but also the understanding of nature, as well as the acquisition of materials and knowledge about them. In these cartographic operations, it exemplified the importance of corporeal experience in epistemological inquiry.

Caves in Literature, Legend, and Myth

Caves, the interiors of mountains, served both practical and metaphorical ends, as described in early modern literature. As places of shelter, they evoked for Renaissance theorists and artists functional structures as well as poetic spaces. Caves represented the

primordial origins of domestic architecture in Renaissance art theory. In his treatise on architecture, Filarete explained how man first used the cave for shelter: "…we can believe that [Adam] made some sort of shelter of branches, or a hut, or perhaps some cave where he could flee when he needed. … It is true that Vitruvius says that the first to invent habitations were those first men who lived in the forests and made themselves huts and grottoes as best they could."[209] Caves decorated by ancient Romans were models for garden grotto decoration for Alberti, and in this context represented spaces of visual delight.[210] In poetry that invoked ancient mythological references and pastoral tropes, caves provided shelter, serving as resting places for the gods. For example, in Giovanni Boccaccio's (1313-1375) *Ninfale Fiesolano*, the cave is a place for repose; it silences the emotional concerns or distress of the outside world.[211] In Jacopo Sannazaro's *Arcadia*, a cave serves as shelter, a site of sorrow for a river god and melancholic nymphs.[212] In the

---

[209] Filarete, *Trattato di architettura* [1461-64], trans. John R. Spenser (New Haven: Yale University Press, 1965), 10.

[210] Alberti, *On the Art of Building in Ten Books*, 299. "To their grottoes and caves the ancients used to apply a deliberately roughened revetment of tiny pumice chips, or Travertine foam, which Ovid called 'living pumice.' We have also seen green ocher used to imitate the bearded moss of a grotto. Something we once saw in a grotto gave great delight: where a spring gushed out, the surface had been made up of various seashells and oysters, some inverted, others open, charmingly arranged according to their different colors."

[211] Giovanni Boccaccio, *Ninfale Fiesolano*, trans. Daniel J. Donno (New York: Columbia University Press, 1960). See eclogue 3.

[212] Jacopo Sannazaro, *Arcadia & Piscatorial Eclogues*, trans. Ralph Nash (Detroit: Wayne State University Press, 1966), 139. "So taking my way along a hidden channel I wandered hither and thither until, arrived at last at a cave hollowed out in the stern rock-face, I found the venerable God sitting on the ground, with his left side leaning on a stone urn that was pouring forth water: which (already in great plenty enough) he made the more with that which he was continually adding as it rained down from his face, his hair, and the bristles of his dripping beard. His garments seemed to be of a greenish ooze…and round about him were his Nymphs all weeping in an unaccustomed murmur,

Hypnerotomacchia Poliphili, a cave is a place for protecting and nurturing.[213] In Pietro Bembo's "Sarca," a cave in Monte Baldo hosts a wedding feast: it is a place for celebration and revelry.[214] In Torquato Tasso's *Gerusalemme Liberata*, among other functions, the cave serves as a place to hide and is likened to a vault.[215] In ancient texts translated and circulated during the Renaissance – texts upon which Renaissance neo-Platonism and art theories were based – caves serve protective and nurturing functions. They are described as places to sleep,[216] as residences,[217] as sites for meditation, and as places for the acquisition of knowledge.[218] In ancient myth, caves harbor pastoral and pugilistic figures and can be connected to revelry, amorousness, and artistic creativity: Venus Anadyomene was perhaps born in a cave; Pan uses the cave as a resting place, while Vulcan houses his workshop in one. In the Renaissance, first-hand accounts

---

and cast on the ground without order or any dignity they never lifted up their sorrowful faces." Lazzaro and other scholars have noted the incredible similarity between this description of a river god and the appearance of the *Appennino*. See Chapter 1, page 48.

[213] Francesco Colonna, *Hypnerotomachia Poliphili*, trans. Joscelyn Godwin (New York: Thames and Hudson, 1999), 171. Describing the reliefs carved from precious stones, the narrator explains the function of a cave thus: "On the other side I admired Jupitor the succourer handing the same infant to a celestial man with winged heels and a caduceus; and it was then entrusted for nursing to so many nymphs in a cave."

[214] Referenced in Jacob Burckhardt, *The Civilization of the Renaissance in Italy*, trans. S.G.C. Middlemore (London and New York: Penguin, 1990), 169.

[215] Torquato Tasso, *Gerusalemme Liberata* [1581, Parma], trans. Edward Fairfax (first published London, 1600; published online by the Electronic Classics Series, Pennsylvania State University, 2000-2013). See Fourth Book, LXXIII; Fourteenth Book, XXXVI and XLVIII.

[216] Virgil, "Eclogue V," in *Eclogues, Georgics, Aeneid*, trans. H.R. Fairclough, Loeb Classical Library Volumes 63 & 64 (Cambridge, MA: Harvard University Press, 1916), 52-60.

[217] Ovid, *Metamorphoses*, trans. A.D. Melville (Oxford: Oxford University Press, 1998), 188-190. (Book 8.547.)

[218] Plato, Book VII in *The Republic of Plato*, trans. Allan Bloom (New York: Basic Books, 1967), 193-220. (The Allegory of the Cave.)

likewise attested to the dualistic character of the cave. While multiple of the functions articulated above suggest positive associations – restorative, recreative, safe – the English diarist Fynes Morrison (1566-1630), in recounting his travels through Italy during the 1590s, explains the ancient understanding of a mountain passage near Naples, *la grotta di Napoli*, as a cave that is like a prison.[219] The cave had ominous meaning in a number of episodes in Virgil's *Aeneid*, also. It is the place where Hercules kills Cacus in "vaporous fogbanks of blackness"; it is the "Cyclops' monstrous cave," the home of Polyphemus; "shaped by an outcrop of rock …opening a monstrous, gaping mouth," it signals the underworld.[220]

In this vein, in the Platonic tradition, caves could be understood to represent darkness and ignorance, in contrast to light and knowledge of the real, outside world.[221] In the allegory of the cave, in Book VII of the *Republic*, Plato explains how representations (shadows) and the sensory judgment of them entrap men in darkness:

---

[219] Fynes Morrison, *Itinerary vvritten by Fynes Moryson, gent: first in the Latin tongue, and then translated by him into English: containing his ten yeeres trauell through the tvvelue dominions of Germany, Bohmerland, Sweitzerland, Netherland, Denmarke, Poland, Italy, Turky, France, England, Scotland, and Ireland*. Part I, Ch. 2 (London, 1617), 113. "I say, their Progenitors with wonderful Art and huge expence [sic], digged a passage under this mountaine, and so made a plaine way to Pozzoli and those parts. This way Strabo called "*La grotto di Napoli*," and serveth this famous city in nead [sic] of a gate. …and in the time of Seneca this passage was so darke, as he compares it to a prison…"

[220] Virgil, *Aeneid*, trans. Frederick Ahl (Oxford and New York: Oxford University Press, 2007). Hercules and Cacus: 8.255-265; Polyphemus: 3. 615-620; underworld: 6.237-240.

[221] See Herman Sinaiko, "Knowing, Being, and the Community: The Divided Line and the Cave in *Republic*, Books VI and VII," in *Reclaiming the Canon: Essays on Philosophy, Poetry, and History* (New Haven: Yale University Press, 1998), 277-299, and *Love, Knowledge, and Discourse in Plato: Dialogue and Dialectic in Phaedrus, Republic, Parmenides* (Chicago and London: The University of Chicago Press: 1965), 167-184.

> Socrates: See human beings as though they were in an underground cave-like dwelling with its entrance, a long one, open to the light across the whole width of the cave. They are in it from childhood with their legs and necks in bonds so that they are fixed, seeing only in front of them, unable because of the bond to turn their heads all the way around. Their light is from a fire burning far above and behind them. Between the fire and the prisoners there is a road above, along which see a wall, built like the partitions puppet-handlers set in front of the human beings and over which they show the puppets.
>
> Socrates: …Then also see along this wall human beings carrying all sorts of artifacts, which project above the wall, and statues of men and other animals wrought from stone, wood, and every kind of material; as is to be expected, some of the carriers utter sounds while others are silent.
>
> Socrates: …do you suppose such men would have seen anything of themselves and one another than the shadows cast by the fire on the side of the cave facing them?
>
> Glaucon: How could they, … if they had been compelled to keep their heads motionless throughout life?[222]

Experience of the real world liberates and illuminates humans, in contrast.

Renaissance humanists translated, interpreted, and revived this text: for example, Pico della Mirandola (1463-1494) echoed the metaphor in his *Oration on the Dignity of Man* (1486),[223] and Marsilio Ficino (1433-1499) translated the *Republic* into Latin for Cosimo de' Medici between 1463 and 1484.[224] Ficino interpreted Plato's cave and the human's emergence from it thus:

---

[222] *The Republic of Plato*, second edition, trans. Alan Bloom (New York: Basic Books, 1991), 193.

[223] Pico della Mirandola, *Oration on the Dignity of Man: A New Translation and Commentary,* ed. Francesco Borghesi, Michael Papio, and Massimo Riva (Cambridge, UK, and New York: Cambridge University Press, 2012), 113-115. See also the "Overview of the Text," 66-70.

[224] For a summary of Ficino's patronage by Cosimo, work on Plato and other ancient philosophers, and influence in the Renaissance, plus bibliography, see "Marsilio Ficino,"

> And he will suffer even more if he is suddenly dragged up from the cave to the heavenly light of day. Not all of a sudden, therefore, but little by little and by appropriate stages he should be brought up from the shadows of things to things themselves and from the light's reflection to the light itself. So he should gaze at the things in the cave below with the prisoners first in reflection, then in themselves. Again he should gaze at what are outside the cave with us, first, at night, at the moon, similarly in reflection, then at the things of earth in themselves…. By this means he will be best able to distinguish between individual objects clearly and easily and will realize what a blind deluded wretch he was when he was bound in the cave and wasting his time on the insubstantial shadows of things.[225]

For Ficino, "the relationship of that cave to this world, which we call the visible world, is more or less the same as the relationship of this world to the world we call invisible and divine…"[226] Through endeavors like this translation and commentary, as well as his participation in humanist circles and tutelage of courtly patrons, Ficino influenced patrons, artists, and beholders throughout the Renaissance.

Renaissance artists engaged with the Platonic metaphor of the cave in broad and particular ways. When considered in light of the Platonic-Aristotelian debates of the Renaissance, this passage from the *Republic* can be understood in relationship to ideas of naturalism of the period.[227] But in addition to informing the philosophy of art, the Platonic cave informed the conceptualization of artworks. For example, through Ficino, Michelangelo was probably familiar with Plato's allegory of the cave, and perhaps it

---

in *The Classical Tradition*, ed. Anthony Grafton, Glenn W. Most, and Salvatore Settis (Cambridge, MA: Belknap Press of Harvard University Press, 2010), 360-361.

[225] Marsilio Ficino, *Platonic Theology*, Vol. 2, Books V-VIII, trans. Michael J.B. Allen, ed. James Hankins (Cambridge, MA: Harvard University Press, 2002), 145.

[226] Ficino, 145.

[227] See Erwin Panofsky, *Idea: A Concept in Art Theory*, trans. S. J. Peake (Columbia, SC: University of South Carolina Press, 1968) and David Summers, *The Judgment of Sense: Renaissance Naturalism and the Rise of Aesthetics* (Cambridge and New York: Cambridge University Press, 1987), especially the "Introduction," 1-31.

informed Michelangelo's idea of hell in the Sistine Chapel *Last Judgment*,[228] as well as the depictions of the ancestors of Christ in the lunettes on the Sistine Chapel ceiling.[229] In visual examples such as these, the cave is a metaphor for darkness and leaving it leads to (spiritual) light.

At the same time that conceptual applications of the Platonic cave allegory capitalized on its dyad of light and dark and set it in an antagonistic relationship to knowledge, caves also were understood to be in a symbiotic relationship with knowledge and were associated with its pursuit and production during the Renaissance. For example, the act of mining was understood as a metaphor for the acquisition of knowledge, and caves were known as the places where knowledge was obtained. Agricola framed the act of mining as one that required command of multiple disciplines of art and natural science, and that also enriched the knowledge of these disciplines.[230] Greatly influenced by Agricola's treatise *De re metallica*, Francis Bacon (1561-1626), employed the mining metaphor throughout his writings. In this often quoted passage from *The Advancement of Learning* (1605), he wrote:

> If then it be true that Democritus said, *That the truth of nature lieth hid in certain deep mines and caves*; and if it be true likewise that the Alchemists do so much inculcate, that Vulcan is a second nature, and imitateth that dexterously and compendiously which nature worketh by ambages and length of time; it were good to divide natural philosophy into the mine and the furnace, and to make two professions or occupations of natural

---

[228] Valerie Shrimplin, "Hell in Michelangelo's *Last Judgment*," *Artibus et Historiae* 15, no. 30 (1994): 83-107.
[229] Andre Chastel, "First Reactions to the Ceiling," in Carlo Pietrangeli, ed., *The Sistine Chapel: The Art, the History, and the Restoration* (New York: Harmony Books, 1986), 149-175.
[230] Agricola, 19-20.

> philosophers, some to be pioners [sic] and some smiths; some to dig, and some to refine and hammer.[231]

Bacon's motivations were somewhat aligned with those of Agricola and Biringuccio, discussed earlier in this chapter; not only were the activities of mining useful metaphors for Bacon's philosophical projects, but also he sought to defend mining, or at least liberate it from moral or religious judgment, as numerous scholars have noted.[232] In addition to illustrating the concept of the mine or cave as productive of knowledge, then, this excerpt also underscores that cave imagery was central to ecological debate during the period. Within Renaissance gardens, grottoes fulfilled the metaphorical idea put forth by Agricola and Bacon: like caves (mines) facilitated the production of knowledge of natural science and history, artificial caves (grottoes) hosted academies wherein intellectual pursuit transpired.[233] As the mythological home of the nymphs who acted as muses, caves or grottoes were associated with inspiration and creativity. Functioning as places for learning, the exchange of ideas, and debate, (artificial) caves were generative of knowledge.

Cave environments also harbored concrete associations with generative-ness during the period. Natural historians thought that the depths of the earth produced all life upon the earth; they envisioned animal, plant, and mineral forms growing within the earth and emerging on its surface. Caves were places where much of this output could be

---

[231] Francis Bacon, *The Advancement of Learning*, Book II, in *The Works of Francis Bacon, Baron of Verulam, Viscount of St. Alban, and Lord High Chancellor of England*, Vol. III, ed., James Spedding, et. al. (London: Longmans & Co., 1887), 351.
[232] This issue is acknowledged in many analyses of Bacon's mining metaphor. For example, Carolyn Merchant and other environmental writers critique Bacon's rhetoric from ecocritical and feminist perspectives. See, Merchant, *Death of Nature*.
[233] Naomi Miller, *Heavenly Caves*, 35.

observed – they were liminal spaces between the underworld or interior of the earth and the surface or outside world, and accretions like stalactites appeared to be "evidence" of this generative system that was embedded deep underground and that could manifest above ground in zoological, botanical, and geological incarnations. Not only did the bowels of the earth generate, but they used decay to do so: as stuff slipped away from one state of being – for example living botanical matter – it could be reconceived as petrified, stony matter.[234] This was an entropic system of generation, decay, return, and regeneration, with matter continually refolded back into the cave structure.[235]

The growth of plants and the formation of stones were intertwined in the minds of some Renaissance naturalists, who thought that similar processes produced both, and that the matter produced by the earth could shift its state from mineral to plant to animal.[236] Many naturalists saw fossils as evidence of the malleability of matter: "…imprints of plants upon rocks…were thought to be actual plants intercepted on the point of turning into stone (or stones in the process of turning into plants)."[237] Corals, like fossils, were thought to represent malleable matter: Agostino del Riccio wrote that when under water coral is "a tiny soft green tree that is born at the bottom of the sea," and that out of water

---

[234] Much of the discussion in this paragraph and the one following is indebted to information and quotations found in Małgorzata Szafrańska, "The philosophy of nature and the grotto in the Renaissance garden," *Journal of Garden History* 9, no. 2 (1989): 76-83. The idea of entropy in grottoes, as far as I know, has not previously been fully articulated, though Philippe Morel approaches this kind of interpretation in an essay on mannerist grottoes, wherein he acknowledges the idea that Detlef Heikamp sketched out in an article on the Boboli Gardens. See Morel, 115-134; Detlef Heikamp, "La Grotta Grande del giardino di Boboli," *FMR*, 35 (1985): 105.

[235] See discussion of entropy in Introduction, 11-12, especially the behavior of "cavernous matter," and note 18.

[236] Scipione Capece, *De principiis rerum* (Venice, 1546). See Szafrańska, 78.

[237] Szafrańska, 80.

it becomes stone.[238] Like the idea of nature mediating materiality and illusion discussed above relative to fossil impressions and nature prints – nature – especially stone – was thought to mediate plant and animal states. Thus, despite the proto-geology practiced by Bellini, Leonardo, and other artists, and by Aldrovandi and other naturalists, common understanding of the origin of fossils and the formation of phenomena like stalactites was still incomplete and/or incorrect (relative to modern scientific knowledge) for the duration of the sixteenth century, and this was reflected by art theorists, artworks, and beholders of art and nature. Misunderstandings like those described above echo the multiple temporalities from Michelangelo's sculptures and Mantegna's painting; the displaced marble, painted quarry, and real cave all enfold the durations of contemporary time of beholders, geological time, and incomprehensible primordial time. The latter seems to have confused beholders about the duration of geological time as reflected (or suppressed) by artefacts and artwork, and thereby to have spurred perception of an ever-present and always-unfurling (visually manifest) geological record (in caves).[239]

Grottoes – artificial caves – visualized the association between mining and knowledge, the generative nature of the earth's interior, and the blurred understanding of material properties discussed above.[240] For one, the design of grottoes often reflected knowledge of antique sources, both literary and visual.[241] But also in terms of substance,

---

[238] del Riccio, *Istoria delle pietre,* ch. CXXIII. Quoted and translated in Morel, 130.
[239] See Introduction, 11-12, and note 18.
[240] On the expression of ancient texts and visual models in Renaissance gardens, as well as on the blurred boundaries between art and nature in grottoes see Miller, *Heavenly Caves,* 35-58. More direct treatment of the idea of "third nature" is found in Chapter Three, 160-162; also see note 341.
[241] Miller, *Heavenly Caves*, 35.

grottoes demonstrated knowledge, especially of the realm of naturalists. In grottoes at Castello, Pratolino, and Mantua, and at villas near Rome and Genoa, just to name a few sites, the interiors were encrusted with all kinds of natural treasures and curiosities, from spongy stone, shells, and coral to exotic marbles, metals, and gemstones.[242] The French garden designer Bernard Palissy (1509 – 1590), who was also a ceramicist and naturalist (among many other vocations), went so far as to incorporate fruits and seeds that would attract birds, beckoning live nature into his grottoes, perhaps providing pleasant sounds for visitors or offering the chance to observe birds up close.[243] Living nature helped make the art-nature distinction less distinct. Palissy wrote about how, in the ideal grotto, stony materials should effect seamlessness, too. Here he explains how rough, rare stones should be set into grotto encrustations to appear as if in nature:

> on the cliff (within the grotto) I shall set many rare stones, which I shall cause to be brought from all quarters of the land, such stones as Chalcedon, Jasper, Porfiry, Marble, Crystal, and other stones of great price and beauteous to behold; these stones shall be mounted in the cliff without any polishing, and they will be so well adapted to the niches made in this cliff, that it will have no quality of artifice, but rather will all seem as if in a state of nature.[244]

Palissy's catalogue of stones suggests a project that is encyclopedic and that would attest to global knowledge – the materials are from "all quarters of the land," places foreign and exotic in character. The stones also represent the kind of materials that would be mined or quarried from the earth's interior, and their appearance in the grotto is suggestive of

---

[242] From a survey of correspondence between the Medici court and its representatives, diplomats, and peers of Cosimo I and Francesco I, the significance of and delight about these materials, especially things considered exotic in nature, is clear.
[243] Bernard Palissy, *Recepte veritable* (La Rochelle, 1563; in *Oeuvres completes*, Paris, 1961), 60.
[244] Palissy, 60. Quoted and translated in Szafrańska, "Philosophy of nature," 78.

the processes that Renaissance humanists and naturalists thought transpired inside the earth. The grottoes in the *Appennino* would have evoked some of the same associations; Francesco de' Vieri, in his 1587 treatise on Pratolino, instructed readers to "consider here … within this mountain, there are fountains, niches, metals, and plants that show us that, within the cavities of the Earth, waters, metals and stones are generated and outside these cavities, on the surface, there are the plants."[245]

In addition to symbolizing mining and knowledge, the grotto and materials described by Palissy presented the relationship of materiality and illusion as one that was cooperative, not antagonistic. His description emphasizes not only the importance of a continuum or interchangeability between the artificial and natural materials in an intellectual sense, but also pictorially: their rough-hewn nature is imperative for visual seamlessness, and is used to communicate naturalness. Nature represents nature. (Both real and artificial fossils were used in a similar way, and were understood to symbolize the generative nature of earth,[246] in the spirit of the (mis)understandings of fossil production discussed earlier in this section.) But instead of serving documentary purposes, like the fossils and nature prints that naturalists encountered and created on botanizing expeditions and mountain climbs, the encrustations and gemstones of Palissy's grotto represented (or re-presented) natural processes of dissolving and resolving, while figuring their own likeness in ways that blurred the distinction between

---

[245] De Vieri, 29. Translation from Matteo Valleriani, "Pratolino: The History of Science in a Garden," Max Planck Institute for the History of Science and Ente Provincia of Florence, http://pratolino.mpiwg-berlin.mpg.de/

[246] Szafrańska, 80.

art and nature, like the exterior of the *Appennino*.[247] The stones served illusionism at the same time that the authenticity and roughness of their material nature were crucial.

As exemplified by Palissy's description of the grotto and illustrated by the texts discussed in this section, caves harbored multiple associations – anthropological, mythological, architectural, and philosophical – and connected to natural history, metallurgy, and multiple scientific disciplines during the Renaissance. For Renaissance artists and architects, they served as structural models and places to compete with nature; for Renaissance humanists, caves were locales for intellectual regeneration and sensory stimulation. Returning to Leonardo's words, caves (like mountains) could elicit simultaneously very different responses, "fear and desire: fear of the menacing darkness of the cavern; desire to see if there was any marvellous thing within." The preceding examples and analysis demonstrate how Renaissance artists and beholders might have perceived caves as places that hid valuable materials, embodied the secret to natural generation, invited discovery, and facilitated revelation, at the same time that these caves could be understood to mystify knowledge. Not only do these descriptions from fiction and primary sources characterize how the cave could serve as foil and complement to the sculpted mountain, but they also elucidate the ways that caves iterate histories and theories that imbricate art history and art theory with ecological sensitivity in similar ways that the mountain does.

---

[247] See discussion throughout the Introduction, as well as the extended analysis in Chapter Three.

Conclusions

In this chapter, I suggested that the intersection of ecological awareness and art theory can be found in a reception history of mountainous landscapes. By underscoring this relationship, this chapter provides context for the theoretical and historical interrogations found in Chapters Three and Four. Beyond their topographical and geological significances, mountains and caves were material resources for sculptors and metal smiths; catalysts for art theory; treasure troves for collectors and naturalists; signposts of wealth; measures of distance; geographical boundaries; and indices of environmental change. At the same time that Renaissance artists and beholders saw mountains and caves functioning in these theoretical, practical, political, and metaphysical ways, these beholders also expressed wonder, awe, curiosity, and delight for the aesthetic experience of viewing mountains and caves. Montaigne noted the indescribable "loveliness of [Apennine] scenery," and he also recognized mountains as places to learn about geological phenomena. Leonardo observed the artfulness of nature in cave environments, and he also practiced natural history on mountainsides. Palissy's fabricated caves asked beholders to suspend disbelief about their constructed nature, and these same spaces also reflected the artist's knowledge about natural history and invited beholders to access such knowledge. These and other experiences, descriptions, and depictions of mountains and caves discussed in this chapter demonstrate that in the Renaissance, nature could engender aesthetic responses, and in that regard be viewed as landscape, but that the Renaissance landscape was not a purely aesthetic phenomenon. This complicates the canonical history of the "rise of landscape" in Renaissance art.

E.H. Gombrich, who coined the phrase, and other pioneering scholars of landscape argued that the impulse to see views of nature as landscape stems from the experience of paintings, especially northern Renaissance interior scenes, which incorporated incredibly detailed views through windows, or in the margins – in a sense, landscapes as asides – and Venetian paintings that featured the landscape as an important, but still secondary, component.[248] Gombrich asserted that these depictions were responses to existing theoretical statements about and descriptions of landscape. That is, he argued that textual or verbal explanations of landscape anticipated visual representations of landscape. In turn, once beholders were conditioned to view representations of nature as landscape, they perceived or experienced nature as landscape.

Later scholarship questioned the relationship between landscape, art, and history that Gombrich canonized.[249] Among recent landscape theorists, W.J.T. Mitchell most

---

[248] See the following: Kenneth Clark, *Landscape into Art* (London: J. Murray, 1949); A. Richard Turner, *The Vision of Landscape in Renaissance Italy* (Princeton: Princeton University Press, 1966); E. H. Gombrich, "The Renaissance Theory of Art and the Rise of Landscape," in *Gombrich on the Renaissance, Vol. 1: Norm and Form* (London and New York: Phaidon, 1985); E.H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation* (Princeton and Oxford: Princeton University Press, 1969), 376-389. Of these key texts, Gombrich's "Rise of Landscape" most emphatically forwards the argument.

[249] For critical engagement with Gombrich's argument see Denis Cosgrove, *Social Formation and Symbolic Landscape* (Madison: University of Wisconsin Press, 1998), 20-21; Cosgrove, *The Palladian Landscape*, 9 ff; Malcolm Andrews, *Landscape and Western Art* (Oxford and London: Oxford University Press, 1999); Whyte, *Landscape and History;* and W.J.T. Mitchell, "Gombrich and the Rise of Landscape," in *The Consumption of Culture 1600-1800: Image, Object, Text,* ed. Ann Bermingham (London: Routledge, 1995), 103-120. Of these more recent accounts, W.J.T. Mitchell most emphatically takes issue with Gombrich's assertions, including some factual claims like the dating of the inaugural use of the term "landscape" in relation to art. Still, elsewhere, Mitchell also allows for the idea of the pre-conditioned beholder, noting a number of ancient and Biblical accounts wherein views of landscape are appreciated for their

pointedly took issue with this approach, questioning Gombrich's theory-practice-perception trajectory and "institutional" framework. Mitchell advocated the "decentering of Gombrich's history of landscape."[250] For Mitchell, landscape is never *just* landscape, but is defined by "historical specificity and relativity of European landscape in relation to the diversity of human responses to and reshapings of the environment."[251]

With Mitchell's critique in mind, recall that the kinds of paintings that Gombrich had in mind are the kinds of paintings that historians of geology more recently identified as catalysts for scientific work, as discussed above. Artists such as Mantegna and Bellini might not have represented the landscape in the way they did had significant environmental change not occurred and had beholders not engaged with and carefully observed geological, botanical, and ecological phenomena. Leonardo, Palissy, and Giambologna, likewise, reflected the imbrication of art theory, aesthetic appeal, natural sciences, and environmental awareness when they conceptualized the landscapes of the *Madonna of the Rocks*, the grottoes of the Tuileries, and the *Appennino*.

By drawing attention to the multiplicity of responses to mountain and cave landscapes from travelers, poets, artists, and scientists during the period, by illuminating the multivalent nature of mountains and caves for these beholders, and by drawing attention to environmental changes and ecological awareness of the period, this chapter contributes to the decentering of Gombrichian landscape history. In the following

---

aesthetics. See Mitchell, "Imperial Landscape," in *Landscape and Power*, second edition, ed. W.J.T. Mitchell (Chicago and London: University of Chicago Press, 2002), 11-13.

[250] Mitchell, "Gombrich," 115-116. Mitchell finds this kind of reaction in recent scholarship by Larry Silver, Walter Gibson, and Ann Adams.

[251] Mitchell, "Gombrich," 115-116.

chapter, I will build upon the notion of a decentered landscape by exploring how Giambologna's figural sculpture of the *Appennino* prompted beholders to see landscapes within a figure, rather than as a setting for figures, and how the receptions of these landscapes further clarify connections between art theory and ecological awareness during the period.

CHAPTER THREE

Landscapes in the Figure

Introduction: "Flowers and foliage in accordance with the seasons"

> …in the crevices of this there are always flowers and foliage in accordance with the seasons…[252]
>
> --Agostino del Riccio, *Il giardino di un re* (1596)

Agostino del Riccio (1543-98), a garden theorist and visitor to the Medici villa at Pratolino, noted that the crevices of Giambologna's *Appennino* always sprouted "flowers and foliage in accordance with the seasons." Agostino perceived how the landscape of the *Appennino* constantly changed and that this phenomenon was observable within the sculpture. Not only did the plant specimens vary with the time of year, but also each season's plants exhibited their own life cycles. The monument appeared/s to be

---

[252] "Il detto monte è di pietre inculte; nelle fissure d'esso vi son sempre fiori et frondi secondo le stagioni de' tempi…" Agostino del Riccio, *Il giardino di un re* [1596], ms. BNCF Targioni 56, vol. III, cc. 42v-93r; reproduced and edited in Detlef Heikamp, "Agostino del Riccio: Del giardino di un re," *Il giardino storico italiano: Problemi di indagine, fonti letterarie e storiche: atti del convegno di studi Siena-San Quirico d'Orcia, 6-8 ottobre 1978* (Florence: Olschki, 1981), 121-122; quoted in Pozzana, "La struttura e l'esterno," 115. Translation mine. Agostino del Riccio was a Dominican friar and botanist installed at Santa Maria Novella in Florence. He was responsible for the garden there, and his theories of garden design probably influenced the Medici gardens at Castello and Pratolino, as well as the Boboli Gardens. In his treatises *Agricultura sperimentale* and *Agricultura teorica* (manuscripts held by the Biblioteca Nazionale Centrale Firenze), Agostino laid out ideals and theories for formal gardens, and he also included commentary about existing Italian gardens and garden patrons like the Medici. The most noted section of these is on the ideal garden, "*Del giardino di un re,"* which is where Agostino commented upon the *Appennino*. See Raffaella Fabiani Giannetto, *Medici Gardens: From Making to Design* (Philadelphia: University of Pennsylvania Press, 2008), 168-170.

perennially blooming; it was not static but reacted to temporal conditions. Truly, this was (and is) a living and growing and decaying artwork, one comprised not only of a sculpted figure but also of landscapes within that figure; the living plants that Agostino observed represented just one iteration of landscape in the *Appennino* (fig. 3.1).

In his comment Agostino acknowledged that the work was not static. It cannot be, of course, as it is a monument situated outdoors, subject to weather, and, as Agostino made clear, other temporally mediated elements like plant growth. Because of these conditions, the artwork changes over the course of years, decades, and longer timespans. Its surfaces also reflect seasonal changes caused by green growth that punctuates the sculpture. This naturally generated changing scenery is the result of a give-and-take between the sculpture and the environment it inhabits. The sculpture transforms the environment because of its presence, and this is unmistakable due to the sculpture's colossal scale; nature transforms the sculpture, in turn. The transformations enacted by nature and art foreground the materiality of the *Appennino* in a way that calls attention to the landscapes that comprise, and those that can be found within, the monument. Agostino's comment thus becomes a departure point for investigating botanical and geological concerns of the period as manifested in this colossal sculpture and for understanding the ways these concerns may connect to ideas of landscape in the Renaissance.

In the context of this chapter, landscape emerges on the *Appennino* in three related ways. First, landscape is found in the continually changing plant growth on the surfaces of the sculpture, which Agostino noticed. Second, the natural elements used to

figure the *Appennino*, like the rocky encrustations and the water (from the Mugnone River) that emerged as a fountain, are fragments of distant landscapes. Third, the monument represents, or, as I will explain below, re-presents, the Apennine Mountain landscape, with frozen/flowing streams, craggy outcrops, and verdant slopes. This last and broadest way of understanding landscape in the *Appennino* relates to the conventional idea that it is meant to personify the Apennine Mountains. Considering these three landscape operations discretely and as enfolded with one another, this chapter aims to clarify the ways in which the *Appennino* materializes landscapes—the ways in which the work's substance is landscape and how botanical and geological substances allow figuration of landscape and human form.[253] This chapter focuses on how natural materials like plants and volcanic fragments figure meadow-like and mountain landscapes on the *Appennino* and how these landscapes might have been understood in terms of the trope of the "image made by chance." I argue that the uses of these natural materials on the *Appennino*, along with their reception by Renaissance beholders, recast the traditional relationship between materiality and illusion in Renaissance art, and this can be understood through the monument's engagement with etiological tropes of art and nature such as the "image made by chance."

[253] Iconography is not the concern of this study; the possible meanings and interpretations of the work have been exhaustively deliberated, though not definitiely settled, from the sixteenth century forward. (See Chapter 1 for an overview and list of references.) The reception and analysis of the figure's iconography, from Baldinucci through the twentieth century, underscores the ambiguity of the sculpture, which is discussed below.

A Meadow on the Man: Figure as Framework for Landscape

One way in which the landscape substance figures landscape image is found in the flowers and foliage that emerge from the *Appennino*. It is not clear that plants on the monument itself were purposefully cultivated.[254] Agostino's description implies that the appearance of flowers on the monument was unplanned and governed by nature, not man. And, records regarding the exact specimens clothing the *Appennino* when Agostino made his observation have not come to light. The absence of clarity about this issue makes it difficult to reconstruct precisely an image of the botanical content that provoked Agostino's comment.[255]

If the plants were purposefully cultivated, their appearance might have echoed the *prato*, or meadow, that was situated in front of the *Appennino*. Like other Italian gardens of the period, the meadow and other wilder areas of Pratolino surrounding the *Appennino*

---

[254] But it is possible that a purposeful, if "wild," planting scheme was carried out. Other mountain-like monuments from the period were planted informally. For example, Marco Antonio Guarini wrote about this kind of growth on the *Montagnola* (an artificial mount) constructed at the garden of San Giorgio for Borso d'Este: "The mountain had paths leading up and down covered by pergolas with vines and other greens. At the summit a small open space was enclosed by a pergola of larch… This mountain was planted informally." Marco Antonio Guarini, *Compendio historico delle chiese di Ferrara* [1621], 295-296. Quoted in Elisabeth Blair MacDougall, "*Ars Hortulorum*: Sixteenth-Century Garden Iconography and Literary Theory in Italy," in *Fountains, Statues, and Flowers: Studies in Italian Gardens of the Sixteenth and Seventeenth Centuries* (Dumbarton Oaks, Washington, D.C., 1994), 97-98.

[255] As such, the following paragraphs are intended as a provocation of the nature of these "flowers and foliage."

probably were "informally" planted.[256] The informal character of this kind of meadow is reflected in descriptions like one that Pietro Bembo (1470 – 1547) offered of the garden at Asolo. He explains with relative detail the way that the formal parterre appeared, with its boxwood and juniper hedges, but he generalizes when discussing the meadow: "…they came to a little meadow at the end of the garden, full of freshly-cut grass, and scattered over with flowers; at the far end were two clumps of laurels placed irregularly and in great numbers, looking very quiet and venerable, and full of shade."[257] Like Agostino, Bembo avoids cataloguing and instead synopsizes.[258] And, a description of the meadow at Pratolino contemporary with Agostino's echoes these: the meadow was deep green, "painted with a thousand varieties of flowers."[259] The meadowscape was perceived not just as an informal space, but also was associated with spontaneity or chance during the early modern period: in 1665 the English garden designer and writer John Rea (d. 1681), inspired by Italian gardens, suggested that "a green Meadow . . . spontaneously imbroydered with many pretty Plants and pleasing Flowers" was ideal.[260]

---

[256] For example, Elisabeth Blair MacDougall discusses the informal plantings in d'Este gardens (and implies an ambiguity about the specimens) in "*Ars Hortulorum*," 89-111.
[257] Quoted in Marie Luise Schroeter Gothein, *A History of Garden Art*, vol. 1, trans. Laura Archer-Hard (Cambridge and London: Cambrdige University Press, 2014), 218.
[258] Even in the practice of botany and its production of herbals and other related texts, precise description in textual or visual terms was often lacking. This is perhaps due to the skepticism with which visual, olfactory, and gustatory evidence was received by scientists during the period. On this see Karen Meier Reeds, *Botany in Medieval and Renaissance Universities* (Garland: New York & London, 1991).
[259] AVR Cod. Barb. lat., n. 5341, c. 206r. In Zangheri, *Pratolino*, Vol. I, 172. "…un prato di mille varietà di fiori dipinto, che d'herba minutissima e verde si che quasi nera rassembra che è lungo braccia trecento cinquanta, e largo a proportione."
[260] John Rea, "Flora," Book 1, in *Flora: seu, De Florum Cultura, or a Complete Florilege, furnished with all Requisites belonging to a Florist, in III Books* (London: J.G.

Returning to Agostino's comment, we might infer that he similarly perceived the cracks, crevices, and encrustations of the *Appennino* embroidered, seasonally and spontaneously, with flowers and other plants.

Agostino's comment underscores the way that the *Appennino* complicates the conventional distinction between nature and culture, and the division between figure and landscape found in Renaissance art. If we accept its surfaces as meadow-like, and remember that the monument itself was set at the end of a natural meadow, and that it was adjacent to wooded sections of the site, then the *Appennino* possesses significance as a culture-nature mediator: meadows were the spaces that mediated culture and nature within the garden, serving as the conceptual midpoint between the formal villa-garden complex and the woods. In this framework, the *Appennino's* place within the garden complex might be seen to thematize the figure-landscape relationship in the monument. The *Appennino* represents both simultaneously, making it impossible to separate one from the other in this monument. This is unconventional in Renaissance art. Usually, the figure and the landscape were considered as discrete from each other: depictions could be described as "figural" or as "landscapes," but not, typically, as both simultaneously.[261] They overlapped when landscape served as a setting or framework for figures – when landscape was subordinate to the figure. In part, this division was driven by the development of perspective theory and the way that it prescribed an organization that

---

Marriott, 1665), 1. See John Dixon Hunt, *Garden and Grove: The Italian Renaissance Garden in the English Imagination, 1600-1750* (London: J.M.Dent & Sons, 1986), 178.

[261] Leon Battista Alberti, *On painting and On Sculpture: the Latin texts of De pictura and de statua*, trans. Cecil Grayson (London: Phaidon, 1972). On the emergence of landscape in Renaissance painting see: discussion in Chapter 2, "Conclusion," pages 111-114 and notes 248 and 249.

derived from notions of human vision. As a result, relative to depictions of figures, landscape in Renaissance paintings was forced into a framework that systematically pushed it back, under, or to the sides.

The introduction of landscape into painting has been linked to the development of perspective theory during the Renaissance. Most notably with the publication of Leon Battista Alberti's *De pictura* (1435) – and with the conversations between Alberti, Brunelleschi, Donatello, and Masaccio during the first third of the fifteenth century – a method for ordering, hierarchizing, and gridding depicted physical space was made clear and accessible. Perspective provided a way for artists to rationalize perceived visual experience. As has been exhaustively discussed, Brunelleschian / Albertian perspective translated into pictorial terms the way that we think we see things.[262] There is fallacy in this translation, of course, but this idea of perspective and the way that it was used to explain spatial relationships between the beholder and depicted nature represents one way that Renaissance observers were trained to see landscape. Through this lens, landscape was framed for the beholder, with the view limited by the edges of the painting and with scale within the depiction governed by human proportion. The perspectival grid

---

[262] On the development of perspective theory during the Renaissance some key sources include: Erwin Panofsky, *Perspective as Symbolic Form*, trans. Christopher S. Wood (New York: Zone Books, 1991) [originally published as "Die Perspektive als 'symbolische Form,'" in the *Vorträge der Bibliothek Warburg 1924-1925* (Leipzig & Berlin, 1927), 258-330]; Rudolf Wittkower, "Brunelleschi and Proportion in Perspective," *Journal of the Warburg and Courtauld Institutes* 16 (1953); Samuel Y. Edgerton, *The Renaissance rediscovery of linear perspective* (New York: Basic Books, 1975) and *The Heritage of Giotto's Geometry: Art and Science on the Eve of the Scientific Revolution* (Ithaca: Cornell University Press, 1991); Hubert Damisch, *The Origin of Perspective* (Cambridge, MA: MIT Press, 1994); James Elkins, *The Poetics of Perspective* (Ithaca: Cornell University Press, 1994).

constantly referred to the measurement of a *braccia* or to the height of a figure, again subordinating landscape to the figure. Two-dimensional representations of landscape privileged a viewing point outside of the pictorial field where the beholder could comprehend depth from foreground to background, and spatial signals like the horizon line and vanishing point, as these elements related to figural, narrative subject matter; again the human was doubly prioritized. Thus, the two-dimensional landscape represented according to fifteenth-century Italian perspective theory was subordinated to the human in multiple ways.

Contrasting the illusion of depth and hierarchical structure made possible by Albertian single-point perspective, Dutch landscape representations, Svetlana Alpers argued, reflect an interest in description and a "mapping impulse."[263] Alpers observed a fascination with rich surface detail in Dutch landscape representations, which, she claimed, eschew single-point perspective in favor of Ptolemaic "distance points": representations made within these parameters, according to Alpers, depict just a slice of a larger scene that is not framed in the way Italian images were. While Albertian single-point perspective compositions assume a beholder outside of the picture plane, Dutch landscapes, Alpers argues, allowed beholders simultaneously to exist within the spatial realm of the artwork – elsewhere in the scene, embedded in it – and also to look at the representation, much like a land surveyor might behave. In this vein, rather than

---

[263] Svetlana Alpers, "The Mapping Impulse in Dutch Art," in *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983), 119-168, and slightly revised as "The Mapping Impulse in Dutch Art," in *Art and Cartography: Six Historical Essays*, ed. David Woodward (Chicago: University of Chicago Press, 1987), 51-75.

subordinating landscape to the human (beholder), these Dutch landscapes might be seen instead to prioritize information about the landscape over the position of the beholder, or even to subordinate the human to description of nature. I am not suggesting that the *Appennino* reflects a northern or Dutch "mapping impulse"; however, the way that Alpers understands human-landscape relationships in Dutch representations and the way she explains the spatial character of Dutch landscapes – as slices or facets of larger entities – are suggestive of how the *Appennino* complicates figure-ground and human-landscape relationships relative to conventional Italian models and relative to two-dimensional examples.

The framework of Albertian perspective in pictorial space can extend to the privileging of views in real space, too, though it is more difficult to translate a consistent use of human scale in views of nature. For example, at Pratolino, the *Appennino* was situated slightly uphill and directly across from the (now destroyed) Villa Medici. Beholders located in or around the villa had a good, broad view. Beholders looking from the vantage point of the villa, especially if they were looking from an upper level, might have comprehended the spatial relationship of the *Appennino* to the garden, meadow and other parts of the estate better than beholders approaching the work closer and from ground level.[264] However, the beholders located at the villa did not enjoy a complete view since the *Appennino* requires circumambulation if one desires to see the entire form. Beholders who circumambulated, and especially those who climbed upon or inside of the

[264] Because the villa is destroyed, it is impossible to test this physically today. However, similar advantages for viewing gardens and axial relationships between various components of them, including sculptures, are allowed from upper level terraces and interior rooms at the Medici villa at Castello and the Pitti Palace, for example.

monument, would have inhabited the artwork in ways similar to Alpers' Dutch landscape beholders. Thus the monument allowed beholders to understand its surfaces and experience its volumes if they abandoned the long view and its associations with perspectival frameworks, while the monument could, alternatively be seen as part of a larger axial system and garden program if those beholders instead looked at it from afar.

Perhaps, as Denis Cosgrove pointed out and Ian Whyte elaborated upon, the phenomenon of perspective theory and its application to depicted landscapes also reflected possession, the acquisition of rural land by "an urban merchant class."[265] This could be yet another way to understand the subordinating of nature or landscape to humans, one that implicates the kind of living landscape of which the *Appennino* is a part. Cosgrove argues that perspective was used to make landscape into a symbol and to order society.[266] He draws from social practices of land surveying, land management, and other ways of measuring land, which might overlap with the practice of organizing a perspectival view, to demonstrate this idea. Cosgrove's claim about possession of the land in terms of the acquisition of wealth is distinct from politically motivated interpretations of landscape as an expression of Medici control. The latter argument suggests personified Apennine Mountains allegorize Medici reign over the mountain territory and the rivers that originated in them—the Arno and Mugnone rivers, both important sources for Florence, could be traced back to the Apennines.[267] Following this

---

[265] Whyte, 21. For example, the Medici possessed seventeen villas around central Italy by 1599, when Justus Utens painted the series of lunettes.
[266] See Cosgrove, *Social Formation and Symbolic Landscape*, 20 ff.
[267] See Chapter 1, 37-38. For more general discussions of controlling outdoor spaces in the Renaissance see Turner, *Vision of Landscape*; Max J. Friedlander, *Landscape,*

line of reasoning, the placement of the sculpture, which in one regard privileged the view from the villa, further underscored the possession of this landscape. The *Appennino* perhaps participated in subordinating the very landscapes it represented, and those that comprised it, to humans. A third way of conceiving the significance of landscape is in terms of military control, a method that also employs inaccurate gendered metaphors, to paraphrase Lazzaro's argument.[268] Lazzaro pointed out the potential problems with this kind of reading (as I noted in Chapter One), suggesting that political connotations of "tamed" landscapes in the Renaissance are ultimately anachronistic.[269] This last way of framing man's power over land through landscape is far less compelling than either of the prior ways. The spatial, mechanical, material, and aesthetic contexts surrounding the *Appennino*, for example, could support the notion that it represented reign over the Tuscan realm, or that its patrons and beholders viewed it within the context of agricultural practices or geographical practices.[270] The *Appennino* was used to redirect water from the Mugnone to irrigate Pratolino, which was both an expression of the ability to engineer water systems and of the ability to facilitate agricultural practices. The monument was comprised of and contained within itself materials that could have connoted Medicean travel, trade, or diplomatic relationships, and it participated in a visual tradition wherein Medici power was allegorized by similar kinds of figural

---

Portrait, Still Life: Their Origin and Development (New York: Schocken Books, 1963), 21; Ronald Rees, "Historical Links between Cartography and Art," *Geographical Review* 70 (Jan. 1980): 71. For broader considerations of the relationship between landscape and power see Mitchell, ed., *Landscape and Power*.

[268] See Chapter 1, 45-46, and note 98.

[269] See Lazzaro, "Gendered Nature," 248-250.

[270] See Chapter 1, 18-19; also see Wright and Smith, "Pratolino," for more information on this topic.

forms.[271] Due to these connections (here given cursory treatment), it is impossible to completely ignore the potential political and social meanings of the landscape in the monument.[272] Within the methodology of this study, the significance of the work as a symbol of Medici power or possession further exemplifies how the *Appennino* maintains a contentious relationship with landscape – the act of symbolizing political or social possession of nature/land is argumentative, and places the landscape in an ecological-philosophical position relative to the possessor/man. As we will see in this chapter and in the Coda, the most palpable expression by this monument of power over land – harnessed river water – was not solely generative.

Even if landscape was systematically made subordinate or peripheral to the human, meaning here both the living beholder and the depicted figure, nature's material substance was foregrounded in some Renaissance art. For example, in the fifteenth century, the Florentine painter Fra Angelico exhibited an interest in this. In his frescoes of the *Annunciation* and *Noli me Tangere* in San Marco, for example, Fra Angelico painted flower petals within passages otherwise filled with a variety of vegetation (fig. 3.2, fig. 3.3). The flowers are made with simple marks – veritable x's, o's, and other purposeful dashes of red and white paint. The leaves and blades of grass are more complex in their forms and gradation of tonalities. Clearly, disconnection persists between the relative precision of the leafy parts and the "blotchiness" of the petals,

---

[271] See Chapter 1, 38, and note 71.

[272] And, through a more particular ecocritical lens than is employed in this study, Cosgrove's frameworks would be helpful for practicing eco-Marxism or social ecology.

between the relative flatness of the former and the subtle texture of the latter.[273] The result of these contradictions in the way nature is represented is to bring our attention to the nature of the description, or lack thereof. Texture or blotchiness disfigures form, turning our attention to matter.

Though Fra Angelico used perspectival construction, the depiction of nature is largely excused from that framework and instead of being subordinated to human vision and human scale, it forces the beholder to take pause and question those very things. It forces close looking, what James Elkins has termed the "myopic position."[274] For example, the beholder of the *Annunciation*, in order to examine the blotches of flowers and grasses, must get so close to the painting that it is possible to overlook the figure – he or she can observe brushstrokes, figure marks and ground marks, but perhaps cannot take in the entire image, cannot place himself or herself in a conversational relationship with figures in the painting. Perhaps this contradiction in technique, which forces close looking, intends to encourage meditations on the human-landscape and figure-landscape relationships: between the depicted body and nature, between the beholder's body and the depiction.

---

[273] Georges Didi-Huberman, *Fra Angelico: Dissemblance and Figuration* (Chicago: University of Chicago Press,1995); for example see p. 157 on the blotches in the *Annunciation*. Didi-Hubermann's idea of the blotch as formless matter emphasizes disfiguration as opposed to deformation or dissolution of matter, as implied by the *informe* discussed by Bataille. See Bataille, 31. And for the argument about this distinction see Yve-Alain Bois and Rosalind Krauss, *Formless: A User's Guide* (New York: Zone Books, 1997), 79-86.

[274] James Elkins, *Pictures of the Body: Pain and Metamorphosis* (Stanford, CA: Stanford University Press, 1999), 16-17. In James Elkins' terms, the "normative positions [,including the figure mark position, the ground mark position, the conversational position, and the inferred center of projection,] afford more or less intimacy and naturalness."

This is what Agostino did with the *Appennino*: in the passage quoted at the beginning of this chapter, he overlooked the figural form in order to describe the passages of landscape in the sculpture.[275] He emphasized the rough or "unpolished" stones (*spugne*), the crevices within these natural materials, and how nature interacts – grows – within them. Normally, humans situate their own bodies in a viewing position that allows full perception of the depicted figure, if they are looking at figural art.[276] Indeed, Renaissance writers on art repeatedly recommend taking a distant view. Alberti makes the suggestion; Filippo Villani says this about Giotto's paintings; Bartolommeo Fazzio about Jan Van Eyck's paintings; Vasari about Donatello's *Cantoria* and Titian's paintings; and Aretino also about Titian's paintings.[277] From the early fourteenth century to the late sixteenth century, the advice persisted. By offering this advice, these writers encouraged subordination of representations to the human visual field. However, the scale and technique of the *Appennino* complicate viewing norms. Using Elkins' vocabulary, it is possible to see the ground – the stone, brick, and concrete that comprise the figure's volumes – and figure marks – the encrustations on the figure that depict hair, beard, and streams – while simultaneously seeing the frontal aspects of the figure in their entirety. This is because the figure and the ground are made of the same passages and because of the colossal scale of the monument. The rock and plaster, lava and stalactites,

---

[275] Within his text, Agostino catalogues and describes many other aspects of Pratolino and the *Appennino*, too – grottoes, statues, fountains, paintings, types of marbles used at the site, species of fish in the pond, aspects of the interior of the monument, and so on.
[276] Elkins, 16-17.
[277] For further discussion of all of these examples, see Norman Land, *The Viewer as Poet: The Renaissance Response to Art* (University Park, PA: The Pennsylvania State University Press, 1994), 165-166.

plants – all of these materials comprise the human form, allude to the kind of landscape the work is meant to allegorize, and also exist *as* landscape(s) on and in the work. While the *Appennino* is, at face value, a figural work that personifies a mountain landscape, it is not the figural nature of the work to which Agostino responded in the quoted passage. His reception of the work turns the conventional sensibility on end: the sculpture that depicts and personifies landscape becomes the host or the framework for the landscape. The landscape-as-setting is not subordinated to the figure.

In addition to complicating the conventional figure-landscape relationship, the *Appennino* subverts the typical figure-ground distinction found in Renaissance art, a distinction that was driven by perspective theory.[278] Typically, passages that depicted figures/subjects were to be understood as discrete from the ground of the work. In both paintings and sculptures, the figure was often seen as resting on top of or developing in front of the ground. In relief sculpture, such as Ghiberti's *Sacrifice of Isaac* (fig. 1.23), the figures and setting do just this, appearing in high relief, in stark contrast to the completely flat ground that belies its function as a support. Nanni di Banco's relief of the sculpture studio in the predella of the *Four Crowned Martyrs* depicts the figures in high relief, distinct from the ground, which is also flat, but which doubles as a studio wall (fig.

---

[278] The seminal study is Edgar Rubin, "Synsoplevede Figurer," Ph.D. dissertation, University of Copenhagen, 1915. A broadly-cast consideration of the blurring of figure-ground distinction in Renaissance culture, framed in terms of green studies, is found in Bruce R. Smith, *The Key of Green: Passion and Perception in Renaissance Culture* (London: University of Chicago Press, 2009). Geoff Lehman characterizes the shifts in figure-ground relationship in the late 15th century as "figure-landscape dialogue," framed within the development of perspective theory. See Geoff Lehman, "Measure and the Unmeasurable: Perspective and the Renaissance Landscape," Ph.D. dissertation, Columbia University, 2010.

1.25).[279] The ground of the predella thus serves as the support for the depiction and as depicted architectural support. But in both cases, the ground is subordinated. In low relief, or "pictorial relief," as developed by Ghiberti, the support became fictive space of infinite depth, which allowed him to convey narratives like those found on the East Doors of the Baptistery, such as that of *Jacob and Esau*, with multiple points in time contained in one frame. However, flat ground exists in this panel and others, doubling, like Nanni's, as a wall or patch of sky. Figure and ground are separable in these examples.

Donatello complicated the figure-ground distinction in his *schiacciato* reliefs such as the predella for the *St. George* tabernacle for Orsanmichele (fig. 3.16). The sculpture subsumes itself, especially in the passage of the horse, rider, and dragon, where the figures' "feet press against the background so that ground and background cannot be disambiguated."[280] This treatment confuses understanding about which space these figures inhabit. The back of the figure and the horse are in higher relief, with the drapery behind St. George's head challenging the spatial limits of the frame, rippling against the top edge of the predella; the horse's head, dragon's wing, and figure's foot melt back into the marble. In addition, conventions of pictorial space and single-point perspective are challenged by this work. Donatello uses the *schiacciato* technique to represent the loggia on the right side of the composition as well as the trees and clouds, expressing linear

---

[279] See David G. Wilkins, "The Invention of 'Pictorial Relief,'" in *Depth of Field: Relief Sculpture in Renaissance Italy*, Donal Cooper and Marika Leino, eds. (Bern: Peter Lang, 2007), 90.

[280] Michael Podro, *Depiction* (New Haven and London: Yale University Press, 1998), 41.

perspective and atmospheric perspective through these elements.[281] Yet it is impossible to see how far they recede in pictorial space. The treetops are legible in terms of shape, but are indistinguishable from the marble substance in terms of relief; the dragon's cave *is* the marble block, with its entrance clearly indicated but shallowly carved, its rocky exterior becoming indistinguishable from the marble substance in terms of form and material character. In this work (and others wherein he used similar technique), Donatello made the figure-ground distinction indistinct, and, furthermore, in capitalizing upon the natural properties of the marble, he made material and form nearly one and the same.

For freestanding figures, the object/volume was to be perceived as discrete from the space surrounding it, the environment hosting it.[282] However, the behavior of sculptures relative to the ground (environment) could be more complicated depending upon the character of convex-concave relationships within them. Rudolf Arnheim explained the inherent interpenetration of figure and ground in modern sculptures: "… sculpture reaches beyond the limits of its material body. The surrounding space, instead of passively consenting to being displaced by the statue, assumes an active role. It

---

[281] See Wilkins, 79-83. For more on Donatello's *schiacciato* see the following select sources: Hans Kauffman, *Donatello. Eine Einführung in sein Bilden und Denken* (Berlin: G. Grote'sche Verlagsbuchhandlung, 1936), 55-95; H.W. Janson, *The Sculpture of Donatello* (Princeton, NJ: Princeton University Press, 1963), 24-25; John Pope-Hennessy, *Donatello Sculpture* (New York: Abbeville Press, 1993), 115-136; Arthur Rosenauer, *Donatello* (Milan: Electa, 1993), 22-24; Charles Avery, "Donatello's Marble Narrative Reliefs," in *Studies in Italian Sculpture* (London: Pindar, 2001), 61-88; Amanda Lillie, "Sculpting the Air: Donatello's Narratives of the Environment," in *Depth of Field: Relief Sculpture in Renaissance Italy*, Donal Cooper and Marika Leino, eds. (Bern: Peter Lang, 2007), 97-124.

[282] Rudolf Arnheim addresses figure-ground distinction in the history of visual art and applies the construct to sculpted volumes (as figures) and the environment in which they exist (as ground) in *Art and Visual Perception: Psychology of the Creative Eye* (Berkeley and Los Angeles: University of California Press, 1954), 239-245.

invades the body and seizes the contour surfaces of the concave units. … space and sculpture interact here in an eminently dynamic way."[283] Thus, sculptures might be seen as discrete from and in front of their environment, but their volumetric quality (continually) reshapes figure-ground boundaries, making these boundaries dimensional and dynamic rather than planar and static.

During the fifteenth and sixteenth centuries, the relationship of sculptures to space and the environment shifted, as discussed in Chapter One. A mural tradition, wherein sculptures were set against niches, walls, or other architectural frames, gave way to an interest in works that were liberated from these elements and that could be viewed from multiple angles. In the fifteenth century, Brunelleschi, Donatello, and others blurred beholder-figure and figure-ground boundaries in projects for the cathedral of Pistoia, the cathedral of Florence, and Orsanmichele, to note just a few spaces.[284] Their freestanding statues and relief sculptures accounted for the spatial relationship of the viewer to the artwork and encouraged observation by the viewer of how sculpture integrated into space. Donatello's *St. Mark* for Orsanmichele is an iconic example of this kind of engagement between beholder, sculpture, and environment. Verrocchio's *Christ and Saint Thomas* is another example, one that perhaps asks the beholder to complete the narrative in what John Shearman termed a "fully transitive" relationship, while Cellini's *Perseus*, Shearman suggested, makes the beholder an "accomplice."[285] Beholders of

---

[283] Arnheim, *Art and Visual Perception,* 242.
[284] On this see, for example, Roger Tarr, "Brunelleschi and Donatello: Placement and Meaning in Sculpture," *Artibus et Historiae* 16, no. 32 (1995): 101-140.
[285] John Shearman, *Only Connect… Art and the Spectator in the Italian Renaissance* (Princeton, NJ: Princeton University Press, 1982), 33, 58.

these sculptures acknowledged spatial interpenetration, completed the work of art, and conspired with the sculptural subjects because the beholders inhabited the sculptural environment: like Shearman's term "accomplice" suggests (with its root *plicare*, "to fold"), these engaged beholders became enfolded with the ground.

In the example of the *Appennino*, the surroundings are composed of the natural environment. But in the *Appennino*, the ground (environment) cannot be separated from the figure (like it is relative to the sculptures discussed above) according to the terms of Agostino's comment. Tacit in Agostino's comment is that the *Appennino* hosted a natural landscape, as opposed to cultivated plants intended as an extension of the formal garden. I think it is significant also that Agostino's description was vague: he did not catalogue the plants he saw, like it was the practice to do for the formal portions of Italian Renaissance gardens, which were typically areas closer to the villa.[286] Instead, his

[286] Generally, the plantings in sixteenth-century Italian gardens like Pratolino were not carefully catalogued and charted, except for specimens contained in the *giardino segreto* of any given villa-garden complex. However, Ulisse Aldrovandi made a list of "the most valuable" plants he found at Pratolino in 1586. See Ulisse Aldrovandi, *Observationes Variae*, Bologna, Biblioteca Universitaria, Ms.. 136, XI, folio 73 recto. This is discussed in Lucia Tongiorgi Tomassi, "The Flowering of Florence: Botanical Art for the Medici," in *The Flowering of Florence: Botanical Art for the Medici*, Lucia Tongiorgi Tomasi and Gretchen A. Hirschauer, eds. (National Gallery of Art: Washington, D.C., 2002), 36-37; and, Alessandro Tosi, ed., *Ulisse Aldrovandi e la Toscana: Carteggio e testimonianze* (Florence, 1989). On a related note, specific identification of imported bulbs like tulips, irises, and narcissuses was common. See Tongiorgi Tomassi, 32. From a survey of botanical treatises of the sixteenth and seventeenth centuries, it becomes clear that specificity and thoroughness in terms of documentation increase as the seventeenth century unfolds. For example, Agostino lists tress and shrubs that comprised parts of the formal gardens – oaks, olive trees, pines, cypress, laurels, palms, and others. Also, trends in terms of common plantings do surface within Medici correspondence. For example, Cosimo I de' Medici was concerned with orange and lemon trees at Poggio a Caiano, Castello, and the Boboli Gardens; and the exact placement of orange trees at Poggio a Caiano is discussed by Niccolo Tribolo. See BIA: The Medici Archive Project, Doc ID #

observation implies that native plants, perhaps parts of the woods that framed the *Appennino,* have become entangled with the figure. Thus, the distinction between figural subject and landscape ground/setting has become, in a physical sense, compromised. The *Appennino's* volumes, concavities and convexities, interstices and protrusions foster this entanglement and allow the monument to behave in an "eminently dynamic way."[287]

One result of this entanglement is that the ground is no longer completely subordinate to the figure. The physical manifestation of figure-ground blurring in the *Appennino* is a three-dimensional analog to how Donatello obfuscated figure-ground distinction in the *St. George* predella, especially with the trees and the cave, and it is a sculptural analog to how Leonardo rendered the relationship between figure and nature in

---

18288 (Archivio di Stato di Firenze, Mediceo del Principato 1174, folio 28). Grapes were cultivated at a number of Medici gardens, including Pratolino. Peaches were grown by Eleonora de Toledo. See BIA: The Medici Archive Project, Doc ID# 9571 (Archivio di Stato di Firenze, Mediceo del Principato 16, folio 201). An octagonal arrangement of laurels was planned for Poggio a Caiano in 1551. See: BIA: The Medici Archive Project, Doc ID# 3239 (Archivio di Stato di Firenze, Mediceo del Principato 1176, foilio 20). Cosimo I de' Medici planted cauliflower seeds at Poggio and Castello; see BIA: The Medici Archive Project, Doc ID # 546 (Archivio di Stato di Firenze, Mediceo del Principato 1175, folio 7). Oak trees were planted from acorns imported from Flanders at Castello. See BIA: The Medici Archive Project, Doc ID# 7713 (Archivio di Stato di Firenze, Mediceo del Principato 1172, folio 35). The garden at Poggio a Caiano produced melons, pomegranates, and quinces. See BIA: The Medici Archive Project, Doc ID # 20385 (Archivio di Stato di Firenze, Mediceo del Principato 1172, folio 44). There was a rose garden surrounding the labyrinth at Castello. See BIA: The Medici Archive Project, Doc ID# 7007 (Archivio di Stato di Firenze, Mediceo del Principato 1171, folio 268). Pratolino probably produced quinces and sultanas. See BIA: The Medici Archive Project, Doc ID # 16289 (Archivio di Stato di Firenze, Mediceo del Principato, folio 9). In addition, notable or unusual plants were sometimes recorded. For example, Francesco de' Medici corresponded with Ulisse Aldrovandi regarding his "most precious specimens." See BIA: The Medici Archive Project, Doc ID # 1414 (Archivio di Stato di Firenze, Mediceo del Principato 269, folio 18).

[287] *Arnheim, Art and Visual Perception,* 242.

his drawings and paintings.[288] For example, in the Louvre *Virgin of the Rocks* (fig. 2.3), Leonardo's *sfumato* technique blurs the distinction between the figures and the cavernous landscape behind them, while the vivid and precise depiction of plants in the foreground parallels the rational organization of the figures and even competes for the beholders' attention. But as a sculpture, the *Appennino* might push this dissolution further. On it, the ground becomes the subject.

This kind of interaction between depicted human form and landscape is explored by Christopher Wood. Regarding a drawing by Albrecht Altdorfer (fig. 3.4) he says that "this is what the *Dead Pyramus* represents: the body is in the process of being absorbed back into the forest, reclaimed by coils of calligraphy. Line here is the spokesman for the organic, for process. The forest advances on the remains of narrative."[289] By invading the *Appennino*, then, nature does for it what Wood argues Altdorfer (with his lines) did for depicted nature, for pictorial landscape: nature brings the idea of landscape completely to the surface of the sculpture. For the engaged beholder like Agostino, it turns the *parergon* into *ergon*.[290] It turns the sculpture into a landscape. Landscape is the subject; it is the figure; and, it is the material from which the figural subject is made.

---

[288] On Leonardo's handling of atmospheric perspective and development of "spatial continuum" see Lehman, 69 ff.

[289] Christopher S. Wood, *Albrecht Altdorfer and the Origins of Landscape* (Chicago and London: University of Chicago Press, 1993), 85.

[290] For an overview of this idea, see Andrews, *Landscape and Western Art*, 7. For the argument, see Jacques Derrida, "The Parergon," trans. Craig Owens, *October* 9 (Summer 1979): 3-41; also Jacques Derrida, *The Truth in Painting*, trans. G. Bennington and I. McLeod (University of Chicago: Chicago, 1987). Wood also discusses this phenomenon relative to Altdorfer and the image discussed above.

"A wonderful and terrible thing to contemplate": Spugne as Palimpsests and the Violent Nature of Sculpture

In addition to the plants sprouting through its crevices, the *Appennino's* surface encrustations – fragments of lava, stalactites, and sandstone – represent another dimension of landscape in the figure. These *spugne* appear to drip down the giant's body. While the specific sources for the encrustations are uncertain, researchers have confirmed that those on the head have volcanic origins, and that the beard is made of stalactites; "spongy stones" of the sort that Vasari attributed to Monte Morello cover the back of the figure.[291] A mixture of these types of rock covers the body, in short.

Through its crags and outcroppings, the *Appennino* foregrounds the geological origins of its materials. The caves, volcanic fields, and riverbeds from which the encrustations were mined are indexed by these accretions. The encrustations also might be seen as relics – their fragmented forms reference past processes of geological formation and of the past human observation and mining of the places where geological

---

[291] See page 158-159 for Vasari's recommendations for mining *spugne*. Researchers and conservators have not been able to determine the provenance of the lava and stalactites that cover the *Appennino*; and sixteenth century descriptions not only fail to identify geographical origins, but also indicate confusion over the precise type of matter – observers referred to the accretions as "petrified water," "spongy stone," and "pumice and sponge." Note also, in his journal, Montaigne is vague, referring to a "certain material which they say is brought from a certain mountain" to decorate a grotto separate from the *Appennino*. Montaigne, *Travel Journal*, 64. In addition, documents related to the restoration efforts add to the confusion; for example in 1817, it was reported, *spugne* were added to the monument, though the writer does not specify if they were affixed on the exterior or interior. A.S.F., RR. Fabbriche, f. 2063, n. 2, in Zangheri, *Pratolino*, vol. I., 289. For an overview of the use of these materials on the *Appennino*, see Pozzana, "La struttura e l'esterno," 110 – 117. She reviews sixteenth century reception of the surfaces, and describes the mineral characteristics of these elements, which were determined by scientific investigations during the conservation efforts of the 1980s.

events occurred.[292] The encrustations can be understood as traces of memories of both natural events and human interventions:[293] they exist as palimpsests of art making, as well as of the natural history of their origins—of the transformation of magma into liquid lava into rock, of the slow dripping of water into pendulous stone.[294]

Inherently these fragments of distant landscapes – of volcanoes, caves, and riverbeds – depend upon change. But the rate of transformation of these geological specimens is not seasonal, like that of the botanical matter that Agostino noticed; rather, it is likely millennial.[295] And, similar to the spontaneity that characterized meadowscapes for early modern beholders, accident characterizes the processes that produce *spugne*. However, the incorporation of these passages into the sculpture is not accidental, like the plants' is; it is purposeful and performs a representational operation. Simultaneously the *spugne* figure human form (hair and a beard) and represent topography (melting streams).[296] Both the technique (exploitation of natural facture of the lava and stalactites)

---

[292] On stones doubling as representation of a place (the Holy Land) and as relics of that place (materials taken from the Holy Land), see discussion of the Graziani Grazadori altar at Santa Corona, Vicenza, in Alexander Nagel, *The Controversy of Renaissance Art* (Chicago and London: University of Chicago Press, 2011), 283.

[293] See Whyte, 7-15.

[294] Rocks, stalactites, and other natural formations tell a story through their composition. When history is contained in materials in such a tangible manner, the subject of art becomes inextricable from its stuff and its setting. See Stephen Bann, "Foreword," in Udo Weilacher, *Between Landscape Architecture and Land Art* (Basel: Birkhäuser Architecture, 1995), 16.

[295] For an explanation of the process of forming stalactites see for example, Forrest L. Hicks, "Formation and Mineralogy of Stalactites and Stalagmites," in *Bulletin of the National Speleological Society* (No. 12, Nov. 1950): 63-72.

[296] While water falling over the statue would have made the streams appear to be melting, and many Renaissance observers described it as such, a poem by Raffaello Gualterotti published in 1579 characterized them as frozen: "Gela ei ben tutto e trema / Tal per le

and the reception history of these materials suggest, relative to conventional art-nature tropes, alternative ways of understanding the etiological relationship between nature and art during the Renaissance.

Because of the spectacular character of their movement from the interior of the earth to the slopes of volcanoes and surrounding land, lava stones (or *spugne di lava*) produced a rich reception history, one which helps illuminate the relationship between art and nature in Renaissance sculpture generally and on the *Appennino* specifically. The fragments of lava on the *Appennino* index what is left after often-violent volcanic activity. In fact, the *Appennino* is geologically connected to one of the most dramatic volcanic fields in the world, the Campi Flegrei, or Phlegrean Fields, located on the edge of the Apennines, in northern Campania (south of Florence and Tuscany). The Campi Flegrei already possessed quite a reputation and reception history by the sixteenth century.[297] An eruption there in 1538 produced Italy's "newest mountain" and Europe's youngest volcano, Monte Nuovo, seemingly overnight.[298] The reception of this event, set within the context of frequent volcanic activity on the peninsula and framed by a chain of

---

vene sue, e giacci, e nevi / Chiuggonsi à giorni nubilosi, e brevi." In Raffaello Gualterotti, *Vaghezze sopra Pratolino* (Florence: Giunti, 1579), 9.

[297] Among other ancient and Renaissance writers, Pliny wrote about the site in the *Natural History*, and, for example, after the 1538 eruption, Leandro Alberti described the "cavernous" feeling of the site ringed by hills, a place where "thick black water continuously bubbles." Leandro Alberti, *Descrittione di tutta Italia* (Bologna: Anselmo Giaccarelli, 1550), 160.

[298] Carey Croneis, William C. Krumbein, and Chichi Lasley, *Down to Earth: An Introduction to Geology* (Chicago: University of Chicago Press, 1936), 166. Also see Tom Simkin and Lee Siebert, *Volcanoes of the World: A Regional Directory, Gazetteer, and Chronology of Volcanism During the Last 10,000 Years* (Tucson, AZ: Geoscience Press, 1994), 49-54.

first-hand observations since antiquity, illustrates why Italy is sometimes described as the "cradle of volcanology."[299]

Regarding the eruption that formed Monte Nuovo, a sixteenth-century beholder noted in evocative terms the dualism within the spectacle of eruption:

> …it is called by the country-people Monte Nuovo, because it was formed in the space of a day and a night. In the year 1538, on the 29th of

---

[299] Simkin and Siebert, 149. The spectatorship and documentation of volcanic eruption in Italy had a long tradition. Ancient Roman accounts underscore the idea of fire as an agent for transformation, and also echo Virgil's violent terminology. In a letter to Tacitus, Pliny the Younger recounts the eruption of Vesuvius: "A cloud was rising from a mountain -- which mountain was unclear to those who looked at it from a distance…Sometimes the cloud was white, sometimes dirty and speckled, depending upon how much dirt and ash it carried with it….By now ash was falling on the ships, hotter and thicker the closer they approached, then pumice and broken stones, burnt and fractured by the fire." And Lucretius explains how eruption works in Aetna: "the wind … / has made whatever it touches scorching hot, it knocks / the rapid flames of fire out of them, and then it draws / Itself upwards and shoots sky-high straight through the mountain's jaws. / Thus far and wide it casts the blaze and scatters ash, and smoulders / With thick and gloomy smoke, and vomits up boulders --"

In the Renaissance, writers continued this tradition of emphasizing the connection between volcanism, Vulcanism, and violence. In poetry, also, this connection is articulated in relationship to the work of the forge. Dante invokes a reference to Vulcan in the *Inferno* (XIV.57) when he characterizes the vanity and bellicosity of Capaneus: "And though he weary all the others, one by one, / at their black forge in Mongibello, / shouting 'Help, good Vulcan, help!' / as once he did on the battlefield of Phlegra, / and though he hurl his shafts at me with all his might, / he still would have no joy in his revenge." And Ariosto repeatedly arms his heroes with Vulcanic wares, notably Ruggiero in his encounter with Bradamant (Canto 45.73.): "Sometimes a thunderclap is followed by a fearsome gust of wind which churns the billowing seas and scoops up the black dust to spin it skywards; the wild beasts take flight, flocks and shepherds flee, the air dissolves into hail and rain: such was the damsel when, on hearing the signal, she grasped her sword and assailed Ruggiero. / But Ruggiero was secure in the armour which Vulcan had given to Trojan Hector, …" Ariosto's analogy between the weather and the warrior is especially striking in the way that it evokes effects comparable to those of the volcanic activity that Pliny the Younger and Lucretius described. See: Pliny the Younger, *Letters*, trans. Betty Radice (London and New York: Penguin, 1963), 166-167; Lucretius, *The Nature of Things*, 219; Dante, *The Inferno*, trans. Robert Hollander and Jean Hollander (New York: Doubleday, 2000), 239-241; and Ludovico Ariosto, *Orlando Furioso* [1516], trans. Guido Waldman (New York: Oxford University Press, 1983), 551-552.

> September, several earthquakes having been felt throughout the whole district of Puzzuolo on the preceding days, the earth opened near Tripergola with a terrible sound like thunder, so that it was expected that the whole country would have been destroyed: the sky was then serene, and from the aperture burst forth flames of fire, bearing with them cinders and red hot stones, with dense smoke: these stones were carried up into the air with such force, that it was a wonderful and terrible thing to contemplate. Afterwards the wind rose with great fury, and the cinders were dispersed on all sides, and driven even into Africa. So vast a quantity of stones and cinders were thrown round the chasm, as to form the mountain now called the Monte Nuovo.[300]

Scipione Mazella, the beholder and writer, explained the event in terms of corporeal movement (earthquakes), touch (red hot), sound (thunder), and sight (flames, smoke) – he recounted it as a sensory experience. He also acknowledged that he gained pleasure while simultaneously feeling terrified: "it was a wonderful and terrible thing to contemplate." It is as if the volcano put on a performance for Mazella, one that engaged him in multiple ways physically and intellectually.

The eruption of Monte Nuovo inspired other similar accounts. Another beholder, Francesco del Nero, also characterized the event in the dyadic terms of "terror" and "splend[or]," akin to Mazella's "wonderful" and "terrible":

> …fire issued forth and formed the great gulf with such a force, noise, and shining light that I, who was standing in my garden, was seized with great terror. Forty minutes afterwards, though unwell, I got upon a neighbouring height, and by my troth it was a splendid fire, that threw up for a long time much earth and many stones. They fell back again all round the gulf, so that towards the sea they formed a heap in the shape of a crossbow, the bow being a mile and a half and the arrow two-thirds of a mile in dimensions. Towards Pozzuoli it has formed a hill nearly the height of Monte Morello, and for a distance of seventy miles the earth and trees are covered with ashes. On my own estate I have neither a leaf on

[300] Scipione Mazella, *Descrittione del Regno di Napoli* (Naples, 1586, 1597), excerpted and translated in *Quarterly Journal of Science, Literature, and the Arts*, 12 (1822): 424.

> the trees nor a blade of grass . . . The ashes that fell were soft, sulphurous, and heavy. They not only threw down the trees, but an immense number of birds, hares, and other animals were killed.[301]

In addition to acknowledging sensory experience like Mazella did, del Nero described the damage around him. He observed the ability of nature to wreck itself: the "splendid fire" was simultaneously visually stunning and palpably violent.

Not only did frequent and dramatic volcanic activity secure Italy's reputation as the "cradle of volcanology," but mythological associations also support the metaphor: the ancient Roman god Vulcan lends his name to the field. The volcanism/Vulcanism connection was articulated in ancient and mythological accounts, and in Renaissance reactions in text and in image. For example, in the *Aeneid*, Virgil imagined the mythological origins of eruption in a cave under Aetna, in Vulcan's workshop, where fire causes groaning and hissing – the sound effects of the forge parallel those of the volcano.[302] This characterization of Aetna persisted in the Renaissance. After Pietro Bembo climbed its slopes in 1492 or 1493, he described his encounter with the fuming

---

[301] Translated and quoted in Arthur Hamilton Norway, *Naples Past and Present* (London: Methuen & Co., 1905), 46. For the entire text of the letter see also "Lettera di Francesco del Nero a Niccolò Del Benino, sul terremoto di Pozzuolo, dal quale ebbe origine la Montagna Nuova, nel 1538," in *Narrazioni e documenti sulla storia del Regno di Napoli, dall'anno 1522 al 1667*, ed. Scipione Miccio (Florence: Gio. Pietro Vieusseux, 1846), Vol. I, 93-96.

[302] "Near the coast / Of Sicily and Aeolian Lipari / A steep island rises, all of rock / And smoking. Underneath, a mammoth cave / And vaulted galleries of Aetna, burned / Away by blast-fire from the Cyclops' forge, / Rumble in thunder: mighty blows are heard / Reechoing and booming from the anvils, / Chalybian bars of iron hiss in the caverns, / Vulcan's workshop, named for him Vulcania. / To this the Lord of Fire came down from heaven. / Working with iron in the enormous cave / Were Cyclops Thunderclap and Anvilfire / And Flash, stripped to the waist. … In streams / The molten brass and gold flowed. Iron that kills / Turned liquid in the enormous furnace heat. / … and the cavern / Groaned under the anvils they set down." Virgil, *The Aeneid*, trans. Robert Fitzgerald (New York: Vintage Classics, 1990), 244-245. (VIII, 559-610.)

volcano: "…we were suddenly struck in the face by a cloud of sulphurous vapor and smouldering smoke, as if from a furnace…" Bembo continued:

> Then smoke began to pour out in a ceaseless exhalation as if from a chimney, but also escaping in many places through fissures in the mountain's crust formed by long eruptions and the winds that rage inside it. That day they were especially powerful and violent in their frenzy. … We were gripped by the thrilling spectacle and the strangeness of it all, and such a spell had come over us that no one was really thinking of his own safety.[303]

Bembo's account not only alludes to the connection of the volcano to the Vulcanic workshop, but it also anticipates the way that Mazella described the imagery of Monte Nuovo's inaugural eruption. Both beholders articulated that volcanic activity was simultaneously enthralling and threatening to them. They saw volcanic activity as being violent and also challenging to comprehend. Mazella, del Nero, and Bembo were overwhelmed by the smoke, the sulphorous ash: these malleable substances behaved in a way that blurred perception of the volcanic form from which they emerged, and that obscured the earth and trees. As transformed volcanic material, these substances also transgressed the spatial limits of the volcanoes and invaded the spaces of the beholders. Etiologies based on mythological tropes or humanizing metaphors were required to help make sense of this natural phenomenon and its various consequences.

The kind of violence associated with volcanic activity and with the forge of Vulcan, in the cave under Aetna, was evocative of the production of bronze sculpture in

---

[303] Pietro Bembo, *De Aetna* [1495], trans. Ross Kilpatrick, "The De Aetna of Pietro Bembo: A Translation," *Studies in Philology* 83, no. 3 (Summer, 1986): 347-348. In addition to hiking the slope of the volcano, observing and writing about the spectacle, Bembo collected a souvenir from his journey: he "brought two rocks back to Messina when they had cooled off and could be picked up by hand…"

the Renaissance. This connection was visualized in the *studiolo* of Francesco de' Medici, located in his residence in the Palazzo Vecchio in Florence, where its designers, Vincenzo Borghini (1515-1580) and Vasari, arranged a scheme of painting and sculpture organized around the four elements: earth, air, water, and fire. Along with a bronze sculpture of *Vulcan* by Vincenzo de' Rossi (fig. 3.5), paintings of the forge of Vulcan and of a bronze foundry were included in the section of the room dedicated to the element of fire.[304] In the painting depicting the forge, the connection to the subterranean is underscored: in the background a masonry arch frames the furnace, while an earthen chamber mirrors it. In the foreground, two figures prepare to hammer red-hot metal simultaneously, and in their poses appear as if they could be going to blows with each other (fig. 3.6). Likewise, in the depiction of the foundry, the roles of fire and physicality are emphasized (fig. 3.7). For example, the figure in the foreground clad in diaphanous red material torques his body in order to chase the bronze object in front of him. His muscles' work is evident through the condition of the material he works; other figures also demonstrate the kinds of effort required in the making of bronze sculpture, one notably and precariously propelling machinery with his body. Similarly, the sculpture of *Vulcan* exhibits tensed musculature, his arm in mid-swing and his face expressing

[304] Though, the current installation of the space (executed in 1910) has been called into question during the last three decades or so. See Scott J. Schaefer, "The Studiolo of Francesco I de' Medici in the Palazzo Vecchio in Florence" (PhD diss., Bryn Mawr College, 1976); Feinberg, "The Studiolo of Francesco I Reconsidered"; and Karen Victoria Edwards, "Rethinking the Reinstallation of the Studiolo of Francesco I de' Medici in the Palazzo Vecchio" (PhD diss., Case Western Reserve University, 2007).

serious, if not angry, concentration.[305] Finally, reigning above all depictions in the space is the ceiling painting by Francesco Poppi of Prometheus, provider of fire. This imagery implied connections between Vulcan, violence, and art making.

The nature of forging within the *studiolo* imagery is suggestive of a *terribilità* analogous to the historical descriptions of volcanic activity, both in antiquity and in the sixteenth century, that were discussed above. In the sixteenth century, *terribilità* referred not just to the personality of the artist or the energy perceived within his work; it characterized his performance of making.[306] It might be likened to demonstrativeness, or even spectacle. In a comparable way, volcanic eruption and the work at the forge suggest a performance. This notion is evoked in the kind of workshop atmosphere that the sculptor (not exclusively, but notably, of bronze) Benvenuto Cellini wrote about. In his *Autobiography*, Cellini described, in a number of separate passages, parts of the process of making bronze sculpture. Beyond the challenge of dealing with incredible temperatures and molten metal, the process of finishing a bronze sculpture, post-pour, was likened to work at the forge: "…after bronze has been cast it must be worked on with hammers and chisels, as the most expert ancients used to do, and the moderns as well…"[307] And, the bronze workshop could be hazardous, in a manner like a volcanic eruption; for example, molten metal, analogous to flowing lava, presented a constant

---

[305] For a diagram of the *studiolo* and the placement of each work in relation to the scheme of the four elements go to the website of the Florentine museums: http://museicivicifiorentini.comune.fi.it/palazzovecchio/visitamuseo/studiolo_francesco_i.htm

[306] David Summers, *Michelangelo and the Language of Art* (Princeton, NJ: Princeton University Press, 1981), 234-241.

[307] Cellini, *Autobiography,* trans. George Bull (London and New York: Penguin, 1998), 329.

danger. The fiery environment could destroy itself, as Cellini explained: "To add to the difficulties, the workshop caught fire and we were terrified that the roof might fall in on us, and at the same time the furnace began to cool off because of the rain and wind that swept in at me from the garden. / I struggled against these infuriating accidents for several hours."[308] And later on during the same episode, "…there was a sudden explosion and a tremendous flash of fire, as if a thunderbolt had been hurled in our midst. Everyone, not least myself, was struck with unexpected terror. When the glare and noise had died away, we …realized that the cover of the furnace had cracked open and that the bronze was pouring out."[309] In these passages, Cellini alluded to Vulcanic and volcanic imagery, and in doing so, he emphasized the connection between the natural phenomenon, artistic production, and accident. But in the end, the accidents in Cellini's workshop proved fortuitous and the resulting sculpture was well received. The process of bronze casting and Cellini's description of it reflect ambivalence. On the one hand, it is violent and accident-ridden, but on the other it is generative.

While the *Appennino* is not cast bronze, and so it is not the product of the kind of workshop environment that Cellini described, some of its craggy encrustations index volcanic phenomena and suggest violence-in-making. The passages of *spugne* that cover parts of the figure, and in so doing, figure landscape, recall through their roughness the qualities of other sixteenth-century sculptures, especially Michelangelo's so-called *Slaves*

[308] Cellini, *Autobiography*, 347.
[309] Cellini, *Autobiography*, 350.

and later *Pietàs*.[310] Michelangelo's roughly hewn marble with traces of chisels and other sharp tools might also index violence-in-making.[311] Through their surfaces that bear the marks of sculpting technique, the *Pietàs* are suggestive of a personal frustration or crisis for the artist, or of an interest in ambiguity (fig. 3.8, fig. 3.9, fig. 3.10).[312] These surfaces perhaps record the artist's struggle of making at the same time that they evoke struggle or anguish of the sculpted subjects. In the *Slaves*, the roughness implies the depicted struggle of the figures to emerge from the blocks,[313] and perhaps a fascination (or obsession?) with process (something that already emerged in the 1492 *Lapiths and Centaurs*) (figs. 3.11, 3.12, 3.13).[314] While these latter works document and represent

---

[310] Scholars have noted the relationship between the *Appennino* and the *Slaves*, but not (to my knowledge) in the terms described above. Carlo del Bravo suggested that both the placement of the *Slaves* in the grotto and the *Appennino* bring up Francesco de' Medici's literary interests in Homer and Empedocles; Hervé Brunon related the natures of metamorphosis and finish, looking at how the materials appear to have inverse functions; and Una D'Elia connected the ways that the figures bear burdens, as examples of "heroic suffering." See Carlo del Bravo, "Francesco a Pratolino," 40-42; Hervé Brunon, "Pratolino"; and d'Elia, "Giambologna's giant."

[311] See discussion on the relationship of violence in sculpture and the experiential nature of sculpture in Jodi Cranston, *The Muddied Mirror: Materiality and Figuration in Titian's Later Paintings* (University Park, PA: Pennsylvania State University Press, 2010), 87-92. Also, note the discussion of *terribilità* above.

[312] John T. Paoletti, "Ambiguity Maintained through the Palimpsest," *Artibus et Historiae* 21, no. 42 (2000): 53-80.

[313] Michelangelo wrote about this in his poems. "Non ha l'ottimo artista alcun concetto / c'un marmo solo in sé non circonscriva / col suo superchio e solo a quello arriva / la man che ubbidisce all' intelletto." And, "Sì come per levar, donna, si pone / in pietra alpestra e dura / una viva figura, / che là più cresce u' più la pietra scema." See Michelangelo Buonarroti, *Sonnet 151* and *Sonnet 152* in James M. Saslow, trans., *The Poetry of Michelangelo* (New Haven and London: Yale University Press, 1991), 301-303.

[314] This is debated within the *non finito* literature; but it is possible that the interest in process shows up early on, in the *Lapiths and Centaurs* (1492). See Michael Cole and Stephen Campbell, *Italian Renaissance Art* (New York: Thames & Hudson, 2012), 320-321. On Michelangelo and the *non finito* see Aldo Bertini, "Il problema del non-finito nell' arte di Michelangelo," *L'Arte* 1 (1930): 131-38; Charles de Tolnay, *Michelangelo*.

kinds of violence that depend on human agency, ironically, in the 1580s, they were incorporated into the Grotta Grande of the Boboli Gardens in part because of their affinity with the *spugne* encrusting that space. As I discuss below, these *spugne*, in contrast, reflect the agency of nature.[315] There was for the sixteenth-century visitor to the grotto an immediate visual correlation between the marble and the *spugne* and their roughness, but also an implicit contrast between the processes of sculpting these materials.

To return to the analogy between volcanic activity and the art of sculpture, descriptions like Mazella's and Cellini's cast light on the ways that the processes of nature and art were understood as terrifying and thrilling, and, to an extent, as dependent on chance. Both of these accounts also suggest ambivalence about these processes.

IV. The Tomb of Julius II (Princeton, NJ: Princeton University Press, 1954), 39; Paola Barocchi, "Finito e non-finito nella critica vasariana," *Arte Antica e Moderna* 3 (1958): 221-235; Teddy Brunius, "Michelangelo's non-finito," in *Contributions to the History and Theory of Art* (Uppsala, 1967), 29-67; Juergen Schultz, "Michelangelo's Unfinished Works," *The Art Bulletin* 57, no. 3 (1975): 366-373; Paul Barolsky, *The Faun in the Garden: Michelangelo and the Poetic Origins of Italian Renaissance Art* (University Park, PA: Pennsylvania State University Press, 1994), 58-59; Paula Carabell, "Image and Identity in the Unfinished Works of Michelangelo," *Res* 32 (1997): 104; Creighton Gilbert, "What is Expressed in Michelangelo's 'Non-Finito,'" *Artibus et Historiae* 24, no. 48 (2003): 57-64. In addition, recent studies that have placed the issue in broader contexts include Leonard Barkan, *Unearthing the Past: Archaeology and Aesthetics in the Making of Renaissance Culture* (New Haven and London: Yale University Press, 1999); Alexander Nagel, *Michelangelo and the Reform of Art* (Cambridge: Cambridge University Press, 1999); Rona Goffen, *Renaissance Rivals: Michelangelo, Leonardo, Raphael, Titian* (New Haven and London: Yale University Press, 2002); Patricia A. Emison, *Creating the "Divine" Artist: From Dante to Michelangelo* (Leiden: Brill, 2004).

[315] After being abandoned by Michelangelo for several decades, and then virtually "lost" in his Florence apartment for twenty years following his death, they were incorporated into the Grotta Grande, designed by Bernardo Buontalenti (who also worked on Pratolino).

Moreover, Mazella's description especially makes note of the generative nature of the explosion: even though it is violent and chaotic, in the end a new mountain is formed from "a quantity of stones and cinders thrown round the chasm." This observation brings up another aspect of volcanic activity – its afterlife in petrified lava. The hardened flow becomes the palimpsest of eruption. It is now a geological record. But its form forgets the relatively fast-paced propulsion of the molten rock, the airborne nature of the cinders, and instead becomes something hard and static. These are the material qualities that sculptures like the *Appennino* capitalize upon. To evoke notions of the primordial, the immovable, and the durable, Giambologna utilized similar kinds of fragments of lava (and stalactites), as outlined above. Like the lava, now immovable, its liquid nature absent and its motility truncated, the personified mountain is stuck.

The *Appennino* is stuck in place, but also stuck in the past. The petrified *spugne* not only record geological processes (and thus serve as a sort of natural history), but in their roughness and in their affinity to surfaces like those of Michelangelo's *Slaves* and *Pietàs* they also suggest an existence outside of history, a timelessness, a primordial being.[316] Like the way that Alexander Nagel suggested that Michelangelo's processes of creating were so destructive that the sculpture ended up "surrounded by [its own] ruins" – by the evidence of the encounter between maker, chisel, and stone – the *Appennino* is

---

[316] On the ability of landscape to contain and to obscure history, and to exist outside of history, see Jonathan Smith, "The Lie that Blinds: Destabilizing the text of landscape," in *Place/Culture/Representation*, ed., James Duncan and David Ley (London and New York: Routledge, 1993), 78-92.

covered in the ruins of nature – evidence of the encounter between fire, air, and earth.[317] The primordial not only is embedded in the millennia-old geological matter, but also it is suggested in the physiognomy of the represented human form. The *Appennino* is often described, like other similar figural types, as an "hoary" old man. His hair and beard especially signal this condition: the geological fragments figure physiognomic elements that are grizzled, greyed, worn – that embody "hoariness." In addition, the frozen and/or melting streams are figured by these same fragments. Thus, the material nature of the petrified lava serves multiple functions of figuration. Because of its natural facture – its inherently rough and raw surface qualities that reflect the processes that made it – the *spugne* can figure feigned nature (the streams) and human characteristics at once.

In this double operation of representing landscape and human, nature mediates materiality and illusion.[318] It brings to the surface roughness and hardness, qualities of its own materiality, but does so in pursuit of the illusion of this mountain-ish human form, or humanized mountain form. Likewise, the stalactites that are employed alongside the lava serve to represent figural content, but still they foreground their own material nature. Aspects of madeness and of fragmentation are not concealed in this facet of the figuration of the *Appennino*. They are embraced. The palimpsest of volcanic performance becomes both a way to index human form and a trace of nature. These fragments are mimetic, and

---

[317] Nagel, *Michelangelo*, 214-215. In the way that Leonard Barkan suggests the archaeological as a hermeneutic for roughness and fragmentation in Renaissance sculpture, this perhaps provides an opening for beholders to imagine the primordial, indefinite past. See Barkan, 201-207.

[318] Though not directly correspondent, this kind of double function is similar to the "redoubled" image discussed by Alexander Nagel. On the *Appennino*, though, instead of recognizing an actor or sitter, we recognize nature. See Nagel, *The Controversy of Renaissance Art*, 17-19.

they are referential of their own prior state of being. To borrow David Summers' phrasing, they are "substitute" and "surface" simultaneously.[319] They act simultaneously as a "real metaphor" of the mountain and as surfaces that depict the human form.[320]

The "Image Made by Chance" and the Third Nature of the Appennino

The lava and stalactites that do double-duty as hair and semi-frozen mountain streams index processes of melting, eruption, and accretion. These are long-term geological processes in which craggy deposits form as a result of the hardening of molten rock or the building up of calcium deposits. They are evidence of geological phenomena, the kinds of things that Renaissance collectors might have kept in a *studiolo*, cabinet of curiosities, or garden grotto.[321] In this vein, the beholder perhaps would have connected the lava and stalactites with *studiolo* culture, with the emerging field of geology, and with scientific study. In fact, Francesco de' Medici's own *studiolo*, mentioned above,

---

[319] David Summers, *Real Spaces: World Art History and the Rise of Western Modernism* (London: Phaidon, 2003), 61. On the uses of other kinds of natural curiosities in art, the intentional celebration of natural facture, and the multivalent nature of coral, shells, antlers, etc. incorporated into artworks, see Martin Kemp, " 'Wrought by No Artist's Hand': The Natural, The Artificial, the Exotic, and the Scientific in Some Artifacts from the Renaissance," in *Reframing the Renaissance: Visual Culture in Europe and Latin America 1450 – 1650*, ed. Claire Farago (New Haven and London: Yale University Press, 1995), 177-196.

[320] Summers, *Real Spaces*, 39.

[321] See Antonio Aimi et. al., "Towards a History of Collecting in Milan in the Late Renaissance and Baroque Periods," in *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. Oliver Impey and Arthur MacGregor (Oxford, U.K.: Clarendon Press, 1985), 24-28; also see John Dixon Hunt, "'Curiosities to adorn Cabinets and Gardens,'" 193-203, in the same volume.

celebrated his interest in geology, and it also stored specimens that he prized.[322] Among the objects that Francesco kept in his *studiolo* were corals, shells, and pearls (in cabinets along the "water" wall); precious metals, especially samples of gold (stored in the "earth" wall); and a variety of gems and stones, such as diamonds, emeralds, bloodstones, carbuncles, and lapis lazuli (in the "air" wall).[323] Scholars agree that Francesco's possession of these items reflected an intimate knowledge and hands-on usage of them.[324] In addition, two particular visitors to Francesco's court were instrumental in propelling the study of geology during the period. Agostino del Riccio wrote a history of stones, *Istoria delle pietre* (1597); and Ulisse Aldrovandi, who was a naturalist and collector, in fact coined the term "geology." The *Appennino*, inside of which many of the same kinds of specimens were found as were kept in the *studiolo*, was produced within a milieu where the geological character of the encrustations would have been appreciated.[325]

In the early modern period, sometimes stones were even framed for their material interest and pictorial suggestiveness. An example from the Medici collections of the seventeenth century underscores the interrelatedness of the geological and the aesthetic: a pair of *pietra d'Arno* specimens were cut and framed by the Galleria dei Lavori, the court workshops founded by Ferdinando de' Medici in 1588, following Francesco's death and Ferdinando's ascent to rulership (fig. 3.14). (Francesco was also a great patron of

---

[322] Feinberg, 47. Other elemental sciences and alchemy were also allegorized, and the room also served as a storage space for some of the materials that Francesco needed to conduct experiments in the Medici laboratories.
[323] Feinberg, 61.
[324] See Berti, Schaefer, Edwards, and Feinberg, as cited in note 304, above.
[325] In his description of Pratolino, Sgrilli noted materials representing the four elements in the grottoes inside the *Appennino*. See Sgrilli, 9-10.

pietre dure workshops, but there are not many extant examples from his period.) These objects are effectively slices of the geological record, or rock strata, taken from the bed of the Arno River, and thus described as *lineato d'Arno*. But for the early modern beholder such a specimen also was known as *pietra paesina*, or "landscape rock."[326] This is because of the way that the patterns and textures of the rock slice looked like landscape elements to beholders. For this pair, we can imagine that the craggy lower half evoked a mountainous terrain, and the smoother, undulating pattern above it suggested perhaps an expanse of clouded sky.

The *pietra paesina* not only looked like landscape to Renaissance beholders, but it *is* landscape. Earthen sediment layers comprise the striations, whose contours in turn evoke topographical shapes and celestial substances. Its material composition and representational capacity mirror or cancel each other – it does not depict because it *is* already. It re-presents itself; the stuff of land is landscape. In a similar manner, a certain kind of marble, *alabastro nuvoloso,* used in the high altar of the Vicenza Cathedral to evoke the cloud around Moses' tabernacle, "produces the effect [of clouds] effortlessly, without recourse to pictorial devices."[327] As Nagel demonstrated, for Renaissance beholders the marble's efficacy as cloud image lay in its supposed physical composition: "Stone, understood as condensed vapor, *is* cloud."[328] Beholders familiar with treatises such as Albertus Magnus' *De Mineralibus*, or Francesco Zorzi's *De Harmonia Mundi*

---

[326] See Wolfram Koeppe and Annamaria Giusti, eds., *Art of the Royal Court: Treasures in Pietre Dure from the Palaces of Europe*, exh. cat. Metropolitan Museum of Art (New Haven and London: Yale University Press, 2008), 158-159. Cat. 31 and cat. 32.
[327] Nagel, *The Controversy of Renaissance Art*, 275.
[328] Nagel, *The Controversy of Renaisssance Art,* 275.

understood that interactions between earth, water or vapor, and heat or cold produced stones with a variety of material qualities; the stone's place within the spectrum from soft to hard, rough to smooth, dull to bright, and so on, depended upon the particulars of the interaction. As Nagel pointed out, what is significant relative to the marble's use in this context is that beholders viewed stones as one among multiple physical states of vapor, the same substance that makes clouds. As I discussed in Chapter One, some Renaissance beholders (and writers like Vasari, for that matter) understood stalactites to be "petrified water," aqueous flow suspended in a hardened state. In this vein, the encrustations on the *Appennino*, too, existed for beholders as one particular state of the very substance they represented. These *spugne* not only look(ed) like melting/frozen streams, but they *are* streams. To this end, these images made by nature might be understood not as representations, but as presentations or re-presentations of nature. The earth, clouds, and streams (or sediment, vapor, and water) present themselves as what they *are*, or perhaps re-present substances in new states; the substances are simultaneously the materials, mediators, and images of art.

The relationship between stones, mountains, and the image found in nature, made by chance emerges repeatedly in Renaissance art theory.[329] In *The Craftsman's*

[329] For an overview of the ancient and Renaissance articulations, see H. W. Janson, "The 'Image Made by Chance' in Renaissance Thought," in *De Artibus Opuscula XL. Essays in Honor of Erwin Panofsky* I (New York: New York University Press, 1961), 254-266. Also see E.H. Gombrich, "The Image in the Clouds," in *Art and Illusion: A Study in the Psychology of Pictorial Representation* (Princeton and Oxford: Princeton University Press, 1960), 181 – 202; and Jurgis Baltrusaitis, trans. Richard Miller Cloth, *Aberrations: An Essay on the Legend of Forms* (Cambridge, MA: MIT Press, 1989) [First published 1957]. More recent contributions to the discussion of chance imagery can be found in Nevet Dolev, "'Such Shaping Phantasies': The Found Object in the Thought and Practice

Handbook, written in the late fourteenth century, Cennino Cennini instructs: "If you want to acquire a good style for mountains, and to have them look natural, get some large stones, rugged, and not cleaned up; and copy them from nature, applying the lights and the dark as your system requires."[330] Alberti suggested, in the early fifteenth-century treatise *On Sculpture*, that a "clod of earth" containing natural likeness inspired early artists.[331] In his *Notebooks,* Leonardo also remarked that an assortment of stones could help the artist imagine a landscape.[332] In each of these instances, agency rests with the artist. Cennini, Alberti, and Leonardo claim special powers of observation and

---

of the Late Renaissance," in *Norms and Variations in Art: Essays in Honor of Moshe Barasch* (Jerusalem: The Magnes Press, The Hebrew University, 1983), 104-128; Anna Bentkowska, "Anthropomorphic Landscapes in 16th- and 17th- century Western Art. A Question of Attribution," *Biuletyn Historii Sztuki*, 1-2, (1997): 69-91; Andrè Corboz, "L'Êrosion sculptrice et la 'reception sans oeuvre,'" *Artibus et Historiae* 23, no. 45 (2002), 223-233; Dario Gamboni, " 'Fabrication of Accidents': *Factura* and Chance in Nineteenth-Century Art," *Res: Journal of Anthropology and Aesthetics*, no. 36 (Fall 1999): 205-225; and, Dario Gamboni, "Stumbling Over/Upon Art," *Cabinet* 19 (Fall 2005), http://www.cabinetmagazine.org/issues/19/gamboni.php

[330] Cennini, 57.

[331] "I believe that the arts of those who attempt to create images and likenesses from bodies produced by Nature, originated in the following way. They probably occasionally observed in a tree-trunk or clod of earth and other similar inanimate objects certain outlines in which, with slight alterations, something very similar to the real faces of Nature was represented." Alberti-Grayson, 120-121. Alberti's and Leonardo's comments are founded in Pliny's anecdotes about an image of the muses being depicted in a gemstone and Protogenes throwing a sponge at a wall: ". . . . the most renowned gemstone is that of another kind, the famous Pyrrhus who fought a war against Rome. He is said to have possessed an agate on which could be seen the Nine Muses with Apollo holding his lyre. This was not due to any artistic intention, but to nature unaided; and the markings spread in such a way that even the individual Muses had their appropriate emblems allotted to them." Pliny, *Natural History*, Vol X, trans. D.E. Eichholz (Cambridge, MA, and London: Harvard University Press, 1962), 167.

[332] ". . . look at walls splashed with a number of stains or stones of various mixed colors. If you have to invent some scene, you can see there resemblances to a number of landscapes, adorned in various ways with mountains, rivers, rocks, trees, great plains, valleys and hills." Quoted in Janson, 260. Also note the collection of stones thought to evoke natural phenomena that were popular for cabinets of curiosities, or *kunstkammern*.

imagination for the artist, with the image made (and found) by chance in stones or earth acting as inspiration for the painter or sculptor.

Early modern beholders also acknowledged the role of nature-as-artist, and in their observations reflect an awareness of the "image made by chance." Like the art theorists referenced above, a number of early modern beholders documented stones that contained imagery: Albertus Magnus, a thirteenth-century bishop and author of the treatise *De Mineralibus*, saw a "bearded and crowned head" on a marble wall for a Venetian church; in the late sixteenth century, Ferrando Imperato (1535? – 1525/35), an Italian naturalist, detected "trees and shrubbery" in a piece of marble; and in the seventeenth century, a French amateur natural historian wrote about "a free-standing rock on the mountain by the sea so like a hermit that it is called 'the sinful brother, the hanged monk.'"[333] Aldrovandi, mentioned above for his relationship to the field of geology, owned a collection of stones (*Museum Metallicum*) that included examples he thought mimicked human anatomy.[334] And, finally, Francesco I de' Medici also stored stones with "chance images" in them in his *studiolo*.[335]

These examples mostly speak to the idea of an image of man found within natural formations; but if we can find figural images in nature, can't we find images of nature within figures – almost the inverse of Alberti's clod of earth?

The list of chance images found by Aldrovandi and others suggests that late Renaissance beholders were primed to find imagery in the raw materials of nature and

---

[333] These observations are discussed in Baltrusaitis, 67-93.
[334] See Paula Findlen, "Jokes of Nature," 292-331.
[335] See Feinberg.

practiced looking closely at small objects and discrete passages; also these beholders appreciated the multivalent possibilities of nature's materials, especially stones.[336] To this end, I propose that the encrustations on the *Appennino* could have been understood as passages of landscape within the figure. At the same time that the giant's hair and/or the frozen/melting streams were observed from a long-range view, a beholder engaged in close-looking could have perceived that the *spugne* represented mountains in microcosm, much like Cennino's and Leonardo's instructions for imagining a landscape suggest.[337] Simultaneously, these passages could have been understood as traces of the real landscape, as geological record. And the stalactites could have been seen as one of the states of water, petrified or suspended in time as a real landscape element, not only a re-presentation of it. As a palimpsest of volcanic activity or as natural curiosity, these passages invited close looking. And, from a phenomenological perspective, "the eye moves to the edge."[338] Beholders had/have the tendency to seek out things and spaces. Like beholders of the *pietra paesina* saw in the striated sediment linear boundaries that conjured landscape forms, beholders of the *Appennino* might have sought boundaries and borders, defining for themselves little landscapes "made by chance."

---

[336] See Dolev, 108-117. Also, on the handling of small-scale figural sculptures see Geraldine Johnson, "Touch, Tactility and the Reception of Sculpture in Early Modern Italy," in *A Companion to Art Theory*, ed. Paul Smith and Carolyn Wilde (Oxford: John Wiley & Sons, 2002), 61-74.

[337] On the idea of wilderness at every scale see Gary Snyder, *The Practice of the Wild* (San Francisco: North Point Press, 1990).

[338] See Edward S. Casey, "The Edges of Landscape: A Study in Liminology," in *The Place of Landscape: Concepts, Contexts, Studies*, ed. Jeff Malpas (Cambridge, MA and London: The MIT Press, 2011), 107. "The bond between boundary, bound, and fold is intense, and all three give shape to the smooth spaces of new or renascent place-worlds."

The passages of mountainous landscape within the *Appennino* are chance-driven because of two key ideas. First, they are depicted solely with natural facture, like the numerous examples cited above; and, as we have seen, the natural processes that produced the *spugne* were themselves characterized in terms of "accident" or spontaneity from the beholders' points-of-view. Second, these passages possibly are noted by an engaged beholder, but they possibly are not acknowledged by a passive viewer. There is a chance they will *and* will not be seen.[339] There is a kind of double-vector in terms of agency: the close-looker is rewarded doubly, by the image made by the artist and the image made in nature; otherwise, for the less engaged beholder, the synoptic and allegorical depiction of the mountain stands alone.[340]

Beyond the issues of natural-accident-as-creator and chance-in-beholding, an aesthetic of spontaneity or randomness appears in the placement of the encrustations. The way the encrustations are affixed, as I have already explained, is meant in part to represent streams and to suggest hair and a beard simultaneously. These landscape and human elements are intrinsically organic shapes, not based on obvious pattern; they might appear to behave spontaneously in nature and also on the monument. Thus, the designed spontaneity or randomness of these passages serves the double concerns of representation – to figure wild streams and hoary hair with the same sculptural passages,

---

[339] Dario Gamboni has discussed the issue of the endogenic receiver and subjectivity relative to the "image made by chance" briefly in "Stumbling Over/Upon Art."

[340] On the experience of landscape and landscape as experience, see the following select sources: Jay Appleton, *The Experience of Landscape* (London & New York: John Wiley & Sons, 1975); Denis Cosgrove, "Prospect, Perspective," 45-62; W.J.T. Mitchell, "Introduction," in *Landscape and Power*; and the seminar discussion moderated by James Elkins and published in *Landscape Theory*, ed. James Elkins and Rachel Ziady De Lue, *Landscape Theory* (New York and Abingdon, UK: Routledge, 2008), 90 ff.

making represented figure and landscape indistinguishable at the same time that the work of art and work of nature are blurred.

Beholders were aware of the artifice employed in this merging of art and nature. For example, the humanist Jacopo Bonfadio wrote in 1541 to a friend about his retreat at Gazano, on Lake Garda, that "…in the gardens…the industry of the local people has been such that nature incorporated with art is made an artificer and naturally equal with art, and from them both together is made a third nature, which I would not know how to name."[341] Bonfadio is unsure of how to label or further describe this *terza natura*; nevertheless, his writing attests to awareness of purposeful and calculated blurring of nature and art.

Relative to the materials of the *Appennino*, several sixteenth-century observers wrote about how "stalactites," "stones," and "sponges" were affixed to sculptures (including the *Appennino*) in an effort to conceal evidence of made-ness, such as the armature that helped support *spugne* and the water pipes that were hidden behind them. Vasari explained where to find these kinds of materials and how to secure them to sculptural works. Vasari noted five ideal sites for mining stalactites. Two of them were in Tuscany: the river Elsa, which flows southwest of Florence, and Monte Morello, about six miles northwest of Pratolino. Vasari's explanation continues:

> These stalactites removed from where nature has produced them are introduced in work done by the artificer and fixed with iron bars, with branches soldered with lead or in some other way, or they are grafted into the stones so as to hang suspended. They are fixed on to the Tuscan work

[341] Jacopo Bonfadio, 1541, in a letter to a friend. Quoted in John Dixon Hunt, "The Idea of a Garden and the Three Natures," in *Greater Perfections: The Practice of Garden Theory* (Philadelphia, PA: University of Pennsylvania Press, 2000), 33.

> in such a way as to leave it here and there exposed to view. Then by adjusting leaden tubes hidden between these stalactites, and distributing holes among them, jets of water are made to pour out, when a key at the entrance of the conduit is turned; and thus are arranged pipes for water and various jets through which the water rains down among the incrustations of these stalactites, and in falling sounds sweet to the ear and is beautiful to the eye.
>
> There is also another kind of grotto, of a more rustic fashion, imitating sylvan fountains in the following way. Some take sponge-like stones and joining them together sow grass over them, thus, with an order which appears disorder[ed] and wild, the grottoes are rendered very natural and real.[342]

Vasari's description of the stalactites implies an environmental awareness; but he is more concerned with the mimetic possibilities of nature, with multi-sensory experience, and with the idea of a contrived "wildness." He suggests that the maker take care in making, so that the work, in the end, does not appear unnatural – so that it does not look too "made."

In the first paragraph above, Vasari referred to work in grottoes at Castello, a Medici villa near Florence.[343] According to Montaigne, similar methods were at work at Pratolino. He described one of the grottoes thus:

> It is encrusted and formed all over of a certain material which they say is brought from certain mountains, and they have joined it invisibly with nails. There is not only music and harmony made by the movement of the water, but also a movement of several statues and doors with various actions, caused by the water; several animals that plunge in to drink; and things like that. At one single movement the whole grotto is full of water, and all the seats squirt water on your buttocks; and if you flee from the grotto and climb the castle stairs and anyone takes pleasure in this sport, there come out of every other

---

[342] *Vasari on Technique*, 87-88.

[343] Castello was acquired in the late fifteenth century by Lorenzo and Giovanni de' Medici. In the sixteenth century, Vasari and Giambologna both contributed to the decorative scheme in the gardens.

> step of the stairs, right up to the top of the house, a thousand jets of water that give you a bath.[344]

On the *Appennino* a similar concept was at play: water was propelled out of pipes hidden under the encrustations so that it appeared as if there were streams running down the figure. Inside of the three-level monument (fig. 3.15) two grottoes, also encrusted with *spugne* and shells, provided seating and housed fountains that functioned similarly: Bernardo Sgrilli, an eighteenth-century visitor, noted that the uppermost grotto featured "lovely water tricks," and another visitor described the hidden water spigots that could be activated if one visitor sought to trick another with the water feature.[345] Montaigne's description suggests that the encrustations at Pratolino were handled in a manner similar to the technique Vasari suggested – they were "joined invisibly," their made nature concealed.

Regarding Vasari's second bit of advice, Sgrilli confirms that on the *Appennino* itself, the encrustations conform to the style of haphazard placement that Vasari encouraged. Sgrilli wrote that the *Appennino* "is compounded by more pieces of stones and sponges that look as if they were placed randomly."[346] A couple of decades after the *Appennino* was completed, the Dutch artist and art theorist Karel van Mander described the kind of mountain landscape that artists should try to evoke:

> See how the stones hang like icicles on the rocks, irregular and green with moss, in this waterfall, and how the water rushes drunkenly through the twisting paths helter-skelter until it falls below; now you wise serpents of

---

[344] Montaigne, *Travel Journal*, 64.
[345] Sgrilli, 10; AVR Cod. Barb. lat., n. 5341, 205v. In Zangheri, *Pratolino*, Vol. I, 172.
[346] Sgrilli, 9.

> art, see how these mastic trees grow here and how strangely they lie! Who could dream of such a thing![347]

In this section on landscape painting from *Het Schilderboek* (1603-04), van Mander was inspired by the landscape prints of Titian and the Alpine landscape paintings of Breughel, in particular. Irregular, drunke[n], helter-skelter, and strang[e]: van Mander's idea of the perfect mountain landscape codifies in theory the technical advice of Vasari and the reception of beholders like Sgrilli and Montaigne.

This consistent valuing of (planned) randomness – and, judging from Van Mander's ideas, even precariousness – in depictions of mountains resonates with the imagery of volcanic activity explored above. Especially Sgrilli's short description of the placement of the *spugne* is reminiscent of Mazella's account of the aftermath of the Monte Nuovo eruption: "and the cinders were dispersed on all sides…so vast a quantity of stones and cinders were thrown round the chasm as to form the mountain now called the Monte Nuovo." The suggestion that the mountain was formed by matter being "thrown down" emphasizes the seemingly chance-driven (and violent) nature of the formation of Monte Nuovo's surfaces; while the handling of the materials of the *Appennino* was purposeful and more careful (less violent), the materials' *appearance* evokes the kind of natural accident Mazella witnessed.

To return to Agostino's comment that the *Appennino's* crevices "always sprouted flowers and foliage in accordance with the seasons": earlier I discussed how this observation suggests an awareness of natural (or living) landscape as image; how it

---

[347] Karel Van Mander, *Das Lehrgedicht*, ed. and trans. into German by R. Hoecker (Haag: M. Nijhoff, 1916), trans. into English by Mary Martin McLaughlin in *The Portable Renaissance Reader* (New York: Viking Press, 1953), 551.

brings attention to the mutable nature of the *Appennino*'s surfaces; and how it relates to the dissolution of the figure-ground boundary. Agostino's observation, in part, helps explain that natural landscape, for the engaged and close-looking beholder, is a subject of the *Appennino*. Taken in concert with Vasari's description of rustic grottoes with their grass-covered *spugne* that produce a "wild" and "natural" effect, Agostino's comment can be understood as evidence of "third nature" and as suggestive of the "image made by chance" on the *Appennino*. It is as if on the exterior of this monument, clad in its seasonal vegetation, Vasari's grottoes have been turned inside-out. The qualities that Vasari encourages grotto designers to cultivate are achieved by nature.[348]

The green growth on the *Appennino* was possible, in part, because of the role that the monument played in transforming the greater landscape of Pratolino. When Montaigne visited Pratolino, he made critical observations about its situation, as discussed in the Introduction. His description of the site warrants quotation again:

> It seems as though [Francesco] purposely chose an inconvenient, sterile, and mountainous site, yes, and even without springs, so as to have the honor of sending to get water five miles from there, and his sand and lime another five miles. It is a place that has nothing level about it. You have a view of many hills, which is the general shape of the country. . . . And they are building the body of a giant, which is three cubits wide at a rough

[348] Pozzana suggests that the *spugne* on the *Appennino* were chosen because of their extremely porous quality, which meant they were hospitable to plant growth, easy to "sow grass over," like Vasari suggested. Specifically, she notes the ivy that crowned the head of the *Appennino* (before conservation) as a possible intentional planting, but does not say if it was a Renaissance notion or a more modern intervention. She also does not provide documentation that the *Appennino* was purposefully sown with grasses – instead she refers to the spontaneous growth of "wild plants." After the major conservation efforts of the 1980s and subsequent cleanings, the monument continues to sprout plants, demonstrating that purposeful cultivation was not necessary, in part given the entanglement of the monument with the woods around it. See Pozzana, "I restauri della struttura," 126.

> estimate, and the rest in the same proportion; from this will pour a fountain in great abundance.[349]

Montaigne not only articulates environmental awareness, as discussed previously in this study, but also he frames the project in terms of displaced nature. He asserts that because of the isolated location and desolate environment importing materials and re-routing water are challenging but necessary. As part of this re-routing dynamic, the *Appennino* participated in disrupting the Mugnone River. Along with other fountains at Pratolino, the sculpture conducted water that was redirected from the river for irrigation, watering livestock, and laundry. This redistribution of water transformed the "sterile" site into a verdant and habitable place. But as Montaigne noted, the water most obviously emerged as visual entertainment: in addition to spouting from other sculptures and fountains, it erupted from the mouth of the fantastical creature that the *Appennino* presses down with his left hand.[350] (Unfortunately, today the fountain is not active.) Formally, the colossal figure could be understood as forcing water from its origins within the mountain – a metaphor for the real detour that the Mugnone took at Pratolino.[351]

In multiple iterations, then, but most especially in the waterworks and verdant grounds at Pratolino, displacement of the river obviously resulted in generation. Robert Dallington, an English visitor to Pratolino around the turn of the seventeenth century, was aware that water conducted by the *Appennino* made this possible. He wrote, "Out of his mouth falleth into a very faire poole, al[l] the water that serves the worke on the other

---

[349] *Montaigne's Travel Journal*, 64-65. The water originated at Monte Senario, five miles away.
[350] See Lazzaro, "Wash Water," 317 – 326; Lazzaro, *The Italian Renaissance Garden*, 131-166. Also see Smith, "Pratolino," 155-168.
[351] See Lazzaro, "Wash Water," 319.

side of the Pallace, among which are many sights yeelding very great content, . . . more delightsome to be seene, than pleasant to be discoursed of...."[352] Dallington alluded to the fact that water coursing through the *Appennino* not only vivified the giant and sea creature, but it also animated a number of other fountains and *giochi d'acqua* around the site. The *Appennino* worked to harness nature into the service of culture, both for practical and artistic ends.

Thus, the relationship between the *Appennino* and the garden as a whole embodied the idea of a "third nature," as coined by Bonfadio and another sixteenth century writer, Bartolomeo Taegio (c. 1520-1573), and as clarified by the garden scholar and art historian Claudia Lazzaro: that is, a new nature that is a product of the environment and human intervention in it.[353] In its displacement, the Mugnone is not *just* subjected to human interference, but it in fact works to create art.[354] Streaming down the *Appennino*, making the sculptural description of melting tributaries palpable, and also irrigating the crevices that sprouted florae, the Mugnone made a third nature that was at once purposeful and accidental, part contrived and part left to chance.

---

[352] Quoted in Hunt, 92-93.
[353] Bartolomeo Taegio, *La Villa* [Milan, 1559].
[354] For discussion on "third nature" in Renaissance gardens, see Thomas E. Beck, "Gardens as a 'third nature': the ancient roots of a renaissance idea," *Studies in the History of Gardens & Designed Landscapes: An International Quarterly* 22, no. 4 (2002): 327-334; John Dixon Hunt, "The Idea of a Garden," 32-75; Lazzaro, "Gendered Nature," 247-248. The origin of the concept can be traced to Cicero: "We enjoy the fruits of the plains and of the mountains, the rivers and the lakes are ours, we sow corn, we plant trees, we fertilize the soil by irrigation, we confine the rivers and straighten or divert their courses. In fine, by means of our hands we essay to create as it were a second world within the world of nature." Cicero, Marcus Tullius, *De natura deorum; Academica*, trans. H. Rackham. (Cambridge, MA: Harvard University Press, 1933), 271. On this see Hunt, "Idea of a Garden," 33-34.

Conclusions: Illusion/Materiality/Time

In the sense that they are "real metaphors," the fragments of lava and stalactites are exploited because of their natural facture; they are not worked, modeled, polished or otherwise altered in order to re-present frozen / melting streams because their surface qualities are already (evocative of) those things. The hardness and cragginess is celebrated, not suppressed. The ground of the work, which in this case is the natural environment, is entangled with the work: the figure is in the landscape, and the landscape is in the figure. The botanical and geological fragments achieve figuration and undo it simultaneously.

Looking closely at the botanical and geological materials of the *Appennino* draws attention to the relationship between illusion and materiality in Renaissance art. Traditionally, these two aspects of composition – its stuff and its content – have been understood in opposition to each other in early modern art. In the sixteenth century, for example, Vasari noted works from Michelangelo's *oeuvre* that illustrate this dichotomy: the *Moses* "is executed so well . . . that it seems as if the chisel has become a brush," while the *Slaves* are only "roughed out" and for Vasari did not merit explication.[355] Smooth, painterly surfaces suggest completion and illusion; rough ones do not.

Twentieth-century critical analysis of the issue tended to endorse Vasari's observations: in *Art and Illusion*, Gombrich identified Vasari's accounts of Donatello's

[355] See Giorgio Vasari, *The Lives of the Artists*, trans. Julia Conaway Bondanella and Peter Bondanella (Oxford and New York: Oxford University Press, 1998), 434.

relief sculpture and Titian's late paintings wherein the obviousness of facture, upon close looking, served to disturb illusionistic pretensions, while it worked in favor of them from far away.[356] While Gombrich ultimately viewed roughness and smoothness in dualistic terms, he suggested that Vasari's discussion of Titian, in particular, made room for the rough mode alongside the smooth. Vasari called attention to the spatial relationship between the viewer and the canvas, and made a distinction between the earlier and later works:

> It is true, however, that the method of work which he employed in these last pictures is no little different from the method of his youth, for the reason that the early works are executed with a certain delicacy and a diligence that are incredible, and they can be seen both from near and from a distance, and these last works are executed with bold strokes and dashed off with a broad and even coarse sweep of the brush, insomuch that from near little can be seen, but from a distance they appear perfect. This method has been the reason that many, wishing to imitate him therein and to play the practised master, have painted clumsy pictures; and this happens because, although many believe that they are done without effort, in truth it is not so, and they deceive themselves, for it is known that they are painted over and over again, and that he returned to them with his colours so many times, that the labour may be perceived. And this method,

---

[356] The same could be said for the sculpted surfaces of Donatello's *Magdalene* and of Michelangelo's *St. Matthew* among many other of their works, as well as for Tintoretto's paintings, to cite just a few examples. See Vasari-Bondanella, 67-69. Vasari describes the two *cantorie* for the New Sacristy of Santa Maria del Fiore, Florence. One was made by Luca della Robbia, the other by Donatello: ". . .Donatello, who later carved the decoration for the other organ facing Luca's, completed his work with much more judgment and skill than Luca had employed . . . by executing that work in an almost entirely rough-hewn and unpolished form, so that from a distance it would look better than Luca's (as it does).. . . Artists should pay close attention to this, since experience makes it clear that from a distance all things – whether painting, sculpture, or any other similar thing – have greater boldness and force if they are well roughed out rather than well finished. . ."

> so used, is judicious, beautiful, and astonishing, because it makes pictures appear alive and painted with great art, but conceals the labour.[357]

Essentially, Gombrich concurs with Vasari and forwards the idea that the handling of paint in Titian's *Nymph and Shepherd* (fig. 3.17) calls attention to the work's materiality and making.[358] The conventions of interpretation, from Vasari to Gombrich, understand materiality and illusion as inversely related.

As this chapter has demonstrated, materiality and illusion do not have to be mutually exclusive, but they may coexist, at times antagonizing each other and at times cooperating. The botanical and geological materials – the "flowers and foliage" and *spugne* – figure landscapes on the *Appennino* because they present their own material natures; as they interact upon the *Appennino*, their material qualities and illusionistic possibilities are indebted to, re-present, and index multiple frameworks of time.

Agostino's statement that the *Appennino* always sprouted "flowers and foliage in accordance with the seasons" reveals his awareness of the passage of time and implies that the sculpture's surface served as a platform for tracing time through the life cycles of plants. Agostino's observation about the plants' temporality was not exceptional within the sixteenth-century reception history of plants, nor in the cultural imagination of gardens. For example, in *The Godly Feast* (1522), Erasmus' interlocutor Eusebius explains that "…a garden isn't always green, nor flowers always blooming. *This* garden

---

[357] Giorgio Vasari, *Lives of the Most Eminent Painters, Sculptors & Architects,* trans. Gaston Du C. de Vere, Vol. IX (London: MacMillan & Co. Ld. & The Medici Society Ld., 1912-1914), 174.
[358] Vasari-Bondanella, 503-504.

grows and pleases even in midwinter."[359] In Leonardo's notes on plants, we find observations about the life of a plant from seed from to maturity, seasonal changes of plants, and the ways that plants reacted to temporal conditions like light.[360] And the naturalist Calzolari wrote about his contemporary Luca Ghini (1490-1556) ascending Monte Baldo "to contemplate the diversified and beautiful phases of nature there."[361] Through the lens of Agostino's comment, the *Appennino* can be seen as a place where flowers and foliage embedded notions of cyclical change in the monument, making it a place to "contemplate the phases of nature." The constant generation of "flowers and foliage" provided perennial vividness, while the seasonal decay and regeneration of plants marked the passage of time for beholders of the *Appennino*. Simultaneously, the generative work of nature meant that illusion could not be indefinitely suspended; any single transitory state or botanical phase did not persist. Within the relatively static sculpture, plant life was constantly changing form and state. Nature's materiality antagonized sculptural illusion by punctuating the figure's crevices and drawing Agostino's attention to these crevices; yet at the same time, for close-looking beholders, these botanical materials might have served to make the "mountain" more real. Both results are possible because of the plants' chronic behavior.

---

[359] Craig R. Thompson, trans., *The Collected Works of Erasmus: Colloquies* (Toronto: University of Toronto Press, 1997), 179. Lines 32-33.
[360] See Reeds, "Botanical Illustration," 221; Francis Ames-Lewis, "Leonardo's Botanical Drawings," *Achademia Leonardo da Vinci* (*ALV Journal*) 10 (1997), 117-24; reprinted in Claire J. Farago, ed., *Leonardo da Vinci: Selected Scholarship,* 5 vols. – vol. 5, *Leonardo's Science and Technology* (New York: Garland, 1999), 275-82.
[361] Francesco Calzolari, *Il Viaggio di Monte Baldo* (Venice, 1566). Quoted in Edward Lee Greene, et. al. eds., *Landmarks of Botanical History,* Volume II (Stanford, CA: Stanford University Press, 1983), 710.

The botanical time of the *Appennino* was anchored in place. Its spatial dimension was static. Conversely, the *Appennino* indexes the travel across space and through deep time of the stony fragments that encrust its surfaces. The time of these *spugne* is not cyclical or repetitive like the plants', rather it is aggregative. This long-accreted geological time of the *spugne*, in contrast to that of the plants, produced material nature that facilitated figuration of human and landscape components. It served illusionistic aims.

The coexistence of botanical and geological materials and the different ways that they exhibit the passage of time creates temporal tension within the monument. While the geological fragments index deep time and evoke primordial being, the processes they (re)present are of the moment: we are to understand these outcroppings as freezing or melting, fleeting metamorphoses of the states of water. Another layer of temporal tension, or confusion, exists within this operation. The traces of long-term processes represent nearly instantaneous transformation. Thus the *Appennino* maintains the "plural present" and possesses a "plural temporality," both of which complicate the spatial-temporal significance and illusion-materiality relationships within the work.[362]

As George Kubler noted, we tend to think in chronological terms that are relative to human life cycles, while artefacts, including many artworks, often persist in ways that exceed comparison with human time.[363] As an artwork, the *Appennino* exhibits long

---

[362] See Kubler, 129; Alexander Nagel, *Anachronic Renaissance*, 10.
[363] Kubler, 84. Kubler suggested that artifacts inhabit St. Thomas Aquinas' time of angels – that artifacts persist in a way that cannot be measured by the solar-based calendar of days, months, or years; that they are "so durable that they antedate every

duration; as relics of volcanic eruption or calcareous concretion, some of its materials exhibit even longer duration. However, the *Appennino*'s botanical and geological materials also manifest a series of or repetition of present moments. Solar-based botanical cycles provide one way to measure the contemporaneity of the *Appennino*. Rather than spanning a human lifetime, though, these cycles are seasonal and annual in character; they are perpetually regenerative. The re-presented stream, perpetually in the process of freezing or melting, is another series or repetition of present moments. Thus the materiality and figuration of the monument foreground decay and regeneration processes.

These processes are dependent upon and inseparable from the plural temporalities they manifest, suggestive of a time-spiral or folded time, a constant "unfurling" of the sort that has characterized several art-nature interactions discussed in this study already. The botanical matter palpably re-penetrates the "pourous, spongy … irregular passages"[364] of the figure, while the geological matter does this notionally (and if the fountain functioned water would flow through the passages, too.) The processes, their temporalities, and their materialities make the *Appennino* entropic, and the entropy reflects the constant confrontation between art and nature, or the ecological situation of the work. Rather than neatly reflecting conventional art-nature tropes, wherein art and nature were seen as generative rivals, botanical growth and geological fragments are cooperative, and at points destructive, within the *Appennino*, drawing attention to

---

living creature on earth, so indestructible that their survival may, for all we know, approach infinity."

[364] Deleuze, 5.

processes of decay, state-shifting, and regeneration that return the beholders' attention to marks and measures of botanical and geological time. In so doing, the *Appennino* reframes etiological tropes of art and nature in terms of environmental transgressions.

CHAPTER FOUR

Figures in/from the Landscape

Introduction

Ten meters in height, Giambologna's *Appennino* transforms the landscape of its immediate environment (fig. 1.1). Emphatically, it draws attention to its own figuration and its materiality. These aspects of the monument are amplified because of the same essential quality that draws attention to its relationship with nature and the ways that it figures landscapes: the *Appennino* is colossal. At the same time that the monument challenges traditional figure-ground relationships, it places the beholder in an exceptional relationship to the sculpted figure. Both of these facets of the monument make it "eminently dynamic."[365] The body of the giant requires circumambulation for full apprehension. In the past, beholders became explorers of it, climbing its virtual mountainsides (fig. 1.22) and inhabiting its interior, which is comprised of a series of grottoes and chambers (fig. 1.9). These possibilities of corporeal engagement by the beholder have inspired a rich reception history, one that highlights how visitors to the site not only were impressed by the scale of the work, but also repeatedly were intrigued by its formal qualities.

This chapter examines key formal elements of the *Appennino*: scale, style, and materiality. Each of these elements requires the beholder to think of bodily relationships to the landscapes contained within, referenced through, or transformed by the monument.

---

[365] Arnheim, *Art and Visual Perception,* 242. See Chapter 3, 132-136.

In so doing, these elements reflect upon or generate responses to the art history of the *Appennino* – its engagement with artistic precedents and with the history of art. The ways that the formal elements discussed above surface in the monument, in turn, illuminate art historical themes of competition, period style, reception, and historiography. These elements and themes reveal the *Appennino's* relationship to sculpted male figures of the sixteenth century, especially its relationship to Michelangelo's work. By referencing High Renaissance sculptural ideals the *Appennino*, a late Renaissance project, exhibits anachronism. Just like its subject and materials manifest chronic tension, the *Appennino's* style also does this, enfolding markers of the past at the same time that it transcends its references in terms of scale.

Scale and Style: Colossal Competition, Disfiguration, and the Mountain Landscape

> He remained in those mountains for more than eight months, with two helpers and a horse and no provision other than food. One day while there, he was looking at the landscape, and he was seized with a wish to carve, out of a mountain overlooking the sea, a colossus which would be visible from afar to seafarers. He was attracted largely by the suitability of the rock, which could be carved conveniently, and by the wish to emulate the ancients, who when they chanced to be in a place, perhaps for the same reasons as Michelangelo, either to escape idleness or for whatever other purpose, left behind them some sketched, imperfect traces which give very good proof of their skill. And he would certainly have done it if he had had enough time or the project for which he had come had permitted. One day I heard him speak of this with great regret.[366]
>
> --Ascanio Condivi, *Life of Michelangelo* (1553)

[366] Ascanio Condivi, *The Life of Michelangelo*, trans. Alice Sedgwick Wohl, ed. Hellmut Wohl (University Park, PA: The Pennsylvania State University Press, 1999), 29-30. Michelangelo probably dictated this to Condivi, but for the purposes of this chapter the authorship is less important than the content of the anecdotes.

> "[I am a] Macedonian architect," replied Dinocrates, "who suggests schemes and designs worthy your royal renown. I propose to form Mount Athos into the statue of a man holding a spacious city in his left hand, and in his right a huge vase, into which shall be collected all the streams of the mountain, which shall thence be poured into the sea." Alexander, delighted at the proposition, made immediate inquiry if the soil of the neighborhood were of a quality capable of yielding sufficient produce for such a state. When, however, he found that all its supplies must be furnished by the sea, he thus addressed Dinocrates: "I admire the grand outline of your scheme, and am well pleased with it: but I am of opinion he would be much to blame who planted a colony on such a spot."[367]
>
> --Vitruvius, *De architectura* (first century BCE)

Michelangelo's 1505 idea for carving a colossus in the mountainside at Carrara, recounted by his biographer Ascanio Condivi (1525 – 1574), overtly challenged antique descriptions of colossal monuments.[368] Michelangelo supposedly was inspired by a passage in Vitruvius, who wrote that the Greek sculptor Dinocrates wanted to carve a man out of Mount Athos as a tribute to Alexander the Great. Neither Vitruvius nor Michelangelo realized their ambition for transforming a mountain into a man.[369] According to Condivi, time and the demands of Michelangelo's patron Pope Julius II,

---

[367] *The Architecture of Marcus Vitruvius Pollio, in Ten Books*, trans. Joseph Gwilt (London: John Weale, 1860), 30.

[368] In general terms, the colossal type was central Italian, inspired by antique sculpture and by Michelangelo. See Bush, 264.

[369] In addition, Michelangelo entertained the possibility – or found the possibility entertaining? (it seems he might have been joking…) – of creating a colossus at the Palazzo Medici in Piazza San Lorenzo, Florence, but he did not realize this project, either. The San Lorenzo colossus would have been sculptural and architectural, perhaps housing a barber shop on the ground floor and a dovecote in the upper stories. For Michelangelo's reaction to the request by Pope Clement VII, see *Il Carteggio di Michelangelo*, 188-191. Also see John Addington Symonds, *The Life of Michelangelo Buonarroti, Based on Studies in the Archives of the Buonarroti Family at Florence*, Vol. I (London: John C. Nimmo, 1893), 400-401; Bush, 293; James Beck, *Michelangelo: A Lesson in Anatomy* (New York: Viking Press, 1975), 17-26; Heikamp, 223; Goffen, 357-359.

who had recently commissioned a tomb project from the artist, prevented Michelangelo from doing so.[370] Apparently Michelangelo lamented this. According to Vitruvius, environmental conditions and political motivations of Alexander the Great likewise prevented Dinocrates from achieving his idea. Surely the Mount Athos project would have brought fame to Dinocrates, but his motivation, at face value, was to honor Alexander the Great. Michelangelo's motivation, instead, pointedly was to compete with ancient artists like Vitruvius, and, perhaps, to surpass Vitruvius or to succeed where Vitruvius had failed. These anecdotes were meant to contribute to the legendary nature of each artist, to bolster biographical accounts, rather than necessarily to attest to real, concrete achievements on the part of Dinocrates or Michelangelo. However, they are useful to illustrate the theme of competition in Renaissance art and Renaissance art history, and they draw attention to the role of sculpting a colossal figure in such competition.

Competition or rivalry manifested in multiple formats during the period, including but not limited to Renaissance art / ancient art, Renaissance artist(s) / ancient artist(s), Renaissance artist / Renaissance artist, and courtly or civic rivalry.[371] In addition to

---

[370] The tomb project also could be characterized as an unrealized colossal endeavor relative to Michelangelo's original concept, or at least under-realized. Julius II commissioned the project in 1505, interrupted it with his commission for the Sistine ceiling, and died in 1513 with the project still incomplete. Dealing with a host of Julius II's heirs, and juggling demands from the Medici and later popes, Michelangelo completed the tomb in 1545. It is a much-abbreviated form, a wall-tomb in San Pietro in Vincoli, rather than the grand freestanding mausoleum intended for St. Peter's basilica.

[371] For example, in the *Lives of the Artists*, Giorgio Vasari frames an art history wherein Renaissance artists are seen not only to revive antique ideals, but also to surpass the accomplishments of ancient artists in terms of technique and concept. At Michelangelo's funeral, orators favorably compared him to Dinocrates, as well as to other ancient artists

considering these competitive dyads relative to Condivi's text, we also might understand Dinocrates' and Michelangelo's projects as competitions with and antagonistic towards nature, in the sense that each artist sought to figure or transform an imposing mountain landscape.[372] These projects could have resulted in damage to the environment. Alternatively, these hypothetical projects could be understood in triumphal terms. If the mystifying, threatening, or incomprehensible associations slipped away from beholders' perceptions of mountains during the Renaissance, in such an historical context the achievement of sculpting a mountain might have seemed all the more superlative. But, temporarily setting aside the historical character of mountains and the idea of transforming nature, the sheer scale of mountains amplifies other concerns embedded in the art historical competition between Michelangelo and Dinocrates. At the same time that the scale of mountains emphasizes the daunting scope of both projects and the potential for colossal production, the scale also makes the non-realization of the projects conspicuous.

The competition between Michelangelo and Dinocrates played out in texts about Michelangelo. In addition to Condivi, Vasari also noted in his biography that "[Michelangelo] went to Carrara to excavate all of the marble with two of his

---

like Xeuxis, Apelles, and Phidias. See Jacopo Giunta, *The Divine Michelangelo: The Florentine Academy's homage on his death in 1564*, trans. Rudolf and Margot Wittkower (London: Phaidon, 1964), 78, 82. The competition for the Florence Baptistery doors commission is one example of Renaissance artists competing directly against each other; for discussion of that episode and also of the multiple manifestations of rivalry outlined above, see Goffen, "Imitatio and Renovatio," in *Renaissance Rivals*, 3-23.

[372] On one hand, then, these projects could be viewed through an ecocritical lens as examples of humans damaging their environment. As discussed in Chapter Two, the mining of mountains for sculptural materials was criticized in antiquity, for example by Pliny, and in the sixteenth century as well. See Chapter Two, 91-92.

apprentices…he spent eight months in those mountains without any other salary or provisions, where, challenged by those massive blocks, he conceived many fantastic ideas for carving giant statues in those quarries in order to leave a memorial of himself as the ancients had already done."[373] And, Michelangelo said to Condivi that the project was "a madness that came over me, but if I could have been sure of living four times longer than I lived, I would have taken it on."[374] The artist underscored the colossal scale of the project by suggesting that an extraordinarily long life – a colossal lifespan, if you will – would be necessary to complete it. With this statement, Michelangelo acknowledges that the time needed for the project exceeded comparison with a human lifespan – like the materials of the *Appennino* (and of the Carrara mountains, for that matter) represent processes of deep time, the creation of this kind of monument might also be of long duration. Thus the physical and temporal scales of a mountain-man were understood as colossal.

The anecdote of Alexander and Dinocrates was brought up repeatedly in Renaissance writing about art: in the fifteenth century, Francesco Villani, Alberti, Filarete, and Francesco Colonna recounted the story. For these writers, the idea of the colossus was connected to the ability of invention, and also to *ingegno*.[375] In the sixteenth century, Vasari expressed admiration for large-scale works, such as the *David,* for possessing "grace," praise he withheld from Baccio Bandinelli's *Hercules and*

---

[373] Vasari-Bondanella, 432.
[374] Quoted in Goffen, 138. From a *postilla* dictated by Michelangelo to Calcagni, included in Condivi's biography of Michelangelo.
[375] Martin Kemp, "From 'Mimesis' to 'Fantasia': The Quattrocento Vocabulary of Creation, Inspiration and Genius in the Visual Arts," *Viator* 8 (Jan.1977): 352-353.

Cacus.[376] Cellini wrote that sculpting a colossus was "the most difficult and the most admirable" sculptural feat, because of both conceptual and technical challenges.[377] Vasari and Lomazzo both noted that carving colossi required *giudizio dell'occhio,* judgment of the eye.[378] Thus, in descriptions and theories of Renaissance art, the colossus was associated with intellectual, stylistic, and technical accomplishment.

As an idea, rather than a realized monument, Michelangelo's colossus served his historical / biographical image. Like numerous other anecdotes about rivalry and competition from antiquity forward, the description of Michelangelo's engagement with Dinocrates' legend might have functioned to underscore Michelangelo's specialness, to paraphrase the analytical framework of Ernst Kris and Otto Kurz.[379] It also could be understood to promote the social status of the artist.[380] The text-to-text response was a literary and hypothetical competition, fundamentally rhetorical. How do the dynamics and significance of artistic competition about colossal figures change when that competition involves a material response to text?

---

[376] Vasari, 428.
[377] Cellini, *Opere,* ed. Bruno Maier (Milan: Rizzoli, 1968), 835-36. On these examples and others relative to art theoretical terms of the sixteenth and seventeenth centuries, see Steven F. Ostrow, "The Discourse of Failure in Seventeenth-Century Rome: Prospero Bresciano's *Moses*," *Art Bulletin* 88, no. 2 (June 2006): 267-291. Also see Summers, *Michelangelo*, 126, 374-376.
[378] Gian Paolo Lomazzo, *Scritti sulli arti*, ed. Roberto Paolo Ciardi, 2 vols. (Florence: Centro Di, 1974), vol. 2, 288.
[379] Ernst Kris and Otto Kurz, *Legend, Myth, and Magic in the Image of the Artist: A Historical Experiment*, trans. Alastair Lang (New Haven and London: Yale University Press, 1979), 120-125. (First published 1934.)
[380] James Clifton, "Vasari on Competition," *Sixteenth Century Journal* 27, no. 1 (1996): 28.

If Michelangelo's idea was to supersede Dinocrates' idea, Giambologna's *Appennino*, in turn, challenged Michelangelo's unrealized idea.[381] Whereas Michelangelo wanted to transform an entire mountainside into a figure, Giambologna used parts of mountains to sculpt a figure personifying mountains: he used an outcropping of living rock for the base of the figure and encrusted the surfaces with pieces of lava and stalactites mined from distant mountains and caves.[382] Among other scholars who have commented upon the relationship between the *Appennino* and Condivi's description quoted above, Charles Avery argued that Giambologna's "principal motivation was to equal the fame of Michelangelo."[383] Giambologna wanted parity, perhaps, but implicit in his desire to equal Michelangelo was competitiveness.[384] In other words, in order to determine if he was as good as Michelangelo, Giambologna had to engage Michelangelo's concepts, and, by virtue of doing so, compete with him. Even if

---

[381] Though, another and broader way of understanding the *Appennino* is in the context of Michelangelesque monsters and grotesque figures, as a descendent of (and in competition with) Michelangelo's *Faun* —that is in the context of material objects, not ideas: see Paul Barolsky, "Rabelais's Giants and Erasmus's Folly," in *Michelangelo's Nose: A Myth and Its Maker* (University Park, PA: The Pennsylvania State University Press, 1990), 36-37.
[382] Giambologna maintained a productive studio; by the middle of his career, his primary hands-on work involved modeling ideas in clay, and other conceptual activity, and he delegated most other manual responsibilities; perhaps he even self-fashioned as an intellectual (architect) in order to distance himself from the latter. See Avery, 28-30. On top of this, at Pratolino, Francesco, through his superintendents and designers, forced local peasants to labor in weeks-long cycles in order to construct the lake, villa, and other large-scale projects at the site. See Butters, "Pressed Labor and Pratolino."
[383] Avery, *Giambologna*, 45. At the same time, as Michael Cole suggested, especially when Giambologna himself invoked comparison or competition with the late Michelangelo, Giambologna could be seen as distancing himself from more immediate rivals like Ammanati (who won the commission for the Neptune fountain over Giambologna) or Vincenzo Danti. See Cole, "Introduction," in *Ambitious Form: Giambologna, Ammanati, and Danti in Florence* (Princeton and Oxford: Princeton University Press, 2011), 1-3.
[384] On the issue of parity in Renaissance artistic competition, see Goffen, 6.

Giambologna did not articulate that competition and victory were his aims, they were implicit in the act of taking on a Michelangelesque notion.

Though the *Appennino* is not at the scale of the Carrara mountains, it embodies Michelangelo's plan in terms of its content, a colossal figure, and in terms of its site, a mountain landscape.[385] Thus, the *Appennino* is situated within a long history of art, anecdote, and competition: it interprets a High Renaissance textual sketch inspired by a Roman account about a Greek artist. The scale of the *Appennino* also draws attention to the work's physicality – materials, form, and pose – and in turn to the art history contained within the figure. In doing this, the *Appennino* becomes a point of departure for looking at the Renaissance history of rivalry and competition with Michelangelo,[386] as well as the art historical understanding of that issue. Placing Giambologna's monument in this context illuminates its character as a competitive work, and it also clarifies how the physical landscape and its materials become a figuration of art history.

Beginning with Vasari, art historians repeatedly have drawn attention to how Renaissance artists engaged with the artistic precedent of Michelangelo.[387] Vasari's "Life

---

[385] In addition, its pose engages the forms and compositions found in Michelangelo's *oeuvre*, as will be discussed later in this chapter.

[386] I make this distinction because all competition is not rivalry. Michelangelo did not consider Giambologna a rival, but Giambologna, perhaps, sought competition with Michelangelo. Also, all competitions and rivalries do not necessarily beget winner-loser dyads, as will be explored later in the chapter.

[387] For examples, see the following: chapters on Raphael and Fra Bartolommeo especially in Heinrich Wölfflin, *Classic Art: An Introduction to the Italian Renaissance* (London: Phaidon, 1952); E.H. Gombrich, *Gombrich on the Renaissance, Volume 3: The Heritage of Apelles* (London: Phaidon, 1976), 55-56, 117-118; Kathleen Weil-Garris, "Bandinelli and Michelangelo: A Problem of Artistic Identity," in *Art the Ape of Nature: Studies in Honor of H.W. Janson,* ed. M. Barasch and L. Freeman Sandler (New York: H.N.Abrams, 1981), 223-251; Robert S. Leibert, M.D., "Raphael, Michelangelo,

of Michelangelo" includes near the beginning a sketch of Michelangelo's challenge of (and surpassing of) his master, Domenico Ghirlandaio: "Michelangelo's skill and character grew in such a way that it amazed Domenico, who saw him executing works beyond a young man's ability, for it seemed to him Michelangelo not only surpassed his other students (of whom he had a large number) but on many occasions equaled works he himself had completed." Vasari continues to explain the significance of a moment wherein Michelangelo teaches his peer by correcting Ghirlandaio's design: "…and it is a marvelous thing to see the difference between the two styles and the excellence and judgment of a young man who was so spirited and bold that he had enough courage to correct the work of his master."[388] Throughout, Vasari recounts episodes – about the faun, the Lapiths and Centaurs, the cupid – wherein there is an implicit competition with antiquity. At the same time, Vasari has Michelangelo constantly outdoing himself, and, thus, constantly in competition with himself. The passage about the Rome *Pietà* is particularly illustrative of this idea.[389] In addition, Vasari explicitly refers to the fresco preparations for the Palazzo della Signoria by Leonardo and Michelangelo as a

---

Sebastiano: High Renaissance Rivalry," *Source: Notes in the History of Art* 3, no. 2 (1984): 60-68; Catherine Sousloff, "Imitatio Buonarroti," *Sixteenth Century Journal* 20, no. 4 (1989): 581-602; Clifton, "Vasari on Competition," 23-41; Fredrika H. Jacobs, "Aretino and Michelangelo, Dolce and Titian: *Femmina, Masculo, Grazia*," *Art Bulletin* 82, no. 1 (March 2000): 51-67; Stephen J. Campbell, "'*Fare una Cosa Morta Parer Viva'*: Michelangelo, Rosso, and the (Un)divinity of Art," *Art Bulletin* 84, no. 4 (2002): 596-620; Goffen, *Renaissance Rivals*; Andrew Ladis, "Identity and Imperfection in the Shadow of Michelangelo," in *Victims and Villains in Vasari's Lives* (Chapel Hill, NC: University of North Carolina Press, 2008). On Michelangelo as a model more broadly, see *Reactions to the Master: Michelangelo's Effect on Art and Artists in the Sixteenth Century*, ed. Francis Ames-Lewis and Paul Joannides (Aldershot, UK, and Burlington, VT: Ashgate, 2003); Emison, *Creating the "Divine" Artist*.

[388] Vasari, 417-416.

[389] Vasari, 425-426.

competition.[390] When explaining the achievement of the *Last Judgment*, Vasari packages together Michelangelo's self-reflexive victory with that over other artists: "When the Last Judgment was uncovered, Michelangelo proved not only that he had triumphed over the first artisans who had worked in the chapel but that he also wished to triumph over himself in the vault he had made so famous, and since the Last Judgment was by far superior to that, Michelangelo surpassed even himself…"[391] With this single project, Vasari suggests Michelangelo triumphs at once over a previous generation of painters: Botticelli, Perugino, Ghirlandaio, Luca Signorelli, Pinturicchio, and Cosimo Roselli, among the "first artisans who had worked in the chapel," who were responsible for the fresco cycles of the Life of Moses and the Life of Christ.

Competition is an overarching theme of Renaissance art as told by Vasari, and it is intrinsic to his life of Michelangelo – but Michelangelo seeks competition with antiquity and nature, not with other artists. [392] Those are his standards of measurement, in addition to his own production; while for other artists, he is the standard of measurement.[393] And competition with Michelangelo also might be insidious: as James Clifton argued, in Vasari's *Lives*, competition with Michelangelo seems definitive of High Renaissance art, and at the same time Vasari suggests it is detrimental to the

---

[390] Vasari, 430.
[391] Vasari, 462.
[392] The idea was reiterated by Benedetto Varchi in his funeral oration for Michelangelo. Benedetto Varchi, *Orazione funerale di M. Benedetto Varchi fatta, e recitata da lui pubblicamente nell'essequie di Michelangelo Buonarroti in Firenze, nella chiesa di San Lorenzo* (Florence: 1564), 13.
[393] Goffen, 3, 28.

progress of Renaissance art.[394] Heinrich Wölfflin articulated this notion when he wrote that "The progress of Michelangelo through Italian art was like that of a mighty mountain torrent, at once fertilizing and destructive; irresistibly carrying all before him, he became a liberator to a few and a destroyer to many more."[395] These are weighty claims about the potentially broad implications of competition with (or comparison to) Michelangelo. Vasari and Wölfflin frame outcomes of engagement with Michelangelo's precedent as either/or results: triumph/failure, victory/defeat, surpass/founder, liberate/destroy, fertilize/destruct. How might Renaissance artists' engagement with Michelangelo's precedent be understood in more nuanced terms? In what specific ways did acts of destruction or notions of undoing inhere in engagement with the legends, figures, poses, and style of Michelangelo's sculptures? How might destruction have led to generation, providing the possibility of a both/and result of engagement with this artistic precedent?

Michelangelo did not suffer a shortage of competitors, who were to be found in his contemporaries as well as in later heirs to his style. For Ludovico Dolce (1508 – 1568) and for Rona Goffen, Michelangelo's chief rivals were Leonardo, Raphael, and Titian.[396] But also Baccio Bandinelli (1493 – 1560) and Cellini sought to rival Michelangelo (as well as each other), among a host of later sixteenth-century artists whose relationships to Michelangelo have been illuminated in recent scholarship.[397]

---

[394] Clifton, 28.
[395] Wölfflin, 39.
[396] Goffen, 3. Also see note 4, p. 386. She casts Michelangelo as her "protagonist," and the others as "antagonists."
[397] Furthermore, the sculptures in the Piazza della Signoria and Loggia dei Lanzi that post-date Michelangelo's *David* could be seen as conversant with it, and thus in comparison to it. (And many of these works happen to involve themes of combat or

Variously, the work of these artists reflects their admiring, emulating, imitating, borrowing, challenging or otherwise inviting comparison with Michelangelo. Certainly one way of thinking about these rivalries is in sweeping terms, with the notion that the artists sought to outdo one another's manners, techniques, *oeuvres*, patronage, or legacies. But also references to competitions based upon particular works of art abound. Perhaps the confrontation between Leonardo and Michelangelo in the Sala del Gran Consiglio of the Palazzo della Signoria is the most famous and palpable, since it is easy to imagine the two artists, tools in hand, bodies moving about the room, both intellectually and physically engaged with the large-scale compositions and with the idea of out-painting each other (fig. 4.1, fig. 4.2). Benedetto Varchi (1503 – 1565) described it as such, writing for Michelangelo's funeral oration that with the commission, Michelangelo sought to "conquer" Leonardo.[398] As John Paoletti and Gary Radke characterize it, the dual commission could be understood in bellicose terms, with the

---

conquest.) For example, Bandinelli's *Hercules and Cacus* directly relates to the issue of rivalry with Michelangelo's *David* through the form of the colossus. Michelangelo thought he was going to receive this commission, imagined by the Signoria as a pendant to the *David* since 1506, and the block for the sculpture was cut with Michelangelo in mind. On this issue and the politics of why Bandinelli was awarded the commission, see Goffen, 342-346. On Bandinelli and Cellini, see Goffen, 342-385. Also see Cole, *Ambitious Form*, and Morten Steen Hansen, *In Michelangelo's Mirror: Perino del Vaga, Daniele da Volterra, Pellegrino Tibaldi* (University Park, PA: The Pennsylvania State University Press, 2013). On the issues of influence, imitation, and competition, see Hermann Gmelin, "Das Prinzip der Imitatio in den romanischen Literaturen der Renaissance," *Römische Forschungen* 46, (1932): 83-360; Rensselaer W. Lee, "Ut Pictura Poesis: The Humanistic Theory of Painting," *Art Bulletin* 22 (1940): 197-269; Harold Bloom, *The Anxiety of Influence: A Theory of Poetry* (London: Oxford University Press, 1975); G.W. Pigman, III, "Versions of Imitation in the Renaissance," *Renaissance Quarterly* 33 (1980): 1-32; Thomas M. Greene, *The Light in Troy: Imitation and Discovery in Renaissance Poetry* (New Haven and London: Yale University Press, 1982).

[398] Varchi, 17. Cellini also described Michelangelo's cartoon for the composition as a "competition" with Leonardo. See Goffen, 143; Cellini, 18.

Signoria having "pitted" the artists against each other within the same physical working space.[399] In fact, militaristic jargon frequently characterizes the interchanges between Michelangelo and his rivals as described in modern texts: in his biography of Michelangelo, George Bull wrote that Raphael and Michelangelo had a "prolong[ed] .. duel";[400] and Goffen described the rivalry between Michelangelo and Titian as "combative."[401] Competition lends itself to this kind of language – sports, chess, and even artistic "duels" can be seen as (relatively) benign substitutes for battle, as each of these three may produce an outcome of victory and defeat (or one that proclaims victory of its artist-patron-city, in the case of visual art). Direct competitions involving militaristic content, such as with the Florence frescoes, invite the analogy.[402] Binaries of combat – triumph/failure, conquering/succumbing, ascendant/outdone – cast artists' relationships and their works as hierarchical and linear. (This language of combat iterates Vasari's and Wölfflin's creation/destruction thesis in confrontational terms.) This kind of framework is useful for organizing chronology, patronage, and psychobiography, among other art historical concerns. But viewing competitive exchanges in such finite and

---

[399] See John T. Paoletti and Gary M. Radke, *Art in Renaissance Italy*, fourth edition (Upper Saddle River, NJ: Pearson Prentice Hall, 2012), 91.
[400] George Bull, *Michelangelo: A Biography* (New York: Macmillan, 1998), 123.
[401] Goffen, 26.
[402] Pigman identified three main classes of imitation and emulation: transformative, dissimulative, and eristic. Within the first, biological, zoological, anatomical, and genealogical analogies dominate. The second "refer[s] to concealing or disguising the relation between text and model." Within the third, we find analogies of "struggle, strife, and competition," along with "a large group of analogies connected with overtaking and passing people on roads or paths." See Pigman, 4. Eristic imitation, then, can be a part of competition and, on the flip side, this kind of imitation is considered competitive.

oppositional terms does not always leave room for recognizing subtler threads of artistic response.

Rivalry and competition also can be understood as clusters of integrations and differentiations, producing not a fixed outcome of victory or defeat, but a wider set of possibilities.[403] Focusing on a series of works, critical responses, and encounters around the mid-sixteenth century, Fredrika Jacobs charted a rivalry between Michelangelo and Titian that acknowledged not only contention between the two, but also a call-and-response that built multi-layered multivalent alternatives relative to multiple of the conventional *paragoni* of sixteenth-century art.[404] Through the examples of Michelangelo's *Leda* and *Cupid,* and Titian's *Venus and Adonis* and *Danäe*, we see that together Michelangelo and Titian responded to and revised, confirmed and questioned art theory. Johannes Wilde previously framed a group of Virgin and child compositions by Michelangelo and Leonardo in a similar manner.[405] Though the artists may have felt antagonistic toward each other, the interactions, or actualized responses, were productive, even poetic.[406]

---

[403] Relative to Pigman's classes and analogical sets summarized in note 33, this idea of integration and differentiation, then, adds to the eristic class a non-combative and non-binary analogy that is mathematical or, to be more precise, calculus-based. The competitive productions of sculptors, especially, might be seen as volumes representative of the (potentially infinite number of) emulative / imitative and distinctive / inventive / unique decisions and manipulations within a work.

[404] Jacobs, 51-67.

[405] Johannes Wilde, "Michelangelo and Leonardo," *The Burlington Magazine* 95, no. 600 (March 1953): 65-75, 77.

[406] A similar kind of competition and framework for its analysis were central to a recent exhibition on sixteenth-century Venetian rivals Titian, Tintoretto, and Veronese who worked in close proximity and viewed one another's works: see *Titian, Tintoretto,*

These responses by Leonardo, Michelangelo, and Titian to one another's works carry a sense of immediacy, at least in the way they are discussed by the art historians cited in the preceding paragraphs. But what about the responses of Baccio, Cellini, and Giambologna to Michelangelo's precedent, wherein the older artist did not respond in kind, and wherein the younger artists were sometimes engaging ideas, poses, and styles ten years or more past? For example, when Baccio received the commission for the *Hercules and Cacus* in 1515 (fig. 4.17), he responded to "other Florentine depictions of Hercules, anticipated and actualized," including Michelangelo's now-lost *Hercules* from the early 1490s,[407] as well as to the *David* (fig. 4.3), already ensconced in the Piazza della Signoria for fourteen years, among other compositions and concepts generated by Michelangelo and Leonardo over the preceding decades. Or, to think about this issue more broadly, consider how these younger artists responded to the long-standing legends about Michelangelo. For example, as a young artist in Florence, Baccio supposedly copied an "antique head of a woman," like Michelangelo had copied the antique faun's head from the Medici sculpture garden.[408] Through emulating Michelangelo's study methods and by referencing his civic commissions, Baccio engaged the history of art, inscribing a narrative for himself that was analogous with and retrospective of Michelangelo's precedent. However, Vasari's account of Baccio's poor reception by Florentines – recapitulated throughout the history of Renaissance art – forces the history of Baccio's art into an either/or binary resulting in defeat (or, perhaps, Wölfflinian

---

Veronese: Rivals in Renaissance Venice, ed. Frederick Ilchman (Boston: MFA Publications, 2009).

[407] Goffen, 344.

[408] Goffen, 343.

destruction).[409] But in his engagement with Michelangelo's precedent, Baccio reflected upon multiple of Michelangelo's works along with Leonardo's ideas; Baccio's retrospection and creativity relative to these precedents might be more sensitively characterized with generative metaphors, such as weaving together threads of multiple types and origins. Alternatively, perhaps like the beholders enfolded by the figure-ground relationship of the *Appennino*, Baccio beheld and became enfolded by these various artistic precedents and folded them into his sculpture.

Using Deleuze's theory of the fold, Maria Loh suggested this kind of generative relationship between the paintings of Padovanino (1588 – 1648) and those of Titian.[410] In art history, Padovanino traditionally was met with "hostility," perhaps because like Baccio he appeared, on the surface, to copy, repeat, or imitate (in a lesser manner) relative to the artistic precedent of an already-celebrated sixteenth-century artist.[411] In this traditional history of Padovanino, he, too, was subject to the binary of triumph/failure, to isolate just one among multiple either/or outcomes. Loh focused upon compositions wherein Padovanino seemed to copy, but in fact emulated and invented; while the instance of Baccio here (and of Giambologna later) does not mirror exactly the

---

[409] Scores of poems, most of which were negative in tenor, and most of which are now lost, littered the base of the *Hercules and Cacus* following its unveiling in 1534. See Detlef Heikamp, "Antologia di critic: Poesie in vitupero del Bandinelli," *Paragone,* N.S.. 15, no. 175 (1964): 67; and Louis Waldman, "'Miracol' nuovo et raro': Two Unpublished Contemporary Satires on Bandinelli's 'Hercules'," *Mitteilungen des Kunsthistorischen Institutes in Florenz* 38, Heft 2-3 (1994): 419-426.

[410] Maria Loh, *Titian Remade: Repetition and the Transformation of Early Modern Italian Art* (Los Angeles: Getty Research Institute, 2007).

[411] Loh, 5.

Padovanino situation, Loh's framework, metaphors, and terminology are helpful for describing these examples of sculptural emulation, competition, and reflexivity.

In contrast to Vasari's teleological history or other linear explanations of influence and competition, Loh invoked Deleuze's "open process," characterized by systems of "folding-unfolding" and "enveloping-developing," which, as Loh explained "acknowledges not only how something repeated moved back in time in order to advance forward in a rippling effect but also how something repeated belongs to a larger entity while also being different in its specificity."[412] We could imagine Baccio, Padovanino, Giambologna, or other later sixteenth-century artists who engaged Michelangelo, Titian, and other Renaissance models, not only weaving new fabric with historical fibers but also tailoring, pleating, twisting, and otherwise manipulating it. Loh's compelling analysis demonstrated that through repetition of Titian, Padovanino contributed to the legacy of Titian by becoming that against which Titian could be measured, and that Padovanino also self-fashioned through repetition. Moreover, through compositions like the *Sleeping Venus*, Padovanino reflected art history by drawing attention to Titian's own history of Venuses.[413] These acts of repetition were generative of artworks and of art history.[414]

To return to the conceptual origins of the *Appennino*: The seventeenth-century art critic and biographer Filippo Baldinucci (1625 – 1697) recounted a well-known anecdote

---

[412] Loh, 9.
[413] Loh, 18.
[414] They suggest enfolding of ideas, images, and forms, as well as the folding of time; these are also ways of understanding the entropy of these Renaissance artworks, in addition to the unfurling and folding matter that we have observed at several points, and the spiraling temporalities of the *Appennino*. Loh's interpretation of Deleuze's entropic, meshy networks, to which I will refer in this chapter, enriches the focus upon the processes of enfolding/unfolding/folding in previous chapters.

in his "Life" of Giambologna, describing the moment when Giambologna met Michelangelo, in Rome, in the 1550s.[415] According to Baldinucci, Giambologna sought out the older master for critique of a clay model. In response, Michelangelo destroyed Giambologna's work, reshaping the clay into an acceptable sketch, and then instructed Giambologna to learn how to draw models before trying to realize them in three dimensions.[416] From a seventeenth-century inventory of his possessions, we also know that Giambologna made clay sketches of Michelangelo's *Slaves*, reworking those compositions himself.[417] And, from clay sketches for the *Appennino*, it is evident that Giambologna was initially inspired by Michelangelo's reclining, river god-like figures in the Medici Chapel in Florence, before he reconfigured the monument into its extant form (figs. 1.32, 1.33, 1.34).[418]

Clearly, the young Giambologna was engaged with the figural compositions of the already-famous Michelangelo.[419] Moreover, the literary and sculptural evidence suggests that the two consciously manipulated each other's figures. Michelangelo completely destroyed in order to reshape and teach; Giambologna imitated by modeling clay studies, to learn and understand, then later designed the *Appennino* to demonstrate both mastery and innovation. In this series of interactions, not only do creative acts beget

---

[415] See Baldinucci, *Notizie dei professori del disegno da Cimabue in qua* (Milan: Società Tipografica de' Classici Italiani, 1811), Vol. VIII, 112. At the same time, Baldinucci described Giambologna's modeling as superlative.
[416] "…e sì gli disse: or va' prima ad imparare a bozzare, e poi a finire." Baldinucci, 112.
[417] Also discussed in Raffaello Borghini, *Il Riposo* (Florence, 1584), 13.
[418] See Chapter One for a discussion of the three extant clay models and their development of the river god form into the mountain-man form.
[419] For discussion of the significance of modeling as emulation and revision, for Giambologna and his peers relative to Michelangelo's compositions, see Cole, *Ambitious Form*, 21-50.

creative responses, like in the competitions with Leonardo and Titian summarized above, but destructive action also inspires creation and invention. In other words, as explained by Baldinucci, and summarized by Michael Cole, "modeling was a notional act of violence,"[420] but it was followed, in this instance, by regenerative response. Taken together with the series of re-figurations in multiple scales with multiple media, the violent act becomes part of an entropic system, attesting to an underlying awareness by the artists that destruction was necessary for creation: Disfiguration was necessary for figuration.[421]

The interactions, in particular Giambologna's responses to Michelangelo's work on the clay models and to Michelangelo's own sculptural works, also help us understand the significance of Giambologna's actualized response to the textual description of Michelangelo's idea of a colossus. The response is productive, like with the examples of the Michelangelo-Leonardo and Michelangelo-Titian responses; but the response also involved destructive action within the process. Part of its significance lies in manipulation – working by hand raw materials, flesh to clay – to refigure recumbent Michelangelesque figures, and then to reconfigure those compositions from recumbent to crouching, in order to respond to an idea extant only in textual form. These manipulations, aside from their connection to Giambologna's history of modeling (his

---

[420] Cole, *Ambitious Form*, 41. Cole sees Michelangelo's manipulation of Giambologna's model in terms of "ruin" and "renovation," or possibly as the performance of *contrapposto*. See Michael Cole, "The *Figura Sforzata*: modeling, power, and the Mannerist body," *Art History* 24, no. 4 (Sept. 2001): 525.

[421] In the anecdote, Michelangelo's disfiguration of the model first destroyed Giambologna's form, and then Michelangelo created something anew. He returned it to its raw material state, in other words, before regenerating. This is distinct from the disfiguration of Fra Angelico's blotches, discussed in Chapter Three.

demonstration remonstrated by Michelangelo) and the inherent physically destructive moments, bridge the idea with the object, the intellectual with the corporeal.[422] The response of the *Appennino*, then, transforms the discourse about the figure into a monument of the figure.

To return to and attempt to answer the question posed at the beginning of this discussion: If a textual competitive response is rhetorical, then a material competitive response is demonstrative. It serves as a "proof." There are multiple ways of understanding this "proof." Taken superficially and at face value, the material response demonstrates that the competitor challenged, rivaled, and/or surpassed the model. It also could fail to demonstrate the aforementioned achievements. Taking into consideration this particular example of Giambologna's *Appennino* and its use of the rocky outcrop, fragments of lava and stalactites, and other materials – he did not "just" use a mountain, he virtually (re)*made* one, repurposing the stuff of mountain landscapes – a material response can demonstrate ability not just to emulate or interpret, but to invent.[423] This

---

[422] See the analysis of hand-eye-mind-body relationships in David Rosand, *Drawing Acts: Studies in Graphic Expression and Representation* (Cambridge and New York: Cambridge University Press, 2002). Also see Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago and London: The University of Chicago Press, 2004), 95-114. In a similar sense that Pamela Smith discusses the imitation of nature and the "bodily form of cognition … connected to a view that matter and nature are alive and exist in synergy with the human body," (p. 95) the imitation or emulation of modeling in clay or sculpting in marble (handling a medium), or working through a particular kind of technique or in a similar manner (relative to style) could constitute a form of corporeal cognition or bodily knowledge of the master / model / competitor. Also, as Smith points out, apprenticeship in a Renaissance painter's studio heavily involved bodily labor, through which apprentices learned materials, methods, and techniques.

[423] Though another way to think of the contrast in technique is as James Holderbaum did in his dissertation, glyptic v. plastic: "Just as Michelangelo's stone-bound forms are the

understanding of its value, though, still is superficial, based upon the surface qualities of sculptural volumes.

A broader and more substantial understanding of the competitive nature and art historical significance of Condivi's anecdote and Giambologna's project is the way the history of art, whether the long view or the short view, can be documented by and then discerned in the figure. By implying a connection between Michelangelo and Dinocrates, Condivi encapsulated the history of art from ancient Greece until the sixteenth century in the description of a figural object. By implying a connection between himself and Michelangelo, Giambologna invoked the history of sixteenth-century art through the figural object. The response also generates and enfolds art history. In this operation, Giambologna and the *Appennino* can also be framed in a Deleuzian "rhizomic" system comprised of networks of artists, ideas, and artworks – including but not limited to Michelangelo, Dinocrates, Giambologna, anticipated colossi, actualized figures, and clay models – spread in a non-hierarchical manner, obscuring one another's chronological positions.[424]

Undoubtedly, Giambologna would have been familiar with Vasari's writing, and with the fact that Vasari championed Michelangelo. From Vasari, but also from the broader artistic climate of sixteenth-century Italy, Giambologna would have been aware

---

cinquecento ultimate in glyptic sculpture, Giambologna now provides its complementary ultimate in plastic or modeled sculpture." Holderbaum, *The Sculptor Giovani Bologna* (New York and London: Garland, 1983), 109. And another way to understand the idea of creation or invention relative to the *Appennino* is to consider Francesco's interest in alchemy – from the way its materials and interior decorative scheme relate to issues of mining, to the connection between materials used in the monument and materials kept in the *studiolo*, to the idea that the *Appennino* is a mountain reconstituted out of parts.

[424] For this framework, see Loh, 10.

of the rhetoric and instances of comparison, competition, and rivalry, as well as with Michelangelo's position within the literary and material milieus expressing those themes.[425] In the life of Michelangelo, Vasari explained the achievement of the *David* (fig. 4.3): "…and when the statue was finished and set in its foundation, he uncovered it, and to tell the truth, this work eclipsed all other statues, both modern and ancient, whether Greek or Roman; and it can be said that neither the Marforio in Rome, nor the Tiber and Nile of the Belvedere, nor the colossal statues of Monte Cavallo can be compared to this David…"[426] With this statement, Vasari confirms that Michelangelo successfully challenged extant ancient colossi, even if his 1505 idea about the Carrara mountainside did not materialize. At the same time, the *David* may have been viewed as competitive with Leonardo's unrealized design for a colossus (fig. 4.4). As Rona Goffen noted, "In the sixteenth century *David* was famous above all for its size: it was the *Giant*, and as such comparable with Leonardo's *Horse* for the unrealized Sforza monument. … With the *David*, Michelangelo achieved his most conspicuous success, triumphant precisely where Leonardo had conspicuously failed, in the creation of a modern colossus."[427]

Certainly, shifts in scale exist between the monuments in this discussion. Like the *Appennino* is smaller than Mount Athos or a mountain in Carrara, the *David* is smaller

---

[425] Vasari's *Lives of the Artists* was published in 1550 and then revised and republished in1568; Condivi's biography was published in 1553, Benedetto Varchi's *Due Lezzioni* in 1550, and Ludovico Dolce's *Aretino* in 1557, to cite a few relevant sources with which Giambologna would have been familiar, not to mention his own competitive interactions with contemporaries like Ammannati and Cellini. See Cole, *Ambitious Form*.
[426] Vasari, 428.
[427] Goffen, 129.

than the *Appennino* but still considered a "giant" (*un gughante*, *il ghughante, il gigante* in various early modern references to the block of marble and the figure of David, later).[428] In fact, it was larger than any figure Michelangelo had sculpted to that point.[429] And, importantly, the *David* was carved from a single block of stone.[430] In these ways, it set precedent for other sixteenth-century sculptors. The *Appennino* might represent overtly a response to Michelangelo's 1505 idea, but its roots extend to the *David* as well: Michelangelo's triumph over antiquity (and over Leonardo) with the *David* could be seen as a paradigm for the ambition, competition, and realization of the *Appennino*. To use Goffen's formula, reframing and rephrasing, with the *Appennino*, Giambologna achieved a monumental success, triumphant precisely where Michelangelo had conspicuously failed, in the shaping of a mountain into a man. Where the Carrara colossus failed to materialize, the *Appennino* succeeded; where the *David* rivaled extant ancient colossi, the *Appennino* embodied both the ancient and the Renaissance ideas for making a mountain into a colossal figure. Thus, it both emulated Michelangelo's success and was the antithesis of his failure. Or, to set aside the binary and linear framework in favor of the

---

[428] Each one has been characterized as a "colossus," also, though according to Pomponius Gauricus and Benvenuto Cellini, to qualify for this designation a work had to be at least three times life size, and the *David* does not necessarily satisfy this criteria (4.97 meters). Later in the sixteenth century, the qualification was revised to two times life size. nSee Bush, *Colossal Sculpture*; Pomponius Gauricus, *De sculptura* (1504); Cellini, *Autobiography* (written 1558-1566, printed 1728). On the fifteenth-century references to the giant stone, see Goffen, 416, note 169, and on the sixteenth-century references to the giant figure see Goffen, 418, note 186.

[429] Large-scale sculptures pre-dating the *David* include the *Hercules* (4.1 meters) and *Bacchus* (1.84 meters). Measurements taken from Goffen, 122.

[430] On the significance of using single block, *ex uno lapide,* see Irving Lavin, "Ex Uno Lapide: The Renaissance Sculptor's Tour de Force," in *Il cortile delle statue. Der Statuenhof des Belvedere im Vatikan. Akten des internationalen Kongresses zu Ehren von Richard Krautheimer, Rom* 21 (1992): 191-210.

"rippling effect" and "rhizomic" network, the *Appennino* explored "new possibilities with old forms."[431] The hypothetical Carrara colossus would have been carved from a massive stone face – like the *David*, of one piece, though not strictly a block. Giambologna's colossus, on the other hand, is made from both living rock and fragments of *spugne*. The forms – the content and the pose (as discussed below) – were known from the past, and even seem old-fashioned. But the materials were manipulated in an inventive way.

Like Jodi Cranston suggested relative to Renaissance paintings that recover notional artworks from ancient texts, we also could see the *Appennino* as "archaeological hope" for a lost past.[432] In this vein, the monument is self-contradictory, both nostalgic and ahistorical, a kind of art historical matrix and a fictional archive of old ideas. But, Cranston argued, these kinds of Renaissance recoveries are more complicated. Her reasoning is worth quoting at length here because it helps answer the question posed early in this chapter: How do the dynamics and significance of artistic competition change when the competition involves a material response to text? Cranston explains:

> In effect, the Renaissance painting converts the absent original in the text, which seemed to be lost but never actually existed, into the lost original, which has now been found. In doing so, the actual object fundamentally changes the assumed structure of rivalry, or even the less contentious situation of imitation, in which one party initiates or serves as the origin for the competition. The 'found' object is simultaneously the origin and trace, icon and index, and changes the temporal sequence or seriality usually associated with rivalry in which one artwork is thought to precede the other. The 'found' object instantiates a structure for rivalry that is not simply about outdoing or supplanting the rival, but instead is more of a dialogic exchange characterized by longing and desire for an object that

---

[431] Loh, 9, 11.
[432] Jodi Cranston, "Longing for the lost: ekphrasis, rivalry, and the figuration of notional artworks in Italian Renaissance painting," *Word & Image* 27, no. 2 (2011): 212.

> migrates between being absent and that highlights the connective gap between words and images, present and past.[433]

There are differences, to be sure. Neither Vitruvius's nor Condivi's descriptions are particularly ekphrastic. They are not filled with descriptive detail, but rather are generally sketched. They are about sculpture or monuments, not paintings. These monuments cannot be contained in a collection; instead they exist in (and transform) nature. But if we accept that the *Appennino* shifts the absent colossi into lost colossi, it does perform a similar set of operations. It engages in repetitive archaeology, digging deeply and doubly, since it must be viewed as a response to a response to an ancient description. Ultimately, through this work, Giambologna reimagined what it meant to make a Michelangelesque colossus, thus reframing competition or comparative structures and, perhaps, destabilizing the notion that Michelangelo must be the reference point for all major sculptural developments of the sixteenth century. In turn, Giambologna's own art historical legacy benefits.

Not only in scale, but also through style the *Appennino* references concerns of earlier sixteenth-century sculptures. Its modified *contrapposto* builds upon classicizing notions of figural balance, adding torsion and articulated force to earlier expressions of the freestanding figure. And its surfaces exploit facture, not just for (re)presentation(al) purposes, but in a way that can be understood relative to the "rough style" used by artists from Donatello forward. All of these acknowledgments of earlier traditions and developments in the history of Renaissance art become further amplified by the *Appennino's* colossal scale.

---

[433] Cranston, 212.

Looking at the composition and style of the *Appennino* alongside Michelangelo's work further reveals how the *Appennino* acknowledges art historical precedents and how it complicates the notion of period style. Already we have seen how the *Appennino* connects to Michelangelo's *David* relative to the theme of colossal competition. In addition, the *Appennino,* like the *David,* attests to the ability of a single, freestanding sculpture to imply narrative or allegorical history. In both compositions, storytelling is entwined with or made possible by the pose because the arrangement of the figure makes it possible even for static spectators visually to trace multiple moments within an episode of the expression of force, the slinging or suppressing of something. When viewed from the typical frontal vantage point, the *David* turns his head towards his bent right arm, with which he obscures the slingshot behind his back; whereas the *Appennino* turns his head down, directing his gaze towards the thing he subjugates. In both instances, the narrative potential inheres in the balance of the figure. Whereas the *David* – the canonical example of classical *contrapposto* in the sixteenth century – balances working and resting limbs that at the same time contain the narrative, the *Appennino* instead works with his entire body, using his arms to press on the creature and on the ground and bending both legs to crouch acutely. In the latter example, the counter-balance is found in the complex of diagonals formed by the shoulders and hips, the apparent foregrounding and back-grounding of alternating arms and legs. But again, the oppositional organization of the limbs is in part what propels the narrative moment or allegorical story that the figure conveys.

While the relationship of narrative and counter-balances in the *Appennino's* body can be compared with that of the *David,* the arrangement of his body resonates more with that of Michelangelo's *Victory* (1532-34), like Giambologna's *Florence Triumphant over Pisa* (stucco model, 1565; marble, 1575) that was conceived as a pendant to it (fig. 4.5, fig. 4.6). These freestanding sculptures both involve two figures, but the victors in both twist and exert force in a similar way that the *Appennino* does. In this comparison, we see that Michelangelo's realized ideas for bended figures emerge in Giambologna's project: the *Appennino* obviously draws from and builds upon the tradition of the *figura sforzata*.

As Cole has elucidated, the term *figura sforzata* not only describes a forceful body, but it also involves the suppression of force.[434] The art critics Gilio da Fabriano, Pietro Aretino, and Paolo Pino first used variations on the term in the mid-sixteenth century; but its visual form finds its roots earlier in Michelangelo's sculptures. A complex notion of antithesis is evident within the composition: usually, a stronger, tension-filled figure exerts force upon and subjugates another body.[435] But, the opposing

---

[434] Variations on the term can be found in the writings of the sixteenth-century critics Gilio (especially contrasting Michelangelo's *Last Judgment* with Raphael's Chigi Palace frescoes, history with myth), Varchi, Aretino, and Pino. For the discussion, see Michael Cole, "The *Figura Sforzata*: modeling, power, and the Mannerist body," *Art History* 24, no. 4 (Sept. 2001): 520-551. Cole also explains the linguistic mechanism of adding "s" to "forza" – it was a way of signaling antithesis within the term. The following paragraphs are indebted to and frequently cite Cole's analysis.

[435] On the most basic level the *figura sforzata* acts as a *caprice*, or an example of the inventiveness of the artist. From *capriccio*, which according to Oxford Dictionary of Art (online), "derives from the Italian for the unpredictable jumping of a young goat, covers also a rarer form of subject-matter, defined by the 17th-century theorist Filippo Baldinucci as expressing an 'idea of invention' or the product of an unfettered imagination." The *Appennino* acts as a meta-caprice in the sense that on one level it was

forces also can be implied, absent, or abstracted: for example, the absent Goliath in Michelangelo's *David* (fig. 4.3); the ambiguous force that contains and binds his so-called *Bearded Slave* (fig. 4.7); or even the spiritual force that overcomes the figure in Raphael's *Transfiguration* (fig. 4.8).[436]

More explicitly, both Michelangelo's scene of David and Goliath from the Sistine ceiling (1508) (fig. 4.9) and his sculptural *Victory* group (1519-34) manifest dual exertion and suppression of bodily force (fig. 4.5)**.** Probably begun as part of the tomb project for Pope Julius II, the *Victory* depicts a muscular, youthful male conquering an older man who is doubled over on himself. Using his left knee to subjugate, the main figure stands on an almost-straight right leg, twisting his right arm so that the elbow appears to be above the left knee. Echoing the right leg, the loosely bent left arm hangs at his side. This posture forms a *contrapposto*, or a system of counterbalances, in the sculpted figure. But then the standing figure rotates his torso, twisting to reveal the engaged muscles of the abdomen and back, as well as the shoulder blade. He is a *figura serpentinata*, or serpent-like figure, a raveling or unraveling S-shape, as well. According to Cellini, this kind of disfiguration – torsion that reveals the body's structure underneath – is key to the successful and beautiful *figura sforzata*.[437] He must not only demonstrate strength, but also show what makes himself strong.

---

part of a program intended to surprise, delight, and cause marvel – the whole garden at Pratolino and this interpretation of the Appennines were demonstrations of the inventiveness of their designers.

[436] Cole, "The *Figura Sforzata*," 529-536.

[437] See Cole, 539-542. Cole explains Cellini's conception of how beauty is revealed through *forza*, and that is in the way that a body exerting force, specifically through an arm, shows its skeletal structure. He suggests that for Cellini, disfiguration (of the model

The *Appennino* reflects and revises this kind of *figura sforzata*. His is a hugely muscular figure that models bodily strength while applying force to the sea creature under his left hand. But in reference to the *Victory* group, the *Appennino's* pose is somewhat ironic: his splayed legs recall the pose of the victim of *Victory,* though neither of the *Appennino's* knees touches the ground directly. In his exertion of force, the *Appennino* suppresses but also expresses matter, producing water from the mouth of the creature. To do this, the *Appennino's* body is almost doubled upon itself, manifesting an extreme *contrapposto* and an extremely bended figure. It is as if the counterbalances in Michelangelo's *Victory* – the bent knee and elbow, the twisted torso – have been splayed and folded again. The lower right leg is vertically oriented, and the lower left is folded under his body; the left arm extends forward to press upon the sea creature (and perhaps to balance the weight), the right is bent behind the leg.[438] The *Appennino* figures the extremes of productive or triumphant (bending) force – if he went further, he would seem defeated. We could understand this as refigured or disfigured classical *contrapposto*, and we could understand the act of exerting force as the disfiguring agent. In this disfiguration, the giant's body and the sea creature's mass are affected, but so is the originary idea – the Michelangelesque pose.

In sixteenth-century Florence, disfiguration was intimately associated with *disegno*, the ability to design, or, if you will, map out, one's composition. As discussed

---

for the *Nymph*) is equated with *sforzata* and with beauty. . . violence even is part of this formula, considering Cellini's remarks in his autobiography about how he caused her "discomfort" by making her hold the pose, and later how he beat her. See Cellini, *Autobiography*, 290-291.

[438] This pose represents an innovation in Renaissance sculpture, and is quite different from sculpted mountain precursors.

above, Michelangelo explained the importance of design to Giambologna *through* disfiguration (or destruction) of the younger artist's clay model, according to Baldinucci. Also, dissecting cadavers was common practice for Michelangelo, Raphael, Leonardo, Rosso, Cellini, and others. Vasari explained that disfiguring corpses led to understanding of bodily structure: "in flaying dead bodies, to study anatomical matters, [Michelangelo] began to perfect the great sense of design that he later acquired."[439] Bodily undoing was in multiple ways present in the co-operations of producing knowledge and artistic design in Renaissance art. As a response to Michelangelo's lessons and/or ambitions – whether characterized as a rebuttal, revision, invention, or demonstration relative to the elder artist's ideas – the *Appennino*'s forceful disfiguring calls attention to sixteenth-century art history and art practices, and also to its natural surroundings, its own materiality, and its potential to engage an embodied beholder.

The exertion of force, bending, twisting, and reshaping help the form of the figure evoke a mountain. The pose and its counter-balances reinforce the figure's proximity to the earth and approximate a mountain-like man. Though it is as tall as a two-story house, the figure still manages to hover on the ground, even touching it with one hand. Furthermore, water expressed from the sea creature attests to Francesco's intervention in the landscape around Pratolino. In order to transform the originally arid parcel into verdant, amusing gardens,[440] Francesco's designers redirected streams that fed the

---

[439] For discussion of this see Campbell, "Rosso, Michelangelo, and the (Un)Divinity of Art," 602.
[440] Montaigne, *Travel Journal*, 64-65.

Mugnone River, which originates high in the Apennines.[441] The *Appennino* and other fountains throughout the park conducted the water, which was used to entertain visitors, chiefly as an element of surprise, periodically spouting from hidden spigots within grottoes and sculptures throughout the site. (It was also used for irrigation and laundry.) Thus, the body of the *Appennino* takes part in deforming the natural environment surrounding Pratolino and in re-forming the site's landscapes, at the same time that it disfigures itself to figure landscape.

Michelangelo's *St. Matthew* (fig. 4.10), his so-called *Slaves* (figs. 3.11, 3.12), and his late *Pietàs* (figs. 3.8, 3.10) all reveal how a single sculpted figure can expose the history of its making and of its materials. It has been suggested that the *St. Matthew* teaches technique; it could, in this sense, connect to Michelangelo's lesson on design and modeling and the practice of figural disfiguration for revealing design, discussed above. It has been suggested that the *Slaves* were abandoned as unfinished works due to the circumstances of patronage surrounding the tomb project for Julius II and Michelangelo's commitments in Rome.[442] The late *Pietàs* supposedly reveal frustration with composition, as well as spiritual anxiety. In sum, in each instance the "unfinished" surfaces have been explained away; though they seem to fascinate beholders, they have

---

[441] Twelve springs from Monte Senario ran through Pratolino. The water was used to activate automatons (sculptural fountains) throughout the park, to feed fountains, to irrigate the land, for laundry, and for the livestock. Originally, water would have dripped down the surfaces of the *Appennino* itself, as if melting snow. See Lazzaro, *The Italian Renaissance Garden*, 161-165.

[442] Ironically, they were incorporated into the Grotta Grande in the Boboli gardens because their surfaces were seen as complementary to that of the grotto, covered with encrustations, some in the form of plaster facsimile to natural stones, some in the form of natural *spugne*. See Miller, *Heavenly Caves*, and also Chapter 3, pages 145-147 and note 315.

also been dismissed as inferior to completed commissions.[443] Alternatively, Nagel suggested that Michelangelo's process of creating was so destructive that the sculpture ended up "surrounded by [its own] ruins."[444] Not only can sculpture serve as a record of process and of conceptual revision, but it is because of unmaking or disfiguration that the history of the work is viewable.

On the *Appennino,* in narrative terms, roughness might convey another kind of unmaking, the melting of frozen streams running down a mountain. Or, perhaps it conveys a making, the morphing of the mountain material into a man. In stylistic terms, the roughness might work to make the representation legible from afar: the encrustations figure large, broad passages of hair/stream. Or, its roughness can be seen as representative of a stylistic aesthetic: The *Appennino's* "rough style" can be understood relative to Vasari's description of the way Donatello's and Titian's finishes worked,[445] or in terms of the *non finito*, especially in the criticism of Michelangelo's sculpture. The

---

[443] On Michelangelo and the *non finito* see the references in note 314, page 146-147.
[444] See Alexander Nagel, *Michelangelo and the Reform of Art* (Cambridge, UK: Cambridge University Press, 1999), 214.
[445] See Vasari, 67-69. Vasari describes the two *cantorie* for the New Sacristy of Santa Maria del Fiore, Florence. One was made by Luca della Robbia, the other by Donatello: ". . .Donatello, who later carved the decoration for the other organ facing Luca's, completed his work with much more judgment and skill than Luca had employed . . . by executing that work in an almost entirely rough-hewn and unpolished form, so that from a distance it would look better than Luca's (as it does).. . . Artists should pay close attention to this, since experience makes it clear that from a distance all things – whether painting, sculpture, or any other similar thing – have greater boldness and force if they are well roughed out rather than well finished. . ." And, regarding Titian, see Vasari, 503-504. Vasari again calls attention to the spatial relationship between the viewer and the canvas, and makes a distinction between the earlier and later works: "While his early works are executed with a certain finesse and incredible care, and are made to be seen both from close up and from a distance, his last works are executed with such large and bold bursh-strokes and in such broad outlines that they cannot be seen from close up but appear perfect from a distance."

relationship between the *non finito* and the *Appennino* is complicated: Giambologna's sculpture shares some of the rough surface qualities that prompted art historians from Vasari forward to understand Michelangelo's *St. Matthew*, *Slaves*, and late *Pietàs* as "unfinished," but its material roughness is due to geological processes that unfolded prior to the *Appennino's* creation, and lacunae in its composition (the missing niche, missing *spugne*) are due to erosive processes after its completion; none of these conditions of the *Appennino* results from a rough manner of handling. As already noted, Giambologna took advantage of naturally rough geologic elements to express rough surfaces, rather than manipulating sculptural materials of concrete or plaster. And, the body of the figure is layered with smooth plaster; it is "finished." The contrasts between smooth and rough, thus, draw attention to the passages that seem to be unmade/disfigured/in-between-states.

The pose and the materials of the figure, in multiple ways, draw attention to issues of deforming and destroying, enfolding and entropy. On the most basic level, like any material object, especially those that are installed outside and subject to nature, its surfaces continue to be worn down by rain and pollution, which contribute to and complicate the roughness of the work, its significance, and its temporality. The original coloration is gone, and some of the original encrustations that evoked the mountain crags and melting streams are lost.[446] The scale and pose and situation of the *Appennino* also draw attention to retrospection and temporal obfuscation and return. Through actualizing

---

[446] See Cristina Acidini Luchinat, "L'Appennino del Giambologna: uomo, grotto, palazzo – parte I," and Mariachiara Pozzana, "L'Appennino: uomo, grotto, palazzo – parte II," in *Arte delle grotte: per la conoscenze e la conservazione delle grotte artificiali,* ed. Cristina Acidini Luchinat, et.al (Genoa: Sagep, 1987), 95-107. The figure was originally painted a fleshy color. See *Risveglio di un Colosso*, 13, 77, 101, 117.

the notion of the colossus and through the figure's pose, especially, the *Appennino* documents and amplifies trends within Renaissance art history, staging a history of art that looks back over the course of a century. It presents (or performs) this history through engaging the ideal of the colossus and through referencing the triumphal, forceful pose; however, as we have seen, the *Appennino* does not replicate past images of form and pose, but revises them in the "rhizomic" frame. This is a process of enfolding to make something new and present, which is distinct from the way other well-discussed late-sixteenth century works reflect retrospectiveness or "historical awareness."[447] For example, Titian's late religious paintings can be seen to "unmake" their bodies, which were adopted from past ideals but are also disfigurations of the past and continuous (re)presentations of the present.[448] Michelangelo's Rondanini *Pietà* (3.10) can be seen perhaps more acutely to shed both, "stripping away the present without restoring the past," unable to recover from this self-excavation and consequently making the notion of representation past by undoing its own.[449] These examples want to be only present, or only now. The *Appennino,* through the operations discussed above, recovers history through its staging. Disfiguration of form and materials do not obliterate the past, but call attention to multiple pasts and presents, of precedents and structures of art history.

---

[447] Nagel, *Michelangelo*, 215.
[448] Cranston, *Muddied Mirror*, 102-103.
[449] Nagel, *Michelangelo,* 214-215.

Materiality and Embodiment

> …[beholders] have to deal with their own body in relation with the vertical and horizontal axis … they have to deal with their own balance, they have to gauge their own cadence, they have to look ahead and understand that they're being propelled usually through a space. . . [in] pieces [that] really rely on the person's own physical and sensual awareness.[450]
>
> --Richard Serra (2011)
>
> …my body almost seemed to disappear, but for uneven footing and the occasional drop of water on my head.… All the strange forms we saw suggested other forms: it seemed impossible to look without associating those nameless, shapeless stones with items from the upper world, particularly with bodies. In the first long chamber, the soft-looking folds of rock reminded me of flesh, and in the second chamber, of bone – but we wondered about the way people always need to compare the unknown to something known, and often the overwhelming to something banal.… It was a superb exercise in contradiction, this realm in which my actual body seemed to nearly disappear amid so many images of the body.[451]
>
> --Rebecca Solnit (2003)

With Michelangelo's imagined Carrara colossus and Giambologna's actualized mountain giant, the transformation of living landscapes into figural sculptures required that the artists' own bodies inhabited and handled landscapes in ways that could be seen as antagonistic, destructive, generative, and also nostalgic. These ways of describing the relationship between landscape and figuration were amplified by the scale of the works, which also demanded an exceptionally embodied working method on the part of the

---

[450] Richard Serra, interview by Michael Krasny, *Forum*, 88.5 KQED FM, October 10, 2011.

[451] Rebecca Solnit, "Caves," in *As Eve Said to the Serpent: On Landscape, Gender, and Art* (Atlanta, GA: University of Georgia Press, 2003), 177-180.

artist. The artists, and later the beholders of these works, would have to "deal with their own bod[ies]" in ways akin to the spatial and sensual acknowledgments Richard Serra describes relative to sculptures. More than sculpting around a large-scale block [like with the *David*, or for Giambologna, the *Oceanus* fountain (fig. 4.11)], these mountain-sited projects invited encounters with mountain landscapes that would have required command of horizontal and vertical dimensions in exceptional ways. For example, Baldinucci claimed that the scale of the *Appennino* project was, in fact, disorienting for the assistants' sense of sight; he wrote that because of creating the giant's musculature they lost "judgment of the eye" (*giudizio d'occhio*), and this was consequential for dealing with works of "ordinary" size.[452] Not only did the scale impact ocular sensibility, but also ambulation was required: through climbing and walking the experience of working on the project might have overlapped in many ways with those of the naturalists and travelers discussed in Chapter Two. Working the stone *in-situ* would have involved revealing and/or obscuring geological record – manipulating the evidence of geological time – in a way that altered the image of and/or experience of that landscape for beholders. Because the *Appennino* is (and the Carrara colossus would have been) embedded in the mountain landscape, the consequences of such a manipulation for the work and for the landscape would have been all the more obvious. Likewise, negotiating any botanical matter within the site would have amplified awareness of the connection of the sculptural materials to the environment.

---

[452] Baldinucci, *Opere*, Vol. VIII, 127.

At the same time, and as discussed at multiple points in this study, the scale of the work drew attention to the encrustations, the fragments of geological and botanical landscapes that, on one level, describe parts of human anatomy. These encrustations further call attention to the materiality of the artwork and appeal to the beholder's sense of touch; eventually the explorer-beholder may wander upon or inside of the monument, too; thus, the figured landscape enfolds the human figure in the landscape. One can imagine that explorers of the hypothetical Carrara colossus or the *Appennino* might have lost sight of their own, human bodies in the way that Solnit describes, due to preoccupation with the figural suggestiveness of not just the larger contours and folds of the giant figure's exterior, but also that of the encrustations upon and within it. From the distant view (wherein one can grasp the spatial relationship of the work to its setting) and up close (wherein one can appreciate the material nature of the work as mountain outcropping, stalactite fragment), the potential of the landscape to engage and contain figures is found in this monument, and the ways that the monument does this draws attention to its own materiality.

There are multiple ways to understand the relationship between material nature and figural potential in Renaissance sculpture. In an ambiguous and somewhat abstract sense, connections were made between the two issues (materiality and figuration) before stones arrived at an artist's studio or other location for sculptural execution. Sixteenth-century artists, including Giambologna, referred to blocks of marble, even when still at the quarry site, rough cut, as "figures." He described a block at Seravezza as "the first

figure of white marble to come out of that mountain."[453] On the other side of the equation, after quarrying, chiseling, and installation, stone figures were seen to reference their material origins. For example, Giambologna's other works, like the *Sabine* (fig. 4.12), prompted sixteenth-century responses that emphasized the material (marble) and, as a result of his technique, its ability to captivate *as material*.[454] And recent scholarship also remarks upon the way sculptural figures reference material origins: Cole has written about Giambologna's marble sculpture, for example *Florence Triumphant over Pisa* (fig. 4.16), as retaining a "memory of the block."[455] The stone could be made into a figure, and the figure could remind beholders of its mountainous origin. Thus figural potential and material pre-life of sculptures were recognized at various points during the generation and reception of the work; but, in Deleuzian rhizomic form, the observations folded awareness of materiality back upon figured work, while projecting figuration upon rough blocks.

Michelangelo took the idea a step further, perhaps, when writing about bodies that already inhabited blocks of marble. Michelangelo's conceit of a figure, extant within a block and requiring liberation by the sculptor is well-known and much discussed: "Not even the best of artists has any conception / That a single marble block does not contain / Within its excess, and *that* is only attained / By the hand that obeys the intellect."[456] This

---

[453] Cole, *Ambitious Form,* 102. Quotation from Dhanens, *Jean Boulogne*, 338-339.
[454] Cole, *Ambitious Form*, 94-99.
[455] Cole, *Ambitious Form*, 107.
[456] "Non ha l'ottimo artista alcun concetto / c'un marmo solo in sé non circonscriva / col suo superchio e solo a quello arriva / la man che ubbidisce all' intelletto." See Michelangelo Buonarroti, *Sonnet 151* in Saslow, trans., *The Poetry of Michelangelo*, 302-303. This poem and Sonnet 152 are also referenced in discussion in Chapter Three

notion of a figure being hidden, or inherent, in a piece of stone circulated in Michelangelo's own lifetime; Varchi and Vasari both discussed publicly the sonnet from which these lines derive.[457] A madrigal composed around the same time involves a similar conceit: "Just as, by taking away, lady, one puts / into hard and alpine stone / a figure that's alive / and that grows larger wherever the stone decreases…"[458] In both instances, Michelangelo understood stone to conceal a figure found in nature (though not "made by chance").

Thus, the idea of the figure in the landscape, in the sense that figural sculptures reveal this idea, was part of the language and theory of art for Michelangelo, Giambologna, and their contemporaries. The examples discussed above illustrate the operation of this idea on quarried blocks of marble material. The idea of the figure existing *in situ,* in the landscape's native material, like with Michelangelo's imagined colossus, was also manifest by the mid-sixteenth century. In several sixteenth-century gardens, figures were carved from or built into the site. At Bomarzo, a site about 60 miles north of Rome, multiple colossal works were made in this manner, from a particularly textural material, and thus provide a helpful comparison to the construction, scale, material, and forms of the *Appennino*.

---

relative to struggle-in-making and violence in sculpture. Sonnet 152 also involves a similar conceit.

[457] Varchi included it in the 1547 *Lezzione*, and Vasari published a portion of it in his life of Michelangelo. For further context and references, see Saslow, 302.

[458] "Sì come per levar, donna, si pone / in pietra alpestra e dura / una viva figura, / che là più cresce u' più la pietra scema…" Michelangelo Buonarroti, *Sonnet 152* in Saslow, trans., *The Poetry of Michelangelo*, 305.

The *sacro bosco* at Bomarzo was commissioned by the Roman nobleman Pierfrancesco (Vicino) Orsini (1523-1585) and likely designed by Pirro Ligorio.[459] Like Pratolino, it was intended as a park of wonders, almost like a precursor to the contemporary amusement park. Visitors wander paths that wind through the woods, with a surprise waiting around every corner. Sixteenth-century beholders would have been startled, delighted, and occasionally scared by the colossal works that quite physically loomed over them or gaped open. The figures of Hercules and Cacus were a veritable jungle gym (fig. 4.13); the Orc in the stream an adventure challenge (you could crawl under the bridge, cross the stream, and climb onto the work) (fig. 4.14); the so-called "Hell Mouth" was a fun house and dining room all in one (fig. 4.15). It was meant to terrify beholders, but also to entertain them. It acted as an echo chamber; if a party was already underway in it, for beholders outside, the sculpture would have seemed to bellow, laugh, or scream. For beholders inside, it appeared to cannibalize all those who approached; and once beholders were inside, the tongue of the monument doubled as a dining table.

At Bomarzo, sculptures were made from outcroppings of *peperino*, a type of volcanic rock on the site. Possibly the site was chosen because of the abundance of this

---

[459] The identity of the designer is debated. The scheme has also been attributed to Vignola. But recently scholars have suggested an alternative in Rafaello da Montelupo, for one example, and in Michelangelo as a consultant with Liggorio and Vignola, as another. See Christoph Luitpold Frommel, "Bomarzo e il boschetto. Storia, costruzione e attribuzioni Vicino Orsini, Giulia Farnese e la regia architettonica di Rafaello da Montelupo nel Sacro Bosco di Bomarzo," in *Bomarzo: il Sacro Bosco*, 56-65, and Marcello Faggiolo, "Bomarzo e le idee di Vignola e di Ligorio," in *Bomarzo: il Sacro Bosco*, 66-75. Previously, Bartolommeo Ammannati was also considered a candidate. See Maurizio Calvesi, "Il Sacro Bosco di Bomarzo," *Scritti di Storia dell'Arte in onore di Lionello Venturi* (Rome, 1956) I, 384-389.

material, and possibly the placement of sculptures at Bomarzo was dependent upon where the *peperino* emerged from the ground. Sculpture placed by chance, if you will. Though there are few archival records to explain the planning and technique used at Bomarzo, scholars, writers, and visitors have speculated that the shapes of some outcroppings appeared roughly figural to the sculptors, and that these shapes guided the development of works – in other words, Alberti's theory of the "image made by chance," found in a clod of earth or other natural substance, might have manifest in practice at Bomarzo.[460]

These works invited beholders to engage the textures and volumes, the undersides and insides of sculptures intimately. More than that, the so-called "hell-mouth" required visitors to vivify it, to give voice to it. Indeed, the inscription near the entrance to the

---

[460] On Bomarzo see: Arnaldo Bruschi, "L'abitato di Bomarzo e la Villa Orsiniana," *Quaderni* (1955): 3-18; Maurizio Calvesi, "Il Sacro Bosco di Bomarzo," *Scritti di Storia dell'Arte in onore di Lionello Venturi* (Rome, 1956) I, 369-402; Eugenio Battisti, *L'Antirinascimento*, 123-137; Josephine von Henneberg, "Bomarzo: nuovi dati e un' interpretatzione," *Storia dell'Arte* 13 (1972): 43-55; Josephine von Henneberg, "Vicino Orsini's Sacro Bosco and the Literature of His Time," *Aquila* IV (1979): 219-228; Jacqueline Theurillat, *Les mysteres de Bomarzo* (Geneva, 1973); Esther Gordon Dotson, "Shapes of Earth and Time in European Gardens," *Art Joural* 42, no. 3 (1982): 210-216; Horst Bredekamp and Wolfram Janzer, *Vicino Orsini und der heilige Wald von Bomarzo: ein Fürst als Künstler und Anarchist, Vol. 1* (Worms: Wernersche Verlagsgesellschaft, 1985); Anne Bélanger, *Bomarzo ou les incertitudes de la lecture: Figure de la* meriviglia *dans un jardin maniériste du XVI siècle* (Paris: Honoré Champion Éditeur, 2007); *Bomarzo: il Sacro Bosco*, ed. Sabine Frommel and Andrea Alessi (Milan: Electa, 2009). On some connections between Bomarzo and Pratolino see Luke Morgan, "The monster in the garden: the grotesque, the gigantic, and the monstrous in Renaissance landscape design," in *Studies in the History of Gardens and Designed Landscapes: An International Quarterly* 31, no. 3 (2011): 167-180. In his fictional biography of Vicino Orsini, also, Manuel Mujica Lainez suggests that the patron had a similar conception of these blocks of *peperino* as Michelangelo had about the marble blocks: "I had to remove the crust that covered the essential image in each rock." In Manuel Mujica Lainez, *Bomarzo* (Simon and Schuster, 1969), 493.

park commands beholders to consider the blurred boundaries of the sculptures: "You who enter this place, observe it piece by piece and tell me afterwards whether so many marvels were created for deception or purely for art." A twentieth-century novel about Bomarzo imagines a response to the command and evokes the ideas of ocular and tactile engagement: "For a long time, along with Zanobbi, I would walk among the rocks like an illuminate, like a madman, observing and touching them."[461]

Scholars suggest a variety of contexts for understanding Orsini's command: it might be read as his acknowledgment of the *paragone* between art and nature and an assertion that the works are so convincing nature could have fabricated them; on the other hand, it might reflect his interest in alchemy and ideas of magical transformation. (Relative to the overall scheme, which does not cohere in an apparent narrative manner but rather seems fragmented and elusive, multiple texts including the *Hypnerotomachia Poliphili* and *Orlando Furioso* have been cited as influences.) Either way, it is significant that Orsini asks his visitors to take pause and to consider the character of mimesis in his garden. He suggests sustained engagement, if not close looking. Certainly, to perceive the relationship between figuration and natural outcropping, beholders had to forget the big picture for a moment and instead privilege an intimate encounter. One also could argue that the scale and spatial relationships of the works make distant viewing difficult. And, to fully experience many of the works, as discussed earlier, visitors had to climb into or crawl under sculptures, ensuring a close encounter. Finally, *peperino* is notoriously difficult to polish – it is grainy and rough relative to

[461] Lainez, 493. So far, I have not found comparable descriptions from the sixteenth century.

marble, especially. The natural facture, or madeness, of *peperino* would have been impossible to ignore for beholders closely encountering the works. Nature's role in producing the sculptures was apparent.

Furthermore, scholars have suggested that nature's role in destruction was foregrounded, even fictionalized. Esther Gordon Dotson observed that many of the sculptures made from living rock were worked in such a way as to imply masonry construction that is in the process of coming undone. In a sense, the effects of time and weather were "faked"; or, at least the sculptors capitalized upon the roughness of the *peperino*. About the *Pegasus* fountain (fig. 4.16) Dotson wrote: "This is an imitation in natural rock of an imitation of natural rock, and of that imitation unmasked by the activity of nature over time."[462] Not only is the theoretical trope of the "image made by chance" at play, along with a foregrounding of natural facture, but also the inevitability of erosion is acknowledged by the works. The embodied beholder-explorer at Bomarzo would have been confronted with the sculptures' environmental awareness and geological materiality.[463]

---

[462] Dotson, 212. Also see Henneberg, "Nuovi dati." Also, on the actual natural damage to the sculptures see F. Fratini, C. Manganelli del Fa, E. Pecchioni, and A. Scala, "The Scultpures in Bomarzo Park, Viterbo, Italy: Deterioration and Conservation Problems of the Peperino," in *Lavas and Volcanic Tuffs: Proceedings of the International Meeting, Easter Island, Chile, 25-31 October, 1990*, ed. A. Elena Charola (Rome: International Centre for the Study of the Preservation and Restoration of Cultural Property, 1994), 129-141.

[463] This could be contrasted with Michelanglo's attempts in his earlier works to obscure natural imperfections in marble – he sent directions to his quarrymen at Carrara to procure a stone without veins for the Rome *Pietà*, which is highly polished, further obscuring the original raw state of the material, as discussed in Chapter Two.

Constructed about three decades after Bomarzo was begun, the larger program at Pratolino was intended to delight and surprise the visitor visually, audibly, and in terms of touch. Montaigne explained how one of the grottoes at Pratolino engaged visitors. Previously discussed for emphasis on technique and mechanical significance, it warrants re-quotation:

> There is not only music and harmony made by the movement of the water, but also a movement of several statues and doors with various actions, caused by the water; several animals that plunge in to drink; and things like that. At one single movement the whole grotto is full of water, and all the seats squirt water on your buttocks; and if you flee from the grotto and climb the castle stairs and anyone takes pleasure in this sport, there come out of every other step of the stairs, right up to the top of the house, a thousand jets of water that give you a bath.[464]

In the extreme, the sculptures, fountains, and grotto environments could make visitors move. This was contrary to the vein of sixteenth-century art theory that subscribed to the Medusa myth or *topos*: beholders at Pratolino probably were not stunned into stillness but instead were encouraged to engage.[465] Visitors' understanding of the art depended in large part upon their own bodily interaction with it. Clearly, the program of sculptural works at Pratolino did not privilege the ocular alone.

Interacting with sculptures in an embodied manner was not unusual during the sixteenth century, and this phenomenon is articulated in literature produced during the period. Florentine citizens addressed criticism *to* public sculptures, posting notes on the

---

[464] Montaigne, *Travel Journal*, 64.

[465] On the Medusa *topos* in Renaissance art theory see Shearman, 48-57. Among the sixteenth-century artists and theorists who invoked the trope in poetry or criticism are Celio Calcagnini, Michelangelo, Antonio Tebaldeo, and Angelo Ubaldo, as well as a host of writers who responded to the installation of Cellini's *Perseus* in the Piazza della Signoria in 1554.

sculptures' bases. One sonnet of 1534 specifically attacked the surface treatment and facial expression of Baccio's *Hercules and Cacus* figures (fig. 4.17). In the poem, Hercules narrates his own pitfalls: bloated limbs, an absurd laugh, and a body that belies the symptoms of rigor mortis.[466] Relative to this discussion, it is significant that the critical (poetic) beholder endowed the *Hercules* sculpture with a voice that articulated self-awareness about its bodily condition; the beholder virtually vivified the sculpture in a way that underscored corporeality.

This kind of rhetorical trope also was used by Anton Francesco Doni, author of the treatise *I Marmi* (ca. 1552-53). In it, Doni leads a fictional tour through Florence, stopping to speak *with* various works. Like the anonymous Florentine poet who wrote about *Hercules*, Doni endows sculpture with a voice. Yet, while the *Hercules* "speaking" around 1534 was essentially self-reflexive in his analysis, Doni's figures are able to "speak" about other works in the 1552 treatise. Both the poetic critique described above and Doni's treatise are part of a set of traditions, classical in origin, of the "conversational mode of the transitive work of art," in Shearman's words.[467] Beholders made sculptures speak, in theory, but what did sculptures make beholders do, in practice?

As we saw relative to the Bomarzo sculptures, beholders were encouraged to explore, crawling under and climbing into some of the colossi at that site. And according to Montaigne's description of his experience in a Pratolino grotto, beholders even could

---

[466] See Waldman, 422, for the passage cited above. Transcription of the poem appears on p. 424; see especially lines 15-23. Waldman argues that the extremely harsh criticism of the object was in part due to public disdain for the Medici rulers.

[467] Shearman, 46. See pages 44 ff. for discussion of the tradition and for the references on the Renaissance and classical iterations.

be startled into action by a surprise spray of water. The beholders were encouraged to respond not just in an intellectual manner, but also relative to sensory experience. These examples especially engaged the sense of touch, through rough surfaces, cool air (in the Pratolino grottoes or the "hell-mouth" at Bomarzo),[468] and drenched bodies, to name just a few ways.

An awareness of this kind of phenomenological experience of sculpture emerged in sixteenth-century art theory and painting, also. For example, Varchi's *Lezzione* that took up Michelangelo's poem "Non ha l'ottimo artista alcun concetto" is of particular note. Varchi argued that through touch, a beholder could comprehend both the material and illusion of a sculpture.[469] Perhaps the beholder discerns the relationship between materiality and illusion, and that in order to be perceived, they persist in a symbiotic relationship. One is not necessarily privileged over the other through this way of comprehending. Early modern painters even acknowledged the importance of the tactile, bodily relationship to sculpture. For example, Giuseppe de Ribera's *Blind Sculptor Gambazo* and Luca Giordano's *Carneades with the Bust of Paniscus,* both painted in the seventeenth century, refer to the importance of touch for understanding sculpted surfaces (fig. 4.18, fig. 4.19). And, earlier examples, such as Titian's *Jacopo Strada* and Lorenzo Lotto's *Andrea Odoni,* depict collectors handling a small-scale figural sculpture (fig.

---

[468] Also see the letter, 6 June 1563, from Annibale Caro to Torquato Conti, Duke of Poli, on the importance of "wetted sheets of canvas in continuous movement to cool the air." Cited in Bury, "Reputation of Bomarazo," 110.

[469] See Jodi Cranston, "The Touch of the Blind Man: The Phenomenology of Vividness in Italian Renaissance Art," in *Sensible Flesh: On Touch in Early Modern Culture*, ed. Elizabeth D. Harvey (Philadelphia: University of Pennsylvania Press, 2002), 224-242. For discussion of sculpture and Varchi's points, see especially p. 235-242. For references on the sense of touch in Renaissance art see note 4, p. 303.

4.20, 4.21). This imagery brings up a type of object that Giambologna himself popularized, the finely polished, highly sensual statuette, like the *Venus Bathing*, that was meant to be held and caressed (fig. 4.22).[470] The theory and painted iterations of touching sculpture catalogued above have bearing on examples like the sculptures and grottoes at Pratolino and Bomarzo. Texture was at play, and so the ideas of Varchi could be extended in that way; but also sensations like wetness and coolness characterized the (sculpted/architectonic) grotto environments and created an illusory climate, more pleasant than summer heat in central Italy, certainly.

Early modern artists and theorists not only articulated the importance of tactile understanding of sculpture, they explicitly described the way a beholder's body helped make meaning from (or give meaning to) facture. Giambologna's contemporary Vincenzo Danti (1530 – 1576) explained how movement represented in sculpture was to be reflective of beholders' own experiences of movement.[471] That is, engaging with the

---

[470] For discussion of this phenomenon, see three essays by Geraldine A. Johnson: "Touch, Tactility, and the Reception of Sculpture in Early Modern Italy," in *A Companion to Art Theory,* ed. Paul Smith and Carolyn Wilde (Oxford: Blackwell, 2002), 61-74; "The Art of Touch in Early Modern Italy," in *Art and the Senses*, ed. Francesca Bacci and David Melcher (Oxford and New York: Oxford University Press, 2011), 59-84; and "In the Hand of the Beholder: Isabella d'Este and the Sensual Allure of Sculpture," in *Sense and the Senses in Early Modern Art and Cultural Practice*, ed. Alice E. Sanger and Siv Tove Kulbrandstad Walker (Farnham, UK, and Burlington, VT: Ashgate, 2012), 183-197. Earlier discussion can be found in Marjorie O'Rourke Boyle, *Senses of Touch: Human Dignity and Deformity from Michelangelo to Calvin* (Leiden: Brill, 1998), and David Summers, *The Judgment of Sense*.

[471] "E se bene questo genere, che io propongo, del fare, sotto il quale sono tutte le movenze, non rimane dopo l'effetto suo in corpo od in materiale; e tutte le cose che non hanno corpo o material visibile, come sono gli affetti, non si possono ritrarre: con tutto ciò, l'arte della pittura e dela scultura di questo, circa le movenze, si serve, e le dimostra in opera per lo mezzo de' membri che esse movenze producono e mettono in moto. Verbigrazia, l'arte nostra può mostrare gli affetti d'un volto adirato con il moto delle

surface of the sculpture, we can learn how to understand depicted movement through our own movement. Danti's concern in this passage is how ineffable things, like emotions, which have behavior or cause and effect (a kind of trajectory, if not physical motion) associated with them, could be expressed. Appealing to the beholder's sense of motion through his representations, Danti hoped to communicate abstractions like emotion. He was not alone: as Cole recently discussed, along with Danti, writers such as Pomponius Gauricus, Leonardo, Borghini, and Baldinucci articulated similar ideas.[472] Also, Cellini wrote about how the ideal sculpture should have at least eight views, and his idea reflects consideration of the moving beholder.[473] Baldinucci's suggestion about movement in sculpture was especially provocative. He wrote that sculptural forms encourage the beholder to acknowledge not just the ends of figuration but also the means: that is, the materiality of the stuff from which the sculpture is made as well as the physical process of making it.[474] This idea calls up not just the vivified figure and the embodied beholder who considers that figure, but also the embodiment of the artist and the transformation of raw material into figural form. Thus, through these artists and theorists, we encounter in multiple texts notions of movement that could inhere in sculpture – in the actions that the represented figures might have taken already or might take in the future; in the ability of

---

ciglia o altre movenze a quello appropriate." In Paola Barocchi, *Trattati d'arte del' Cinquecento*, Vol. I, 262. Quoted in Cole, *Ambitious Form*. Cole discusses this passage, but his emphasis is slightly different.

[472] See Cole, Chapter 4, "Pose," in *Ambitious Form*, 121-157.

[473] Benvenuto Cellini, in "Lettere di artisti a Benedetto Varchi," *Scritti d'arte del cinquecento*, Vol. I, ed. Paola Barocchi (Milan and Naples: R. Ricciardi, 1971), 520.

[474] Cole, *Ambitious Form*, 137.

the material to balance, or to express balance, stasis, or stillness; in the movement of the sculptor; in the movement of the beholder; and in the movement of the material.

In the *Appennino*, the trace of movement is of multiple natures: the natural morphic processes that produced the lava and stalactites; the "frozen" movement of the stream re-presented melting down the body of the giant; the intermediary pose that the figure assumes that is both self-referential, in terms of the body's *contrapposto,* and expressive or generative, in that it presses on a creature that spouts water; and finally, the journey the human takes around and through the sculpture that helps complete the figuration at hand. In order to fully comprehend the *Appennino*, the human encountering it *must* look at it from multiple views.[475] In the *Appennino*, these aspects of movement are foregrounded by the scale and medium, just as the bodily nature of the sculpture and embodiment of the beholder are heightened. While his own role was mostly conceptual in nature, Giambologna could not have realized the figure of the *Appennino* without an immense amount of difficult physical labor.[476] The workers who constructed the colossus found themselves not just quarrying materials, a physically intense but conventional aspect of the realization of Renaissance sculptures, but also propelling their bodies around and climbing upon the growing giant.

---

[475] See Cole, *Ambitious Form*, for a discussion of the idea of movement v. stasis in early modern sculpture and art theory, as well as for a consideration of the differences between early modern depictions of movement and modern understandings of motion. That is, why it is dangerous to liken what appears to be the depiction of a singular moment to the kind of snapshot of motion you might find in a series by Muybridge.

[476] See Butters, "Pressed Labor and Pratolino."

In fact, not only could humans exploring the *Appennino* climb upon its surfaces, but they also could inhabit it (fig. 3.15).[477] If a person goes inside, s/he may descend stairs to the lower grotto, climb a stairway to the upper grotto (where Francesco de' Medici and his guests famously fished out of the nose of the giant),[478] and sit within these grottoes, occasionally becoming relatively stationary physically, but also being stimulated by the water play, variety of textures that Montaigne described, and paintings inside the grottoes. At the same time, the interior grottoes imitate caves, the insides, or even "inverses," of mountains. Because of this outside-inside scenery-shifting, which is also shape-shifting, the *Appennino* is a work of art that changes the relationship that its beholder has with space, scale, and site. If a person is outside, s/he possibly looks upwards and circumambulates in order to view the mountain in its entirety and in order to place it in the context of the natural surroundings. If a person is inside, s/he possibly has a more intimate, reflective experience, spending time on one level or another, in one grotto or another, placing her/his own body within the context of the architectural framework. In fact, one sixteenth-century visitor described the interior as the "stomach," so it was not just about understanding how one's body could move about from floor to floor, but how it related to the virtual anatomy, here the belly, of the work:

> In his stomach there is a fountain of marine conches and of other wonderful curiosities. The fountain needs a large water vase of jasper of great value and at its centre there is a huge branch of coral that came from the Red Sea. It jets water from a thousand points, and from the lower part of this mountain water jets come out from many places and reach the stomach of the Giant, where, besides the mentioned things, there are two

[477] David Summers defined this kind of work as at once a personal space and a social space. See Summers, *Real Spaces*, "Introduction."
[478] AVR Cod. Barb. lat., n. 5341, c. 205r. Zangheri, *Pratolino,* Volume I, 172.

> rooms. In the smaller one all sort of mines are painted: those where one finds metal, gold and silver and also the way in which they are worked is painted. The bigger room should rather be called a jewel since it is painted by very illustrious Painters and it is completely full of corals and other very noble stones and the floor is made of earth from Liguria with very nice decorations and where many holes for the water jets are hidden. When other people like it, they can cheat and activate those jets.[479]

Quite pointedly, the encounter was about a human body understanding how it fit into a giant's body.[480]

Inhabiting the interior of the *Appennino* meant penetrating the skin of the giant, which itself presented the stuff of the interior in the form of *spugne*, as if flayed and turned inside out.[481] The "skin" of the *Appennino* is paradoxical in this sense: at one and the same time it conceals and exhibits what is contained within it.[482] This kind of material and textural interchangeability could be compared with the representation of

---

[479] Ms. Riccardiana 2312, late 16th century. English translation from Matteo Valleriani, "Pratolino: The History of Science in a Garden." Max Planck Institute for the History of Science and Ente Provincia of Florence, http://pratolino.mpiwg-berlin.mpg.de. See illustration in Giovanni Guerra, *Disegni* (1598). In the early seventeenth century, the paintings of miners in the grottoes were covered over with shells and nautical fossils.

[480] As discussed above, visitors to Bomarzo also could inhabit and vivify the so-called Hell Mouth by using their voices. And, Cellini wrote about a person inhabiting the head of his colossal sculpture of Mars similarly: "but since the young girl who was living in the head could not prevent some of her movements being seen through its eye-holes, a few of those silly people said that the ghost had entered into the statue's body, and it was moving its eyes and mouth as if it wanted to say something. A number of them went off in terror, and some of the more astute ones who came to see for themselves could not gainsay the fact that the eyes were flashing, and so they too claimed that there was a spirit inside the statue. They little guess that there was not only spirit, but excellent flesh as well." Cellini, *Autobiography*, 300-301.

[481] Among other scholars who observed this, see Holderbaum, *Giovani Bologna*, 146.

[482] The interior grottoes fell into disrepair during the nineteenth century. See Coda for discussion.

exterior and interior in Titian's *Flaying of Marsyas* (fig. 4.23).[483] Though there is a material difference between the treatment of the *Appennino's* skin, proper, and these passages of hair/stream, and there is not such a difference in the passages of the *Marsyas*, there exists a fundamental similarity between the two works and what they reflect of their makers' understandings of facture – allowing insight into madeness and/or foregrounding roughness facilitates a richness of haptic experience and potential for simultaneity within the work.

Penetrating the skin, entering the body, the explorer-beholder of the *Appennino* engages a double-analogy of knowledge: in addition to imitating the act of discovery through mining, traveling into the mountain and down into the bowels of the earth, the process of entering the giant's body might be likened to the anatomical practice of flaying in order to gain understanding of the human being.[484] Considered in the context of sixteenth-century representations of flayed bodies in anatomical texts (figs. 4.36, 4.37), we might further see the *Appennino* as an instance of self-exposure: while the exterior

---

[483] On the similitude of the skin and the insides revealed by flaying – the essentially indistinguishable marks that represent them – see Daniela Bohde, "Skin and the Search for the Interior: The Representation of Flaying in the Art and Anatomy of the Cinquecento," in *Bodily Extremities: Preoccupations with the Human Body in Early Modern European Culture*, ed. Florike Egmond and Robert Zwijenberg (Aldershot, UK, and Burlington, VT: Ashgate, 2003), 16. Furthermore, beyond the optical experience, Titian's technique, according to Bohde, allows for apparently distinct entities to be made in the same way: "The flesh of the flaying Scythes or the pail-bearing satyr is painted no differently." Titian built up many layers (from six to fifteen, she writes, more than the typical two to three) across the entirety of the canvas, and the background and figures were made of the same, continuous layers rather than being painted separately and in different ways. See Bohde, 37-39.

[484] This was expressed in the anatomical treatise Andreas Vesalius, *De humani corporis fabrica* (1543). See Bohde, 20. Also as discussed above in this chapter, it relates to the understanding of design for sixteenth-century artists.

surface of the monument obscures the interior structure, the exterior simultaneously shows what the insides look like.[485] Considered in the context of Renaissance representations of flaying, we might find an analogue in the Marsyas myth, in which the exposed body can be seen as sculptural and regenerative (fig. 4.24, 4.25).[486] The exposed exterior encrustations allude to similar formations encased inside the giant, forms which evoked corporeal metaphors for early modern beholders and which referenced cave environments, spaces that continue to suggest anatomical volumes such as those described by Rebecca Solnit in the epigraph to this discussion.

Though the *Appennino's* own fingers do not handle its own skin, its self-referential pose / gesture draws attention towards the body and its bendings, foldings, reversals, and counterbalances. In its original incarnation, the giant might have been seen to enact exposure in triplicate: not only do the encrustations re-present the grotto interiors, but also the pipes hidden by these encrustations (discussed in Chapter Three) would have seeped water onto the surfaces, and, finally, the figure itself was originally seen inside of a mountainous shell. Caves, streams, and mountains were all doubled and in some instances inverted through the reflection of the figure's anatomy to the exterior and, in the case of the lost niche, into the environment. On one hand, the mountain contained or was the source of water expressed through the sea creature form below, like the Mugnone river emerged from the Apennine mountains; on the other hand the liquid

---

[485] See Claudia Benthien, *Skin: On the Cultural Border Between Self and the World*, trans. Thomas Dunlap (New York: Columbia University Press, 2002), 64-70.
[486] Benthein, 79. On the relationship of destruction and creativity in the Marsyas myth also see Jodi Cranston, "Theorizing Materiality: Titian's *Flaying of Marsyas*," in *Titian: Materiality, Likeness, Istoria*, ed. Joanna Woods-Marsden (New York and Turnhout: Brepols, 2007), 5-18.

carried inside the mountains was exposed on the surfaces, too. On one hand, the giant's figure does represent and personify the Apennines, but originally it also was seen inside of a hollowed mountainside, as if allowing spectators to view a cross-section, or to follow the analogies of this discussion, a dissection. However, the body of the giant is un-flayed and intact, and in this its material integrity is contrary to something that has been skinned or dissected. Though it involves multiple kinds of damage to nature, discussed already in Chapters Two and Three, the *Appennino* allows access to layers of knowledge about the body and about nature, via penetration of skin, ultimately without destruction to its body, and so in this way again is paradoxical. The beholder not only gains ocular and tactile knowledge about the materials of the sculpture and of the interior grottoes through the (un)flayed giant, but also embodied understanding of the human figure in and of the sculpture.

In a recent interview, the contemporary artist Richard Serra commented about his work that "…the person walking through becomes the subject matter of his or her own experience…"[487] This, in many senses, was already true of Giambologna's *Appennino* in the late sixteenth century. (At the beginning of this discussion, I suggested that the scale of the work allowed one to forget one's own body; but also it is the scale that in multiple ways (walking around, looking up, going inside) requires bodily engagement, and thus makes it impossible to forget ones' own body.) In fact, I would argue that the human who confronts the *Appennino* relates to it much as the viewer of Serra's work must. His comments are helpful for understanding the ways that the human body must relate to

[487] Richard Serra, interview by Michael Krasny, *Forum*, 88.5 KQED FM, October 10, 2011.

monumentally-scaled, formally complex works. According to Serra, "…[beholders] have to deal with their own body in relation with the vertical and horizontal axis … they have to deal with their own balance, they have to gauge their own cadence, they have to look ahead and understand that they're being propelled usually through a space. . . [in] pieces [that] really rely on the person's own physical and sensual awareness."[488] In other words, the human who encounters Serra's or Giambologna's work is more of an explorer than a viewer, beholder, or spectator.[489] Through the sensory and bodily engagement encouraged by the work, exploring provokes awareness of the co-productive relationship between materiality and illusion in this monument, and it also reveals the art history (and other histories contained within, such as natural history) to the beholder. Through such exploration, the pasts and presents staged by the work are accessed by the beholders.

Conclusions

Just as the *Appennino* defies easy classification as a monument – it is sculptural and architectural, it is a figure and a landscape, it is a fountain and a shelter – its style has proven challenging to define. Since the nineteenth century, art historians have described the work as an example of various period styles: Renaissance, late Renaissance, mannerist, and Baroque. They also have claimed it stands as a culmination in Florentine colossal sculpture (a Panofskian *renascence* of sorts), and that it anticipates the uses of *rocaille* in the eighteenth century. The scholarship suggests that the *Appennino* allows for a multiplicity of responses relative to period style.

---

[488] Serra, October 10, 2011.
[489] David Summers, "Facture," in *Real Spaces*.

In the literature on the *Appennino*, art historians frequently describe the work as an example of Mannerism. In his 1959 dissertation, James Holderbaum asserted that "In the colossus of Pratolino, as he had so often in the past, Giambologna takes a theme of mannerism to its definitive culmination – here the mannerist grotto, which now erupts externally also, into an encrusted grotesque giant."[490] Charles Avery echoed this sentiment: "it was a completely novel form of sculpture, characteristic of the Mannerist ethos."[491] However, seeing precociousness or possibly anachronism in the work, Bertha Harris Wiles claimed, "Here the sculptural and rustic types [of fountains] meet – a paradox that is essentially baroque. It would seem that the striving for bizarre effects could go no further."[492]

Perhaps these different explanations of style are rooted in the changes made to the monument from the seventeenth century forward. Two obvious alterations include the disappearance in the seventeenth-century of the enormous mountain-like niche that once framed the figure and the later renovation of at least one of the grottoes with encrustations in the Baroque style for Grand Duke Ferdinando (1663-1713). In the early nineteenth century other changes were made to the so-called sea monster upon which the giant presses, to the pond, and to the landscape design around the back of the monument to accommodate period tastes. Between the early eighteenth and early twentieth centuries, at least five major interventions occurred, some in the name of restoration,

---

[490] Holderbaum, 146.
[491] See Avery, *Giambologna: The Complete Sculpture* (Phaidon: London, 1993), 28.
[492] See Bertha Harris Wiles, *The Fountains of Florentine Sculptors and their Followers from Donatello to Bernini* (New York: Hacker Art Books, 1975), 82.

some more like renovations.[493] While it seems that the figure remains in its original pose and reflects the original material qualities of the late sixteenth century work, the continual modifications to the landscape setting and material framework should be acknowledged when thinking about the multiplicity of responses to the style of the work. In addition, the natural erosion to the work and the shifts in its surrounding environment have affected its form and could have shifted its meaning. For example, the *Appennino* today is surrounded by "wild" plantings that were conceived of in the nineteenth century; originally, it backed up to a labyrinth that was situated between the *Appennino* and the uppermost fountain at Pratolino, atop which Jupiter Pluvius perched. To what extent might these changes to the monument and its environment have inflected scholarly treatment of its style in the nineteenth and twentieth centuries?

In her 1967 dissertation, Virginia Bush, rather than focusing on the meaning of the encrustations, singularity, or "bizarreness" of the giant, turned instead to scale to find stylistic meaning. She located the *Appennino* within the development of sixteenth-century colossi. In doing this, she avoided labeling it as particularly Renaissance, mannerist, or Baroque, as other of her contemporaries had done. She wrote, "Because of its size and its fabulous character Giovanni Bologna's *Appennines* may be regarded as the climax of the *cinquecento* tradition of colossal sculpture, but it was by no means the last of these extraordinary works."[494] Other colossi materialize later, but none rival the *Appennino,* according to Bush. Bush's assessment is suggestive of the Panofskian idea of

---

[493] Dezzi Bardeschi and Zangheri, "L'Appennino del Giambologna," 64.
[494] See Virginia Bush, *The Colossal Sculpture of the Cinquecent: From Michelangelo to Giovanni Bologna* (New York and London: Garland, 1976), 293.

renascences – she sees a high renaissance of colossi, embodied by the *Appennino*, within the larger Renaissance.[495] But the colossal *renascence* is, relatively, removed from the conventionally prescribed High Renaissance. In scholarly reception, thus, enfolding of temporalities or "rhizomic" obfuscation of chronology occurs like it does in the temporalities of representation, natural processes, and ecological interactions.

In characterizing the significance of this monument, though, Bush does not isolate ways that the *Appennino* differs from High Renaissance convention; rather, Bush celebrates its apparently perfect alignment of subject and purpose, patronage and place, meaning and material nature. Her project might be seen as rescuing the reputation of colossal works, previously "treated … as vulgar aberrants in the *oeuvre* of Michelangelo or Giambologna" by art historians.[496] For example, Holderbaum, writing about a decade before Bush, qualified his characterization of the *Appennino,* discussed above. He saw it as indicative of Giambologna's old-age style: "Giambologna's last great fountain, the astounding colossal *Apennine* of Pratolino, constitutes a sharp break from his usual sculptural practice as it had developed to this time, and is an early indication that the older Giambologna will reach out unexpectedly in new directions." And Holderbaum adds that "When the usually so very sober Giambologna gives way to his bawdy northern

---

[495] Erwin Panofsky, *Renaissance and Renascences in Western Art* (New York: Harper & Row, 1972).

[496] Mary Garrard, "Review*: Florentine Busts: Sculpted Portraiture in the Fifteenth Century (Outstanding Dissertations in the Fine Arts)* by Jane Schuyler; *The Colossal Sculpture of the Cinquecento (Outstanding Dissertations in the Fine Arts)* by Virginia Bush; *The Early Sculpture of Bartolommeo Ammanati (Outstanding Dissertations in the Fine Arts)* by Peter Kinney," *Art Bulletin* 61, no. 3 (1979): 487.

humor, the results are wonderful, if not for the fastidious."[497] The monument, according to Holderbaum, is an "other" within Giambologna's *oeuvre* in multiple ways. But as we have seen, the *Appennino* in fact takes up figural concerns explored in Giambologna's earlier works, and it also manifests art theory articulated earlier in the sixteenth century. The very elements that seem to have confounded some viewers and scholars – size and texture – appealed to embodied beholders and generated a rich reception history.

Early modern responses and modern scholarly reception, as well as the confusion and contradictions present within these collections of interpretation, suggest that the *Appennino* consistently takes neither the form of the "other" nor that of the thing against which the "other" is compared; continually it is in the midst of becoming either for its beholders, manifesting its folds or unfurling, and thus finding it possible to re-present art history.[498] At the same time, this constantly morphing, inside-out figure muddied art historians' perceptions of its style. For Wiles, Holderbaum, and others, it was neither mountain nor man completely, both mountain and cave simultaneously, neither Renaissance nor Baroque essentially, both plastic and natural. Eugenio Battisti articulated another possibility for the *Appennino,* situating it outside of binary, teleological systems, and as work that suspended temporality with its perpetual presentation of process: he viewed it as an example of the *informe*.[499] Battisti likened the

---

[497] Holderbaum, 146.
[498] As discussed in Chapter One, the iconography of the monument also confused some beholders, perhaps for similar reasons.
[499] Battisti, *L'Antirinascimento*, 169-184. Battisti's concepts of "formless matter," "formlessness," and "*informel,*" seem to have most in common with the modernist notion of *informe*, in contrast to Didi-Huberman's idea of the *informe* as disfiguration. On the contrast between and the implications of Bataille's and Didi-Huberman's ideas for art

mountain-man to a "prehistoric monster … still covered with moss, mud, and lichen."[500] It had been covered; it was *still* covered; and it might at some point shed the cover. The green and earthen substances covered the *Appennino* in such a way that made it appear to emerge from a primordial swamp.[501] For Battisti, the *Appennino* was in process; the rough surfaces indicated generation or creativity of the sort that Michelangelo's *non finito* might.[502]

---

historical analysis, see James Elkins, *Pictures of the Body,* 292, note 31*;* on contradictions between Didi-Huberman's development of the idea in *Fra Angelico* and in his later work, see James Elkins and Robert Williams eds. *Renaissance Theory (*London: Routledge, 2008), 249-251, and further discussion in Elkins, "On the Unrepresentable in Pictures," published online, August 2009, 1-18, and as "Einige Gedanken über die Unbestimmtheit der Darstellung," in *Das unendliche Kunstwerk: Von der Bestimmtheit des Unbestimmten in der ästhetischen Erfahrung,* ed. Gerhard Gamm and Eva Schürmann (Berlin: Philo, 2006), 119-140. In Battisti's treatment of grottoes, caves, Michelangelo's *Slaves,* and the *Appennino,* formlessness perpetually manifests the potential to figure, or is always in process, but it is not about something being de-formed. There is no dialectical relationship wherein something is form-less as a result or symptom of interaction, nor form-shifting between representations (other-to-other), but a state between raw material and formation. However, this is all within the context of visual culture of the Renaissance; in a way, it is a method with which Battisti can conceptualize things like the "unfinished," the monstrous, the non-canonical, so his conjuring of this idea does not purely fit Bataille's intention. See also Georges Bataille, "Formless," in *Visions of Excess: Selected Writings, 1927-1939*, ed. and trans. Allan Stoekl (Minneapolis: The University of Minnesota Press, 1985), 31; Didi-Huberman, *Fra Angelico*; Georges Didi-Huberman, *La Resemblance informe ou le gai savoir selon Georges Bataille* (Paris: Macula, 1995); Yve-Alain Bois and Rosalind Krauss, *Formless: A User's Guide* (New York: Zone Books, 1997), 79-86.

[500] Battisti, 237.

[501] Battisti, 237. Battisti's description suggests that if he beheld the work in person, it had not been cleaned recently but was completely embroiled with the environment (see fig. 3.1).

[502] Battisti, 180-181. Battisti discusses Michelangelo's own idea of the potential in blocks, in contrast to sixteenth-century understandings of "fragment," "ruin," and other terms of destruction, as well as modern reception (i.e. Wölfflin); for Battisti the formless is connected to the *non finito*, as well as the idea of "third nature," though he does not use the term *terza natura* but calls upon writers like Tolomei to describe nature's processes in connection to formless or the process of forming.

At the same time, the relationships between the figure, its materials, and its art historical precedents – how these worked together – were perhaps more transparent because of the ever-morphing rough encrustations and colossal entanglement with the environment. The ways that the figure interchanges with – or interpenetrates – landscapes that emerge throughout the monument demonstrate that visible, denotable, even touch-able changing-of-form was crucial to the actualization of the sculpture. As such, the *Appennino* draws attention to its own process of figuration, to human corporeality, and to the liquidity of boundaries between art and nature, landscapes and figures (both sculpted and human). Its processes of figuration develop a human from the landscape, drawing attention to the potential each possesses to create and destabilize the other; as a result, this monument destabilizes art historical conventions.

CODA

Ambivalent *Appennino*: Pastoral, Afterlife, and the Damage of Nature

Ambivalent Pastoral and Renaissance Greening

Arcadian references punctuated the design at Pratolino, both inside and outside of the *Appennino*. Within the giant, chambers encrusted with *spugne*, shells, and other ornaments evoked the caves of Pan and the nymphs, and originally an automaton of a shepherd, accompanied by his flock and dogs, was found in one of the grottoes.[503] In addition, Brunon connected the *Appennino* to an anonymous eclogue on Pratolino in which a shepherd named Pratolino, futilely awaiting a nymph whom he loves, is metamorphosed into a mountain, the place that is Pratolino.[504] Scholars have suggested that one of the most celebrated examples of Renaissance pastoral literature, Jacopo Sannazaro's *Arcadia* (published officially in 1504), inspired the figuration of the *Appennino*. The poem described a river god: "[water] rained down from his face, his hair, and the bristles of his dripping beard. His garments seemed to be of a greenish ooze…"[505] Scholars also have noted the relationship between the *Appennino* and fantastical pastoral imagery from the *Hypnerotomachia Poliphili* (1499).[506] In other grottoes similar imagery appeared: fountain sculptures and automata referenced figures

---

[503] Described in del Riccio, *Il Giardino di un re,* 55r.
[504] See Brunon, *Pratolino*, 718 ff, and 804-809.
[505] Sannazaro, 139. On how *Arcadia* can be seen in the larger scheme at Pratolino, as well as for this particular passage in relationship to the *Appennino*, see Lazzaro, *The Italian Renaissance Garden*, 136-148.
[506] On the relationship of the *Hypnerotomacchia Poliphili* to the larger scheme at Pratolino, see Lazzaro, *The Italian Renaissance Garden*, 136-148. On the relationship of the *Appennino* to the "reclining giant" in that text, see Morgan, 169.

associated with mythical pastoral like Pan and river gods (Arno).[507] By containing depictions of shepherds and embodying the river god of *Arcadia*, and by referencing other Renaissance pastoral imagery, the *Appennino* exemplified multiple characteristics of the pastoral mode.

Considering the visual and literary references conjured by these grottoes and by the figure of the *Appennino*, as well as the retreat-like function of the site, it could be associated with typical evocations of the pastoral. Historically, the pastoral mode, in text or image, depended upon an Arcadian setting: a verdant grove, removed from urban concerns, populated with shepherds and nymphs. Often pastoral emphasized the idea of repose in a rural landscape populated by these shepherds who might be engaged in song or musical competition or reclining under a tree; this kind of landscape suggested a *locus amoenus*, or pleasant place, sometimes denoted as Arcadia, but always in the past and appealing to the imagination, rather than being grounded in reality.[508] Scholarship on the Renaissance pastoral repeatedly emphasizes how the mode offered a fictional alternative to the circumstances of exiled poets (Sannazaro),[509] threatened city-states (Venice),[510]

---

[507] These are recorded in the drawings by Giovanni Guerra from 1598.

[508] The origins of pastoral are found in Theocritus, *Idylls* (3rd c. BCE); the classic Roman text is Virgil, *Eclogues* (37 BCE)*;* examples of Renaissance texts include Petrarch, *Bucolicum Carmen;* Giovanni Boccaccio, *Eclogues (Bucolicum Carmen)*; Jacopo Sannazaro, *Arcadia* (c. 1498); Pietro Bembo, *Gli Asolani* (1505); Giovanni Battista Guarini, *Il Pastor Fido* (c. 1580). Pastoral imagery also is found in the *Hypnerotomacchia Poliphili,* and in Ludovico Ariosto, *Orlando Furioso* (1516/1532), for example.

[509] Jacopo Sannazaro (1458-1530), poet and courtier, accompanied his patron Federigo, king of Naples, into exile in 1501. Though Sannazaro had already completed ten eclogues and ten prose chapters for *Arcadia* in 1489, he had not published it. Unauthorized editions were published in Venice, Naples, and Milan between 1502-1504. This prompted Sannazaro, while in exile, to significantly revise his text, which he then

and, at Pratolino, perhaps a melancholic patron (Grand Duke Francesco I).[511] These examples suggest social, political, and biographical meaning for pastoral.[512] Thus, the *Appennino* can be associated with many scholarly commonplaces of the pastoral.

The *Appennino* also might embody the poetics of loss: Brunon made a compelling argument that the monument can be seen as the double incarnation of the fictive shepherd in the anonymous eclogue and the place of Pratolino – Pratolino becomes the medium for its own figuration, and in its figuration is a lamentation for the absent nymph. In this case, nature mourns human suffering. Both this reading by Brunon and d'Elia's recent discussion of the monument explored how the figural pose of the *Appennino* and its

---

had published in 1504. See William J. Kennedy, *Jacopo Sannazaro and the Uses of Pastoral* (Hanover and London: University Press of New England, 1983), 21-27. Also see Bembo, *Gli Asolani*, and/as the exile of Catarina Cornaro at Asolo.

[510] For example, see Jonathan Unglaub, "The *Concert Champêtre*: The Crises of History and the Limits of Pastoral," *Arion* 5, no. 1 (1997): 46-96.

[511] Brunon lists the number of personal / familial tragedies to befall Francesco in the time leading up to the construction of Pratolino; d'Elia also sees Pratolino as a manifestation of Francesco's melancholy; and earlier, Ciffulotti discussed the melancholy of Francesco.

[512] For an overview of the pastoral see Luba Freedman, *The Classical Pastoral in the Visual Arts* (New York: Peter Lang, 1989); and David Rosand, "Pastoral topoi: on the construction of meaning in landscape," *Studies in the History of Art* 36 (1992): 160-77. For the argument that shepherds make the landscape pastoral, not the other way around, see Paul Alpers, *What is Pastoral?* (Chicago and London: University of Chicago Press, 1996). Also see Paul Holberton, "Painting and Poetry at the Time of Giorgione," Ph.D. diss., Warburg Institute (London, 1989); David Rosand, "Giorgione, Venice and the Pastoral Vision," in *Places of Delight: The Pastoral Landscape*, ed. Robert Cafritz, exh. cat., National Gallery (Washington, DC: 1988); Annabel Patterson, *Pastoral and Ideology* (Berkeley and Los Angeles: University of California Press, 1987); Ellen Lambert, *Placing Sorrow: A Study of the Pastoral Elegy Convention from Theocritus to Milton, University of North Carolina Studies in Comparative Literature* 60 (Chapel Hill: University of North Carolina Press, 1976); Michael J.K. O'Loughlin, "'Woods Worthy of a Consul': Pastoral and the Sense of History," in *Literary Studies: Essays in Memory of Francis A. Drumm,* ed. John H. Dorenkamp (Worcester, MA.: College of the Holy Cross, 1973), 144-158; Erwin Panofsky, "'Et in Arcadia Ego': Poussin and the Elegiac Tradition," in *Meaning in the Visual Arts* (Chicago and London: University of Chicago Press, 1982).

relationship to specific pastoral texts suggest an afflicted, burdened nature. Tracing textual descriptions and sculptures of river gods from antiquity to the sixteenth century, d'Elia described the figure's pose as an expression of the burden of producing water. These analyses both relate the pastoral of the *Appennino* to emotive qualities, to the character of its personification, to an interiority of the figure that reflects his losses, failures, or struggles. As the various interpretations catalogued in these few paragraphs demonstrate, the pastoral is a spectrum, from idyllic to damaged; in its literary references, figural pose, and structural function, the *Appennino* simultaneously idealizes and mourns nature, reflecting the breadth of this spectrum.

But beyond textual associations and empathetic tendencies, the materiality of the work relates to pastoral in broader-reaching ways that attest to its ambivalent engagement with nature.[513] This engagement is seen through the landscapes of the *Appennino* in terms of poetics and content, as well as in the critical sense.[514] Pastoral offers a way of seeing nature that may draw attention to what is not – what is not whole, what is not pristine, what is not wild, what is not idyllic – or what is gone. Thinking of the *Appennino* in this way, the pastoral lens reveals it as a monument of things absent, lost, disappeared, and, especially, damaged. At its inception, Pratolino was a spectacular retreat from Florence for Francesco: the *Appennino,* as one of the only extant works of the original program, reminds us of the original function. It signals double absence – that

---

[513] On the tradition of ambivalent depictions of nature in texts, see Garrard, *Ecocriticism*; Merchant, *The Death of Nature*.

[514] See Terry Gifford, "Three Types of Pastoral," in *Pastoral* (London and New York: Routledge, 1999), 1-12. Also see, on "pastoral's multiple frames," Buell, *The Environmental Imagination*, 36 ff.

of the patron and visitors from the city, historically, and that of the original built environment from the site, now. At the same time, it persists as a monument to its own losses. Parts of the original interior and exterior have disappeared, and the exterior surfaces have been damaged. This pastoral lens focuses the ecological critique of the *Appennino* and clarifies how this monument reflects ambivalence about nature. Works like the *Appennino* suggest that pastoral treatments of nature can reflect disruption and damage of nature during the Renaissance, and beyond. In this regard, it is irrelevant whether Francesco I or Giambologna intended pastoral connotations in the *Appennino*; instead, the construction, mechanical function, and afterlife of the monument are salient.

In multiple ways, water was central to the *Appennino's* structure, mechanics, and afterlife; as such, water was central to the monument's articulation of pastoral and to its ambivalence. Water obviously emerged on the surfaces of the *Appennino*, in its fish pond, and in fountains and other types of waterworks and hydraulically powered mechanisms (like water organs and artificially created birdsong) that punctuated the grounds of Pratolino. Evidence of the water's presence inhered in the green nature of Pratolino, from the "flowers and foliage" that Agostino observed on the *Appennino*, to the informal *prato* in front of the *Appennino*, to the wooded areas and agricultural facets of the site. The water flowing through the *Appennino* ran through pipes, covered by stalactites and lava mined from other sites, which themselves reflected the plunder of nature.[515] But in many ways, the work that the Mugnone did to create such

[515] Concern about the quarrying of mountains for sculptural materials was voiced by Pliny the Elder, as discussed in Chapter Two, and Renaissance artists and beholders who read Pliny might have been aware of his complaint. In addition, in antiquity there were

"delightsome" content remained hidden: its technique was masked not just because the *spugne* hid armature and spigots, but also because its flow and the mechanics of its redirection were covered up, hidden underground.

In turn, because of this covering up, the generative power of the waterworks was threatened: protective encasements around the water pipes were designed to thwart the plants' root systems that could have damaged them. In 1809, the original lead pipes were replaced with terra cotta, which ultimately caused water damage to the underground grottoes and to the villa. By 1819, supposedly because of this damage, the villa was demolished.[516] Thus, at the same time that nature greened, vivified, and otherwise acted in a generative manner, it also caused degeneration of the site and of the *Appennino*. Furthermore, by redirecting the Mugnone, Francesco and his engineers disrupted nature's course and undoubtedly disturbed or damaged ecosystems along the way.

These interactions comprise a system of human damage to the environment and nature's damage of art. In Renaissance art theory, a critical idiom for describing this phenomenon did not exist, despite the evidence in the work, which I have discussed throughout this study, and in its immediate afterlife in the late sixteenth and early seventeenth centuries. But looking at the monument through the lens of pastoral illuminates a latent awareness of the damage of nature. The argument that Robert

---

precedents for concern about deforestation: Virgil, "Eclogue V," in *Eclogues, Georgics, Aeneid,* trans. H.R. Fairclough, Loeb Classical Library, Vol. 63 & 64 (Cambridge, MA: Harvard University Press, 1916), 52-60; and Plato, *Critias*, in The *Dialogues of Plato: Republic, Timaeus, Critias,* trans. Benjamin Jowett (New York and London: MacMillan & Co., 1892), 532. As discussed in Chapter Two, similar concerns about mining and, to an extent, deforestation were articulated in sixteenth-century Italy.

[516] Zangheri, ""L'acqua a Pratolino," 358.

Watson and Ken Hiltner made for Renaissance pastoral literature also applies to visual art: the *manner* in which artists addressed nature in some visual art reveals environmental consciousness, even if the content does not overtly articulate such awareness.[517] That is to say, though a pastoral poem (or a painting or a sculpture or a print) may not depict real, damaged nature, the work of art can still be viewed as "nature writing," something that draws attention to the environment and that offers a philosophy of nature's condition.[518] By virtue of its figuration of nature, and the entanglement of that figuration with the ground of nature, the *Appennino* draws attention to the processes of nature -- streams melting and freezing and of the man-mountain emerging and morphing. The manner in which the monument works to do these things, and then ceases to work, not only offers a philosophy of nature's ambivalence, but also materializes nature's ambivalence.

At Pratolino, the ambivalent pastoral emerged in the way that the fountain sculptures, grotto spaces, and *giochi d'acqua* functioned in the service of play and revelry, and then ceased to function. First, these elements, through mythical imagery and playfulness, not only served as an alternative, foil, or distraction from life outside of the villa complex, but also these elements defied environmental reality in that they facilitated the redirection of water and required the use of water that the site naturally lacked. In this context, the pose of the *Appennino* might be a metaphor for the difficulty of defying

---

[517] Robert N. Watson, *Back to Nature: The Green and the Real in the Late Renaissance* (Philadelphia: University of Pennsylvania Press, 2006) and Ken Hiltner, *What Else is Pastoral?: Renaissance Literature and the Environment* (Ithaca: Cornell University Press, 2011).

[518] Hiltner has pointed out how this stance is contrary to early/conventional ecocriticism of the 1980s and 1990s that only wanted to see critiques of the human/nature relationship in work that described "real" landscape, and how it is also contrary to conventional scholarship on the pastoral.

nature, in the vein that d'Elia suggested, but furthermore the mechanical work of the pose draws attention to the expression of water. Thus, the pastoral is doubly incarnate in physical and phenomenological machinations at the site: it is figured by the artwork and it is manifest in the water-driven sights, sounds, and tactile surfaces.

Pastoral traditionally has not been viewed as critically engaging disruptions of nature; contrarily, pastoral has inspired reception critical of its often-idyllic mode. Ecocritics of the late twentieth century have argued that an idyllic pastoral – as a contrast to the real, human-damaged environment – helped drive ecological imperatives in the modern and contemporary eras. They have seen this positive version of pastoral as persistent, as a foil to (and centering agent for) post-industrial environmental concerns, and as reflective of (an ideal) pre-industrial nature: "At the root of pastoral is the idea of nature as a stable, enduring counterpoint to the disruptive energy and change of human societies."[519] However, within the *Appennino,* pastoral destabilized. It replaced and heightened what is absent, but then instigated loss. Damage enacted upon nature in order to manifest the alternative green paradise of play resulted in damage by nature to art.

Romantic Ruin and Return to Wild Nature

Pratolino was "a place for wild nature, surrounded by mountains, and full of woods," observed Francesco de' Vieri in the sixteenth century. In terms of plant life, "wild nature" at Pratolino consisted of cultivated woods, comprised of beech and laurel, planted inside the boundaries of the park, as well as the forest that surrounded the

[519] See Garrard, *Ecocriticism*, 56-58.

property (fig. 1.2). The former represented human intervention and reworking of the previously "sterile, and mountainous site"; the latter may have appeared naturally wild, but the irrigation system running through Pratolino undoubtedly affected the outlying forest's ecosystem.[520] Again, doubly, Pratolino articulates pastoral through its physicality and mechanics. The cultivated woods replace "sterile" land, standing in for what was absent. But they are seen and experienced against the wilderness of forest and mountain, "natural" counterpoints to fabricated pastoral nature.[521] The juxtaposition heightens the artificiality of Pratolino, wherein the generation of green woods actually required disturbance of wild nature.

The materials that figured pastoral places at Pratolino – mountains, including the *Appennino*, and caves, including those in the *Appennino* and those under the villa – also relate to transgressions involved in making. They are remnants of volcanic violence and at the same time *spolia* from nature; they are re-presentations of the *Appennino's* aged and icy condition, and at the same time they participated in the real redirection of water at Pratolino and the resulting damage to works there. They index the disruptions and damage that nature suffers in the pursuit of art, and that it can inflict.

---

[520] The human intervention in "wild nature" at Pratolino could also be seen in terms of William Cronon's wilderness, "Whatever value [wilderness] might have [prior to 1800] arose solely from the possibility that it might be "reclaimed" and turned toward human ends – planted as a garden, say or a city upon a hill. In its raw state, it had little or nothing to offer civilized men and women." See William Cronon, "The Trouble with Wilderness: Or, Getting Back to the Wrong Nature," *Environmental History* 1, no. 1 (1996): 9. Though, as discussed throughout this study, there are multiple ways of understanding the relationship of nature (living and represented) at Pratolino (and in the *Appennino*) relative to conceptions of nature in the early modern period.

[521] On the artificiality of "wilderness" and perpetual entanglement of humans with it, see Cronon, 16. If humans are present to observe its wilderness, then it is no longer wild, no longer natural.

The mechanical function of the *spugne* of the *Appennino* also undoes itself: it is an expression of entropy and paradox, wherein surfaces that participated in the conduction of water are destroyed because of that very process. The problems with the pipes and the consequent damage observed in the mid-eighteenth century ultimately ruined the subterranean grottoes and led the early nineteenth-century proprietors of Pratolino to demolish the original villa and any remnants of the grottoes. At this point, largely under the direction of the landscape designer Frietsch, the entire complex was re-made in the "wild" Romantic manner.[522] The remaking involved not only razing the original villa and grottoes, but also turning the grounds over entirely to meadowscape and woods and renovating the *Appennino*. Significantly, the lowest grotto of the giant, which was within the "living rock" that comprised part of its body, was denuded of its encrusted plaster walls, and the walls were rough cut to give the impression of a "real" cave. The area around the *Appennino* was planted with more trees, perhaps to heighten the appearance of the giant emerging from green forest. Eighteenth- and nineteenth-century

[522] For a summary of the "renovations" from the seventeenth through nineteenth centuries, see Zangheri, "Trasformazioni dell'Appennino tra barocco e romantic," 22-23. Essentially, there were two campaigns in the early eighteenth century: one in 1817 for which little documentation exists, and one from 1819-1821, which was led by Frietsch. Under Frietsch, repairs were made to the pipes feeding the fantastical creature spouting water, as well as to the *spugne*; exterior and interior were treated with paint, and the lowest grotto was renovated. All of its encrustations were removed, and the walls were hacked at so as to create a "real" cave; the cave environment was furthered by boulders imported to the space and dirt floor. Zangheri notes that, fortuitously, patches of tall trees (planted purposefully) amplified the appearance that the giant was emerging from a green background. (The area around the *Appennino* was already wooded in the sixteenth century, but one gets the impression that the effect was heightened or thickened during Frietsch's period.)

visitors beheld this wildness as if it were witness to and artifact of an antique ideal previously manifest on the site, gone by the nineteenth century.[523]

Critical reception was not uniform, but both laudatory and deprecating comments illuminate that the *Appennino* elicited nostalgia. For one beholder, the *Appennino* was "worthier" than art produced by the "new times,"[524] while for another it was "mediocre" work by an unknown Renaissance artist (in his report, Giambologna and Ammannati were both possibilities).[525] Despite the recent renovations, both beholders recognized the *Appennino* as from a time past. For this latter beholder, memories of the past at Pratolino – of things surely superior to the *Appennino* – rested in the trees (which were more beautiful to behold) and hovered in the shadows. In this example, the *Appennino* acts as reminder of absent works, and a foil for the lost ideal.

Colossal Ambivalence

Sixteenth-century Pratolino serves as a case study for the damaging effects upon nature and art of human intervention in the landscape. Within the case study of Pratolino, the *Appennino* stands as the prime exhibit, due to its persistence over time, when so much of the original program otherwise disappeared, and due to its physicality and functionality. The *Appennino* played a central role within the entropic system of generation and damage at Pratolino, due to its position within the complex (at a focal

---

[523] See selected excerpts in Alessandro Vezzosi, "Le fortune dell'Appennino e il restauro del mito," in *Risveglio di un Colosso,* 44.
[524] The German architect Leo von Klenze, writing around 1820. See Vezzosi, "Le fortune dell' Appennino," 44.
[525] The French writer M. Valery, writing in 1828. See Vezzosi, "Le fortune dell' Appennino," 44.

point, midway between the original villa and fountain of Jupiter) and due to its function as a giant fountain, propelling water over its own body, out of its suppressed prey, into a pond, under the *prato*, and through the plumbing of the place. The deleterious effects of art upon nature and nature upon art are heightened in the *Appennino* due to its scale. The pastoral of the monument relative to its construction, mechanical function, and afterlife also is amplified, pointing towards facets of the project and the place that became absent, lost, or damaged; in turn, this heightens the monument's own ambivalent relationship with nature.

Colossal scale draws attention to these things; the colossal elicits observation, reception history, and conservation efforts that perhaps smaller scaled works do not. For example, in a similar vein, Ken Hiltner explained how old St. Paul's Cathedral, London, also a colossal thing, evidenced environmental distress and architectural decay simultaneously, calling attention to the pollution problem in seventeenth-century England.[526] In his 1638 history of St. Paul's, William Dugdale noted that James I had already, by 1620, become alarmed by the "decayed fabrik" of St. Paul's, the "corroding quality of the Coale Smoake," and the "neer approaching ruin" of the structure.[527] Both Charles I and the diarist John Evelyn observed damage to St. Paul's, Charles I establishing a commission to underwrite its restoration in 1631. But Charles' effort

---

[526] Ken Hiltner, "Renaissance Literature and Our Contemporary Attitude toward Global Warming," *Interdisciplinary Studies in Literature and the Environment* 16, no. 3 (2009): 431.

[527] William Dugdale, *The History of St. Paul's Cathedral in London, from Its Foundation Untill These Times: Extracted Out of Originall Charters, Records, Leiger Books, and Other Manuscript, Beautified with Sundry Prospects of the Church, Figures of Tombes and Monuments* (London: Tho. Warren, 1658), 134. .

would not have been necessary in the absence of another human intervention – the near deforestation of England by 1500, and the subsequent dependence upon coal – especially upon sea coal.[528] As Hiltner wrote, not only did the cityscape and its architectural monuments suffer, but so did florae and faunae; Evelyn reported that bees, flowers, agricultural animals, and fish perished or, worse, appeared to become extinct. Human illness also escalated.[529] For Hiltner, the situation in early modern London represented a paradox, and also posed a "major representational challenge" to writers: they could be compelled to articulate environmental distress that they and their readers instantiated.[530] And how could they escape it? The smoke plume was ubiquitous and the damage to human life and to the built environment was staggering. John Evelyn's solution, in his 1661 treatise *Fumifugium* (on the polluted air of London) was to blame it all on industry.[531]

Hiltner suggested that Evelyn's rhetoric anticipated or served as a model for post-modern environmentalists: afraid to look themselves in the mirror, instead they point fingers at the most conspicuous – the most colossal – perpetrator, industry. One place where this misrepresentation occurs today is in Las Vegas. Despite "green" efforts initiated at least a decade ago, conventional perception of Las Vegas overlooks environmentally responsible corporations and irresponsible individuals. Instead we think we see casino hotels with an insatiable appetite for water to produce their own, modern water-games and to hydrate and launder their own, modern palatial quarters:

---

[528] Hiltner, 431.
[529] Hiltner, 432.
[530] Hiltner, 432-433.
[531] Hiltner, 433-435.

> No matter how you arrive in Las Vegas, by car or plane, you are immediately struck by the stark contrast of a lush city against a barren desert that stretches in all directions.
>
> Yet, this is a region in the grip of one of the worst droughts on record.
>
> … And each day countless tourists wander up and down the Strip, in awe of dancing fountains, sinking pirate ships, tropical landscaping, pools and many more water features.[532]
>
> --Carmen Roberts, "Vegas Heading for Dry Future," *BBC*, 2005

We overlook the huge consumption by private individuals for many things, especially watering lawns – greening desert.[533] Beholders of Las Vegas home in on the colossal monuments and the green-ness that strikingly contrast the "barren" land surrounding Las Vegas. The "lush city," "dancing fountains," and colossal replicas of cultural landmarks collaborate to create a fantasy world, a post-modern pastoral of sorts, which draws attention to the problems of its own generation and the probability that it will enact its own demise. These aspects of the Las Vegas –scape overlap with the fantastical descriptions of the *Hypnerotomachia Poliphili* and with the features of Pratolino, some

---

[532] Carmen Roberts, "Vegas Heading for 'dry future,'" *BBC News*, 07/29/2005. http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4719473.stm

[533] As Carmen Roberts reported for the BBC, it is a common misconception that casinos (corporations) are largely responsible for water consumption, and thus contribute unduly to the near constant draught, damaging the environment and threatening the future of human habitation of that place. In 2005, hotel casinos only used 30% of their water allocation outside, and the water used inside is largely recycled. On the other hand, private residents used about 70% of their water allocation outside in 2005. In 2007, dozens of "green initiatives" encouraging stewardship of natural resources, especially water, were articulated among the city's Sustainable Initiatives on a "Green Sheet." Among the measures taken by the city and private entities, city park grass has been replaced by synthetic turf, irrigation systems have been updated to more efficient models, and wastewater is being treated, recycled and returned to river sources in large volume. These initiatives are described in the City of Las Vegas "Green Sheet," 2007. Accessed online.

lost and some conspicuously persistent. Sketching out these similarities in terms of scale, functionality, and the greening of barren nature, again as a case study, illustrates the on-going human compulsion to transform the environment and the consequent damage.

Contrary to Evelyn's experience of London and view of St. Paul's, early modern beholders of Pratolino observed the site in perfect working order; the pernicious effects of time and weather upon the sculpture and architecture would not fully erupt until later. But during the late sixteenth and seventeenth centuries, local wilderness and agriculture both must have been harmed from the use of water at Pratolino. As we have seen, at least from the mid-eighteenth century, beholders could not overlook damage to the sculptural and architectural program. The damage to the pipes, fountains, grottoes, and structures implied that redirecting water to Pratolino – in effect, controlling the environment – was not natural. Even if the early modern beholders at Pratolino and their contemporary artists and art theorists did not possess the critical idiom for articulating the ecological consequences of this circumstance (or did not want to), together nature and art represented the problem for them.

BIBLIOGRAPHY

Ackerman, James. "Early Renaissance 'Naturalism' and Scientific Illustration." In *Distance Points: Essays in Theory and Renaissance Art and Architecture*, 185-207. Cambridge, Massachusetts: MIT Press, 1991.

Agricola, Georgius. *De re metallica* [1556], trans. Herbert Clark Hoover and Lou Henry Hoover. Dover: New York, 1950.

Aimi, Antonio et. al. "Towards a History of Collecting in Milan in the Late Renaissance and Baroque Periods." In *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. Oliver Impey and Arthur MacGregor, 24-28. Oxford, U.K.: Clarendon Press, 1985.

Alberti, Leandro. *Descrittione di tutta Italia*. Bologna: Anselmo Giaccarelli, 1550.

Alberti, Leon Battista. *On the Art of Building in Ten Books*, trans. Joseph Rykwert, Neil Leach, Robert Tavernor (Cambridge, MA, and London: The MIT Press, 1988).

Alberti, Leon Battista. *On painting and On Sculpture: the Latin texts of De pictura and de statua*, trans. Cecil Grayson. London: Phaidon, 1972.

Albury, W.R. and D.R. Oldroyd. "From Renaissance Mineral Studies to Historical Geology, in the Light of Michel Foucault's 'The Order of Things." *The British Journal for the History of Science,* 10, no. 3 (Nov. 1977): 187-215.

Alpers, Paul. *What is Pastoral?* Chicago and London: University of Chicago Press, 1996.

Alpers, Svetlana. "The Mapping Impulse in Dutch Art." In *The Art of Describing: Dutch Art in the Seventeenth Century,* 119-168. Chicago: University of Chicago Press, 1983.

----------"The Mapping Impulse in Dutch Art." In *Art and Cartography: Six Historical Essays*, ed. David Woodward, 51-75. Chicago: University of Chicago Press, 1987.

Ames-Lewis, Francis. "Leonardo's Botanical Drawings." In Claire J. Farago, ed., *Leonardo da Vinci: Selected Scholarship,* 5 vols. – vol. 5, *Leonardo's Science and Technology*, 275-82. New York: Garland, 1999. Originally published in *Achademia Leonardo da Vinci* (*ALV Journal*) 10 (1997): 117-24.

Ames-Lewis, Francis and Paul Joannides, eds. *Reactions to the Master: Michelangelo's Effect on Art and Artists in the Sixteenth Century*. Aldershot, UK, and Burlington, VT: Ashgate, 2003.

Andrews, Malcolm. *Landscape and Western Art*. Oxford and London: Oxford University Press, 1999.

Appuhn, Karl. *A Forest on the Sea: Environmental Expertise in Renaissance Venice*. Baltimore: Johns Hopkins University Press, 2009.

Appleton, Jay. *The Experience of Landscape*. London & New York: John Wiley & Sons, 1975.

Arasse, Daniel. *Leonardo da Vinci: The Rhythm of the World*. Konecky & Konecky: New York, 1998.

Arber, Agnes. *Herbals: Their Origins and Evolution, A Chapter in the History of Botany, 1470*-1670. Cambridge, UK, and New York: Cambridge University Press, 1986.

Ariosto, Ludovico. *Orlando Furioso*, trans. Guido Waldman. Oxford UP: New York, 1983.

Arnaud, Philippe. "L'Apennin: Renaissance d'un Géant." *L'Estampille / L'Objet d'Art*, 273 (1993): 64.

Arndt, Ernst Moritz. *Brunchstücke aus einer Reise durch einen Theil Italiens im Herbst und Winter 1798 und 1799,* 2 vols. Leipzig, 1801.

Arnheim, Rudolf. *Art and Visual Perception: Psychology of the Creative Eye*. University of California Press: Berkeley and Los Angeles, 1954.

Arnheim, Rudolf. *Entropy and Art: An Essay on Order and Disorder*. Berkeley and Los Angeles: University of California Press, 1971.

Avery, Charles. "Donatello's Marble Narrative Reliefs." In *Studies in Italian Sculpture*. 61-88. London: Pindar, 2001.

Avery, Charles. *Giambologna: The Complete Sculpture*. Phaidon: London, 1993.

Bacon, Francis. *The Advancement of Learning*, Book II, in *The Works of Francis Bacon, Baron of Verulam, Viscount of St. Alban, and Lord High Chancellor of England*, Vol. III, ed., James Spedding, et. al. London: Longmans & Co.,1887.

Baldinucci, Filippo. *Notizie dei professori del disegno da Cimabue in qua,* Vol. VII in *Opere*. Milan: Società tipografica de'Classici italiani, 1808-12.

Baldinucci, *Notizie dei professori del disegno da Cimabue in qua*. Milan, Vol. VIII. Società Tipografica de' Classici Italiani, 1811.

Baltrusaitis, Jurgis. *Aberrations: An Essay on the Legend of Forms*, trans. Richard Miller Cloth. Cambridge, MA: MIT Press, 1989.

Bann, Stephen. "Foreword." In Udo Weilacher, *Between Landscape Architecture and Land Art*. Basel: Birkhäuser Architecture, 1995.

Barkan, Leonard. *Unearthing the Past: Archaeology and Aesthetics in the Making of Renaissance Culture*. New Haven and London: Yale University Press, 1999.

Barocchi, Paola. "Finito e non-finito nella critica vasariana." *Art Antica e Moderna* 3 (1958): 221-235.

Barocchi, Paola, ed. *Trattati d'arte del' Cinquecento: fra manierismo e Controriforma*. Vol. 2. Bari: G. Laterza, 1960.

----------. *Scritti d'arte del cinquecento*. Vol. I. Milan and Naples: R. Ricciardi, 1971.

Barocchi, Paola and Renzo Ristori, eds. *Il Carteggio di Michelangelo*. Florence: Sansoni, 1965.

Barolsky, Paul. *The Faun in the Garden: Michelangelo and the Poetic Origins of Italian Renaissance Art*. University Park, PA: Pennsylvania State University Press, 1994.

Barolsky, Paul. "Rabelais's Giants and Erasmus's Folly." In *Michelangelo's Nose: A Myth and Its Maker*. University Park, Pennsylvania: The Pennsylvania State University Press, 1990.

Bataille, Georges. "Formless," in *Visions of Excess: Selected Writings, 1927-1939*, ed. and trans. Allan Stoekl. Minneapolis: The University of Minnesota Press, 1985.

Battisti, Eugenio. *L'Antirinascimento: con una appendice di manoscritti inediti*. Milan: Feltrinelli, 1962.

Baucon, Andrea. "Leonardo da Vinci, the Founding Father of Ichnology." *Palaios* 25, no. 5/6 (May-June 2010): 361-367.

Baxandall, Michael. "Art, Society, and the Bouguer Principle." *Representations* 12 (1985): 32-43.

Baxandall, Michael. *Giotto and the Orators: Humanist observers of painting in Italy and the discovery of pictorial composition, 1350-1450*. Oxford and New York: Oxford University Press, 1971.

Beardsley, John. *Earthworks and Beyond: Contemporary Art in the Landscape*. New York: Abbeville Press, 2006.

Beck, James. *Michelangelo: A Lesson in Anatomy*. New York: Viking Press, 1975.

Beck, Thomas E. "Gardens as a 'third nature': the ancient roots of a renaissance idea." *Studies in the History of Gardens & Designed Landscapes: An International Quarterly* 22, no. 4 (2002): 327-334.

Bélanger, Anne. *Bomarzo ou les incertitudes de la lecture: Figure de la* meriviglia *dans un jardin maniériste du XVI siècle*. Paris: Honoré Champion Éditeur, 2007.

Bembo, Pietro. *De Aetna*, trans. Ross Kilpatrick, in "The De Aetna of Pietro Bembo: A Translation," *Studies in Philology* 83, 3(Summer, 1986): 347-348.

Benthien, Claudia. *Skin: On the Cultural Border Between Self and the World*, trans. Thomas Dunlap. New York: Columbia University Press, 2002.

Bentkowska, Anna. "Anthropomorphic Landscapes in 16th- and 17th- century Western Art. A Question of Attribution."*Biuletyn Historii Sztuki*, 1-2, (1997): 69-91.

Benton Michael J. and David A.T. Harper. *Introduction to Paleobiology and the Fossil Record*. Chichester, UK, and Hoboken, NJ: John Wiley & Sons, 2009.

Berti, Luciano. *Il principe dello studiolo: Francesco I dei Medici e la fine del Rinascimento fiorentino*. Pistoia: Maschietto, 2002.

Bertini, Aldo. "Il problema del non-finito nell' arte di Michelangelo." *L'Arte* 1 (1930): 131-38.

Bloom, Harold. *The Anxiety of Influence: A Theory of Poetry*. London: Oxford University Press, 1975.

Boccaccio, Giovanni. *Ninfale Fiesolano*, trans. Daniel J. Donno. New York: Columbia University Press, 1960.

Boettger, Suzaan. *Earthworks: Art and the Landscape of the Sixties*. Berkeley: University of California Press, 2002.

Bohde, Daniela. "Skin and the Search for the Interior: The Representation of Flaying in the Art and Anatomy of the Cinquecento." In *Bodily Extremities: Preoccupations with the Human Body in Early Modern European Culture*, ed. Florike Egmond and Robert Zwijenberg. Aldershot, UK, and Burlington, VT: Ashgate, 2003.

Bois, Yve-Alain and Rosalind Krauss. *Formless: A User's Guide*. New York: Zone Books, 1997.

Borghini, Raffaello. *Il Riposo*. Florence, 1584.

Boyle, Marjorie O'Rourke. *Senses of Touch: Human Dignity and Deformity from Michelangelo to Calvin*. Leiden: Brill, 1998.

Branagan, David. "Geology and the artists of the fifteenth and sixteenth centuries, mainly Florentine." In *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell, 31-42. Boulder, CO: Geological Society of America, 2006.

Bredekamp, Horst and Wolfram Janzer. *Vicino Orsini und der heilige Wald von Bomarzo: ein Fürst als Künstler und Anarchist*, Vol. 1. Worms: Wernersche Verlagsgesellschaft, 1985.

Brinckmann, Albert. *Barock-Bozetti*: *Italienische bildhauer,* Vol. I. Frankfurt am Main: Frankfurter Verlags-Anstalt, A.G., 1923-25.

Brotton, Jerry. *Trading Territories: Mapping the Early Modern World*. London: Reaktion Books, 1997.

Brunius, Teddy. "Michelangelo's non-finito." *Contributions to the History and Theory of Art*, 29-67. Uppsala, 1967.

Brunon, Hervé. "La forêt, la montagne et la grotte : Pratolino et la poétique pastorale du paysage à la fin du xvi^{e} siècle." *Mélanges de l'École française de Rome. Italie et Méditerranée*, CXII, 2 (2000): 785-811.

----------. "Pratolino: art des jardins et imaginaire de la nature dans l'Italie de la seconde moitié du XVIe siècle." PhD diss., University of Paris I: Panthéon-Sorbonne, 2001.

Bruschi, Arnaldo. "L'abitato di Bomarzo e la Villa Orsiniana." *Quaderni* (1955): 3-18.

Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge: Harvard University Press, MA, 1995.

Bull, George. *Michelangelo: A Biography*. New York: Macmillan, 1998.

Burckhardt, Jacob. *The Civilization of the Renaissance in Italy*, trans. S.G.C. Middlemore. London and New York: Penguin, 1990.

Butters, Suzanne. "Pressed Labor and Pratolino: Social Imagery and Social Reality at a Medici Garden." In *Villas and Gardens in Early Modern Italy*, ed. Mirka Benes and Dianne Harris, 61-87. Cambridge, UK and New York: Cambridge University Press, 2001.

Bush, Virginia. *The Colossal Sculpture of the Cinquecento: From Michelangelo to Giovanni Bologna*. New York and London: Garland, 1976.

Calvesi, Maurizio. "Il Sacro Bosco di Bomarzo." In *Scritti di Storia dell'Arte in onore di Lionello Venturi,* Vol. I., 369-402. Rome, 1956.

Calzolari, Francesco. *Il Viaggio di Monte Baldo*. Venice, 1566.

Campbell, Stephen J. "'*Fare una Cosa Morta Parer Viva'*: Michelangelo, Rosso, and the (Un)divinity of Art." *Art Bulletin* 84, no. 4 (2002): 596-620.

Carabell, Paula. "Image and Identity in the Unfinished Works of Michelangelo." *Res* 32 (1997): 83-105.

Casey, Edward S. "The Edge(s) of Landscape: A Study in Liminology." In *The Place of Landscape: Concepts, Contexts, Studies*, ed. Jeff Malpas, 91-110. Cambridge, MA and London: The MIT Press, 2011.

Cellini, Benvenuto. *Autobiography*, trans. George Bull. London and New York: Penguin, 1998.

----------. *Due trattati, uno dell' oreficeria, l'altro della scultura*. Milan: Dalla Società Tipografica de' Classici Italiani contrada del Cappuccio, 1811.

----------. *Opere,* ed. Bruno Maier. Milan: Rizzoli, 1968.

Cicero, Marcus Tullius. *De natura deorum; Academica*, trans. H. Rackham. Cambridge, MA: Harvard University Press, 1933.

Ciuffoletti, Zeffiro, ed. *Pratolino, Villa Demidoff: Storia, Arte, Natura*. Florence: Alinari, 1990.

Ciulich, L.B. "Michelangelo, Marble and Quarry Expert." In *The Genius of the Sculptor in Michelangelo's Work*, ed. Denise L. Bissonette and Maurizia Binda, 169-178. Montreal: Montreal Museum of Fine Arts, 1992.

Chastel, Andre. “First Reactions to the Ceiling.” In Carlo Pietrangeli, ed., *The Sistine Chapel: The Art, the History, and the Restoration,* 149-175. New York: Harmony Books, 1986.

Clark, Kenneth. *Landscape into Art*. London: J. Murray, 1949.

Classen, Albrecht. “Mountains as a Novel Staging Ground in Late Medieval and Early Modern Literature: Felix Fabri’s *Evagatorium* (1493), Aeneas Silvio Piccolomini’s *Historia Austrialis* (after 1452), and Emperor Maximilian’s *Tewrdank* from 1517.” *Medievalia et Humanistica* 39 (2013): 1-24.

Clifton, James. “Vasari on Competition.” *Sixteenth Century Journal* XXVII, no. 1 (1996): 23-41.

Cocco, Sean. *Watching Vesuvius: A History of Science and Culture in Early Modern Italy*. Chicago and London: University of Chicago Press, 2012.

Cole, Michael. *Ambitious Form: Giambologna, Ammanati, and Danti in Florence*. Princeton and Oxford: Princeton University Press, 2011.

----------. “The *Figura Sforzata*: modeling, power, and the Mannerist body.” *Art History* 24, no. 4 (Sept. 2001): 520-551.

Colonna, Francesco. *Hypnerotomachia Poliphili*, trans. Joscelyn Godwin. New York: Thames and Hudson, 1999.

Conan, Michel, ed. *Landscape Design and the Experience of Motion*. Dumbarton Oaks Research Library and Collection: Washington, D.C., 2003.

Condivi, Ascanio. *The Life of Michelangelo*, trans. Alice Sedgwick Wohl, ed. Hellmut Wohl. University Park, Pennsylvania: The Pennsylvania State University Press, 1999.

Corboz, Andrè. “L’Êrosion sculptrice et la ‘reception sans oeuvre.” *Artibus et Historiae* 23, 45 (2002), 223-233.

Cosgrove, Denis. *The Palladian Landscape: Geographical Change and Its Cultural Representations in Sixteenth-Century Italy*. University Park, Pennsylvania: Penn State University Press, 1993.

----------. "Prospect, perspective and the evolution of the landscape idea." *Transactions of the Institute of British Geographers* (1985): 45-62.

----------. *Social Formation and Symbolic Landscape*. Madison, WI: University of Wisconsin Press, 1998.

Cox-Rearick, Janet. "Art at the Court of Duke Cosimo I de' Medici (1537-1574)." In *The Medici, Michelangelo, and the Art of Late Renaissance Florence*, ed. Cristina Acidini Luchinat, 35-45. New Haven and London: Yale University Press, 2002.

Cranston, Jodi. "Longing for the lost: ekphrasis, rivalry, and the figuration of notional artworks in Italian Renaissance painting." *Word & Image* 27, no. 2 (2011): 212.

----------. *The Muddied Mirror: Materiality and Figuration in Titian's Later Paintings*. University Park, PA: Pennsylvania State University Press, 2010.

----------. "The Touch of the Blind Man: The Phenomenology of Vividness in Italian Renaissance Art." In *Sensible Flesh: On Touch in Early Modern Culture*, ed. Elizabeth D. Harvey, 224-242. Philadelphia: University of Pennsylvania Press, 2002.

----------. "Theorizing Materiality: Titian's *Flaying of Marsyas*." In *Titian: Materiality, Likeness, Istoria*, ed. Joanna Woods-Marsden, 5-18. New York and Turnhout: Brepols, 2007.

Croneis, Carey, William C. Krumbein, and Chichi Lasley, *Down to Earth: An Introduction to Geology*. Chicago: University of Chicago Press, 1936.

Cronon, William. "The Trouble with Wilderness: Or, Getting Back to the Wrong Nature." *Environmental History* 1, no. 1 (Jan. 1996): 7-28.

----------. "The Trouble with Wilderness: A Response," *Environmental History* 1, no.1 (Jan. 1996): 47-55.

Damisch, Hubert. *The Origin of Perspective*. Cambridge, Mass.: MIT Press, 1994.

Dante. *The Inferno*, trans. Robert Hollander and Jean Hollander. Doubleday: New York, 2000.

Del Bravo, Carlo. "Francesco a Pratolino." *Artibus et Historiae* 8, no. 15 (1987): 37-38.

della Mirandola, Pico. *Oration on the Dignity of Man: A New Translation and Commentary,* ed. Francesco Borghesi, Michael Papio, and Massimo Riva. Cambridge, UK, and New York: Cambridge University Press, 2012.

Deleuze, Gilles. *The Fold: Leibniz and the Baroque*, trans. Tom Conley. Minneapolis: University of Minnesota Press.

d'Elia, Una. "Giambologna's giant and the cinquecento villa garden as a landscape of suffering." *Studies in the History of Gardens & Designed Landscapes: An International Quarterly* 31:1 (March 2011): 1-25.

Derrida, Jacques. "The Parergon," trans. Craig Owens, *October* 9 (Summer 1979): 3-41.

----------. *The Truth in Painting*, trans. G. Bennington and I. McLeod. University of Chicago: Chicago, 1987.

Dezzi Bardeschi, Marco and Alessandro Vezzosi, eds. *Il Ritorno di Pan. Ricerche e progetti per il future di Pratolino,* exh. cat. Florence: Alinea, 1985.

Dezzi Bardeschi, Marco and Luigi Zangheri. "L'Appennino del Giambologna." In *Il Concerto di Statue,* ed. Alessandro Vezzosi, 49-76. Florence: Alinea, 1986.

Didi-Huberman, Georges. *Fra Angelico: Dissemblance and Figuration*. Chicago: University of Chicago Press,1995.

---------- *La Resemblance informe ou le gai savoir selon Georges Bataille*. Paris: Macula, 1995.

Dolev, Nevet. "'Such Shaping Phantasies': The Found Object in the Thought and Practice of the Late Renaissance." In *Norms and Variations in Art: Essays in Honor of Moshe Barasch*, 104-128. Jerusalem: The Magnes Press, The Hebrew University, 1983.

Gordon Dotson, Esther. "Shapes of Earth and Time in European Gardens." *Art Joural* 42, no. 3 (1982): 210-216.

Durling, Robert M. "The Ascent of Mt. Ventoux and the Crisis of Allegory." *Italian Quarterly* 18, no. 69 (Summer 1974): 7-28.

Edgerton, Samuel Y. and *The Heritage of Giotto's Geometry: Art and Science on the Eve of the Scientific Revolution*. Ithaca: Cornell University Press, 1991.

----------. *The Renaissance rediscovery of linear perspective*. New York: Basic Books, 1975.

Edwards, Karen Victoria. "Rethinking the Reinstallation of the Studiolo of Francesco I de' Medici in the Palazzo Vecchio," Ph.D. diss., Case Western Reserve University, 2007.

Elkins, James. "On the conceptual analysis of gardens." *The Journal of Garden History*

13, no. 3 (1993): 189-198.

----------. On the Unrepresentable in Pictures," published online, August 2009, 1-18. Originally published as "Einige Gedanken über die Unbestimmtheit der Darstellung," in *Das unendliche Kunstwerk: Von der Bestimmtheit des Unbestimmten in der ästhetischen Erfahrung,* ed. Gerhard Gamm and Eva Schürmann, 119-140. Berlin: Philo, 2006.

----------. *Pictures of the Body: Pain and Metamorphosis*. Stanford, CA: Stanford University Press, 1999.

----------. *The Poetics of Perspective*. Ithaca: Cornell University Press, 1994.

Elkins, James and Rachel Ziady De Lue, eds. *Landscape Theory*. New York and Abingdon, UK: Routledge, 2008.

Elkins, James and Robert Williams eds. *Renaissance Theory*. London: Routledge, 2008.

Else, Felicia M. "'La maggior porcheria del mondo': documents for Ammannati's Neptune Fountain." *The Burlington Magazine* 147, no. 1228 (July 2005): 487 – 491.

Emison, Patricia A. *Creating the "Divine" Artist: From Dante to Michelangelo*. Leiden: Brill, 2004.

Evelyn, John. *The Diary of John Evelyn*. 3 vols. London and New York: Macmillan, 1906.

Faggiolo, Marcello. "Bomarzo e le idee di Vignola e di Ligorio." in *Bomarzo: il Sacro Bosco*, ed. Sabine Frommel, 66-75. Milan: Electa, 2009.

Feinberg, Larry J. The Studiolo of Francesco I Reconsidered." In *The Medici, Michelangelo, and the Art of Late Renaissance Florence,* ed. Cristina Acidini Luchinat, 46-65. New Haven and London: Yale University Press, 2002.

Ficino, Marsilio. *Platonic Theology*, Vol. 2. trans. Michael J.B. Allen, ed. James Hankins. Cambridge, MA: Harvard University Press, 2002.

Filarete. *Trattato di architettura*, trans. John R. Spenser. New Haven: Yale University Press, 1965.

Findlen, Paula. "Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe." *Renaissance Quarterly* 43, no. 2 (Summer 1990): 292-331.

----------. *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy*. Berkeley and Los Angeles: University of California Press, 1994.

Fiorani, Francesca. *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy*. New Haven and London: Yale University Press, 2005.

Focillon, Henri. *The Life of Forms in Art*. New York: Zone Books, 1989. First published 1934.

Foscari, Marco. "Relazioni . . . de Fiorenza, 1527." In *Relazioni degli ambasciadori veneti al Senato*, ed. A Segarizzi, iii.1 (Bari, 1916), 9-13.

Fratini, F., C. Manganelli del Fa, E. Pecchioni, and A. Scala. "The Sculptures in Bomarzo Park, Viterbo, Italy: Deterioration and Conservation Problems of the Peperino." In *Lavas and Volcanic Tuffs: Proceedings of the International Meeting, Easter Island, Chile, 25-31 October, 1990*, ed. A. Elena Charola, 129-141. Rome: International Centre for the Study of the Preservation and Restoration of Cultural Property, 1994.

Freedman, Luba. *The Classical Pastoral in the Visual Arts*. New York: Peter Lang, 1989.

Friedlander, Max J. *Landscape, Portrait, Still Life: Their Origin and Development*. New York: Schocken Books, 1963.

Frommel, Christoph Luitpold. "Bomarzo e il boschetto. Storia, costruzione e attribuzioni Vicino Orsini, Giulia Farnese e la regia architettonica di Rafaello da Montelupo nel Sacro Bosco di Bomarzo." In *Bomarzo: il Sacro Bosco*, ed. Sabine Frommel, 56-65. Milan: Electa, 2009.

Frommel, Sabine, ed. *Bomarzo, il Sacro Bosco*. Milan: Electa, 2009.

Gamboni, Dario. "'Fabrication of Accidents': *Factura* and Chance in Nineteenth-Century Art." *Res: Journal of Anthropology and Aesthetics*, no. 36 (Fall 1999): 205-225.

---------- "Stumbling Over/Upon Art." *Cabinet* 19 (Fall 2005). http://www.cabinetmagazine.org/issues/19/gamboni.php

Garrard, Greg. *Ecocriticism* (London and New York: Routledge, 2004).

Garrard, Mary. "Review*: Florentine Busts: Sculpted Portraiture in the Fifteenth Century (Outstanding Dissertations in the Fine Arts)* by Jane Schuyler; *The Colossal Sculpture of the Cinquecento (Outstanding Dissertations in the Fine Arts)* by Virginia Bush; *The Early Sculpture of Bartolommeo Ammanati (Outstanding Dissertations in the Fine Arts)* by Peter Kinney." *Art Bulletin* 61, no. 3 (1979): 485-490.

Giannetto, Raffaella Fabiani. *Medici Gardens: From Making to Design* (Philadelphia: University of Pennsylvania Press, 2008).

Gifford, Terry. *Pastoral*. London and New York: Routledge, 1999.

Gilbert, Creighton. "What is Expressed in Michelangelo's 'Non-Finito.'" *Artibus et Historiae* 24, no. 48 (2003): 57-64.

Gill, Meredith J. *Augustine in the Italian Renaissance: Art and Philosophy from Petrarch to Michelangelo*. Cambridge and New York: Cambridge University Press, 2005.

Giunta, Jacopo. *The Divine Michelangelo: The Florentine Academy's homage on his death in 1564*, trans. Rudolf and Margot Wittkower. London: Phaidon, 1964.

Giridharadas, Anand. "In Las Vegas, Defying the Odds of Reality." *New York Times*, 07/07/2014. http://nyti.ms/1kxB8HA

Gmelin, Hermann. "Das Prinzip der Imitatio in den romanischen Literaturen der Renaissance." *Römische Forschungen* 46, (1932): 83-360.

Goffen, Rona. *Renaissance Rivals: Michelangelo, Leonardo, Raphael, Titian*. New Haven and London: Yale University Press, 2002.

Goldthwaite, Richard A. "Artisans and the Economy in Sixteenth-Century Florence." In *The Medici, Michelangelo, & the Art of Late Renaissance Florence*, ed. Cristina Acidini Luchinat, 84-93. Yale University Press: New Haven and London, 2002.

Gombrich, E.H. *Art and Illusion: A Study in the Psychology of Pictorial Representation*. Princeton and Oxford: Princeton University Press, 1969.

----------. *Gombrich on the Renaissance, Vol. 1: Norm and Form*. London and New York: Phaidon, 1985.

----------. *Gombrich on the Renaissance, Vol. 3: The Heritage of Apelles*. London, Phaidon, 1976.

Gould, Cecil. "Leonardo da Vinci's Notes on the Colour of Rivers and Mountains." *The*

Burlington Magazine for Connoisseurs, 89, no. 534 (September 1947): 239-252.

Gould, Stephen Jay. "Both Neonate and Elder: The First Fossil of 1557." *Paleobiology* 28, no. 1 (Winter, 2002): 1-8.

----------. *Leonardo's Mountain of Clams and the Diet of Worms: Essays on Natural History*. New York: Harmony Books, 1998.

----------. *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time*. Cambridge: Harvard University Press, 1987.

Grafton, Anthony, Glenn W. Most, and Salvatore Settis, eds. *The Classical Tradition*. Cambridge, MA: Belknap Press of Harvard University Press, 2010.

Greene, Edward Lee. *Landmarks of Botanical History,* Volume II. Stanford University Press, 1983.

Greene, Thomas M. *The Light in Troy: Imitation and Discovery in Renaissance Poetry*. New Haven and London: Yale University Press, 1982.

Gualterotti, Raffaello. *Vaghezze sopra Pratolino*. Florence: Giunti, 1579.

Guarini, Marco Antonio. *Compendio historico delle chiese di Ferrara* [1621].

Gwilt, Joseph, trans. *The Architecture of Marcus Vitruvius Pollio, in Ten Books*. London: John Weale, 1860.

Hansen, Morten Steen. *In Michelangelo's Mirror: Perino del Vaga, Daniele da Volterra, Pellegrino Tibaldi*. University Park, PA: The Pennsylvania State University Press, 2013.

Harrison, Robert Pogue. *Forests: The Shadow of Civilization*. Chicago and London: University of Chicago, 1992.

Heikamp, Detlef. "Agostino del Riccio: Del giardino di un re." In *Il giardino storico italiano: Problemi di indagine, fonti letterarie e storiche: atti del convegno di studi Siena-San Quirico d'Orcia, 6-8 ottobre 1978*. Florence: Olschki, 1981.

Heikamp, Detlef. "Antologia di critic: Poesie in vitupero del Bandinelli." *Paragone,* N.S. 15, no. 175 (1964): 5-68.

----------. "La Grotta Grande del giardino di Boboli." *FMR*, 35 (1985): 105.

----------. "Les merveilles de Pratolino." *L'Oeil*, no. 171 (March 1969): 16-27.

----------. "Pratolino nei suoi giorni splendidi." *Antichità Viva*, No. 2 (1969): 14-34.

Hicks, Forrest L. "Formation and Mineralogy of Stalactites and Stalagmites." *Bulletin of the National Speleological Society* (No. 12, Nov. 1950): 63-72.

Hiltner, Ken. "Renaissance Literature and Our Contemporary Attitude toward Global Warming," *Interdisciplinary Studies in Literature and the Environment* 16, no. 3 (2009): 431.

----------. *What Else is Pastoral?: Renaissance Literature and the Environment*. Ithaca: Cornell University Press, 2011.

Hirst, Michael. "Michelangelo, Carrara, and the marble for the Cardinal's Pietà." *The Burlington* Magazine 127, no. 984 (March, 1985): 152-159;

Holberton, Paul. "Painting and Poetry at the Time of Giorgione." Ph.D. diss., Warburg Institute, London, 1989.

Holderbaum, James. *The Sculptor Giovani Bologna*. New York and London: Garland, 1983.

Hunt, John Dixon. "'Curiosities to adorn Cabinets and Gardens.'" In *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. Oliver Impey and Arthur MacGregor, 193-203. Oxford, U.K.: Clarendon Press, 1985.

----------. *Garden and Grove: the Italian Renaissance Garden in the English Imagination, 1600-1750*. University of Pennsylvania Press: Philadelphia, 1996.

----------. *Greater Perfections: The Practice of Garden Theory*. University of Pennsylvania Press: Philadelphia, PA, 2000.

----------. "'Lordship of the Feet': Toward a Poetics of Movement in the Garden." In *Landscape Design and the Experience of Motion*, ed. Michel Conan, 187-213. Dumbarton Oaks Research Library and Collection: Washington, D.C., 2003.

Ilchman, Frederick, ed. *Titian, Tintoretto, Veronese: Rivals in Renaissance Venice*. Boston: MFA Publications, 2009.

Inghirami, Francesco. *Monumenti per l'intelligenza della storica della Toscana*. Fiesole, 1834.

Ivins, Jr., William M. *Prints and Visual Communication*. Cambridge, Massachusetts: MIT Press, 1969.

Jacobs, Fredrika H. "Aretino and Michelangelo, Dolce and Titian: *Femmina, Masculo, Grazia*." *Art Bulletin* 82, no. 1 (March 2000): 51-67.

Janson, H. W. "The 'Image Made by Chance' in Renaissance Thought." In *De Artibus Opuscula XL. Essays in Honor of Erwin Panofsky,* Vol. I. , 254-266. New York: New York University Press, 1961.

Janson, H.W. *The Sculpture of Donatello*. Princeton, NJ: Princeton University Press, 1963.

Johnson, Geraldine A. "In the Hand of the Beholder: Isabella d'Este and the Sensual Allure of Sculpture." In *Sense and the Senses in Early Modern Art and Cultural Practice*, ed. Alice E. Sanger and Siv Tove Kulbrandstad Walker, 183-197. Farnham, UK, and Burlington, VT: Ashgate, 2012.

---------. "The Art of Touch in Early Modern Italy." In *Art and the Senses*, ed. Francesca Bacci and David Melcher, 59-84. Oxford and New York: Oxford University Press, 2011.

---------. "Touch, Tactility, and the Reception of Sculpture in Early Modern Italy." In *A Companion to Art Theory,* ed. Paul Smith and Carolyn Wilde, 61-74. Oxford: Blackwell, 2002.

Kauffman, Hans. *Donatello. Eine Einführung in sein Bilden und Denken*. Berlin: G. Grote'sche Verlagsbuchhandlung, 1936.

Kaufmann, Thomas DaCosta. "Remarks on the Collections of Rudolf II: The Kunstkammer as a Form of Representation." *Art Journal* 38, no. 1 (1978): 22-28.

Kemp, Martin. "From 'Mimesis' to 'Fantasia': The Quattrocento Vocabulary of Creation, Inspiration and Genius in the Visual Arts." *Viator* 8 (Jan.1977): 352-353.

----------. *Leonardo da Vinci: Marvellous Works of Nature and Man*. Cambridge, MA: Harvard University Press, 1981.

----------. *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat*. New Haven: Yale University Press, 1992.

----------. "'Wrought by No Artist's Hand': The Natural, The Artificial, the Exotic, and the Scientific in Some Artifacts from the Renaissance." In *Reframing the Renaissance: Visual Culture in Europe and Latin America 1450 – 1650*, ed. Claire Farago, 177-196 New Haven and London: Yale University Press, 1995.

Kennedy, William J. *Jacopo Sannazaro and the Uses of Pastoral*. Hanover and London: University Press of New England, 1983.

Keutner, Herbert "Giambologna a Pratolino." In *Il giardino d'Europa: Pratolino come modello nella cultura europea*, ed. Alessandro Vezzosi, 55-60. Milan: Mazzotta, 1986.

Kirchner, Walther. "Mind, Mountain, and History." *Journal of the History of Ideas* 11: 4 (Oct. 1950): 416-426.

Klapisch-Zuber, Christiane. *Les maitres du marbre: Carrare 1300-1600*. Paris: S.E.V.P.E.N., 1969.

Koeppe, Wolfram and Annamaria Giusti, eds. *Art of the Royal Court: Treasures in Pietre Dure from the Palaces of Europe*, exh. cat. Metropolitan Museum of Art. New Haven and London: Yale University Press, 2008.

Krahn, Volker. "Modello dell'Appennino." Cat. 47, in *Giambologna: gli dei, gli eroi*, ed. Beatrice Paolozzi Strozzi (Florence: Giunti, 2006).

Kris, Ernst and Otto Kurz. *Legend, Myth, and Magic in the Image of the Artist: A Historical Experiment*, trans. Alastair Lang. New Haven and London: Yale University Press, 1979.

Ladis, Andrew. *Victims and Villains in Vasari's Lives*. Chapel Hill, NC: University of North Carolina Press, 2008.

Lainez, Manuel Mujica. *Bomarzo*. Simon and Schuster, 1969.

Lambert, Ellen. *Placing Sorrow: A Study of the Pastoral Elegy Convention from Theocritus to Milton, University of North Carolina Studies in Comparative Literature* 60. Chapel Hill: University of North Carolina Press, 1976.

Land, Norman. *The Viewer as Poet: The Renaissance Response to Art*. University Park, PA: The Pennsylvania State University Press, 1994.

Landau, David and Peter Parshall. *The Renaissance Print, 1470-1550*. New Haven and London: Yale University Press, 1994.

Lang, Karen. "The Body in the Garden." In *Landscapes of Memory and Experience*, ed. Jan Birksted, 107-127. London and New York: Spon Press, 2000.

Larner, John. "Crossing the Romagnol Appennines in the Renaissance." In *City and Countryside in Late Medieval and Renaissance Italy: Essays Presented to Philip Jones*, ed. Trevor Dean and Chris Wickham, 147-170. London and Ronceverte, WV: Hambedon Press, 1990.

Lavin, Irving. "Ex Uno Lapide: The Renaissance Sculptor's Tour de Force." *Il cortile delle statue. Der Statuenhof des Belvedere im Vatikan. Akten des internationalen Kongresses zu Ehren von Richard Krautheimer, Rom* 21 (1992): 191-210.

Lazzaro, Claudia. "From the Rain to the Wash Water in the Medici Garden at Pratolino." In *Renaissance Studies in Honor of Craig Hugh Smyth*, ed. Andrew Morrogh et.al., Vol. II, 327-326. Florence: Giunti Barbèra, 1985.

----------. "Gendered Nature and Its Representation in Sixteenth-Century Garden Sculpture." In Sarah Blake McHam, ed., *Looking at Italian Renaissance Sculpture*, 246-273. Cambridge and London: Cambridge University Press, 1998.

----------. *The Italian Renaissance Garden: From the Conventions of Planting, Design, and Ornament to the Grand Gardens of Sixteenth-Century Italy*. New Haven: Yale University Press, 1990.

----------. "Politicizing a National Garden Tradition: The Italianness of the Italian Garden." In *Donatello Among the Blackshirts: History and Modernity in the Visual Culture of Fascist Italy,* ed. Claudia Lazzaro and Roger Crum, 157-169. Ithaca: Cornell University Press, 2005.

----------. "The Villa Lante at Bagnaia: An Allegory of Art and Nature." *The Art Bulletin* 59, no. 4 (December 1977): 553-560.
Rensselaer W. Lee, "Ut Pictura Poesis: The Humanistic Theory of Painting," *Art Bulletin* 22 (1940): 197-269;

Lee, Pamela. *Chronophobia*: *On Time in the Art of the 1960s*. Cambridge: MIT Press, 2004.

Lehman, Geoff. "Measure and the Unmeasurable: Perspective and the Renaissance Landscape." PhD diss., Columbia University, 2010.

Leibert, Robert S., M.D., "Raphael, Michelangelo, Sebastiano: High Renaissance Rivalry." *Source: Notes in the History of Art* 3, no. 2 (1984): 60-68.

Leone, Ambrogio. *De agro Nolano denique montibus Vesuvio*. Venice: Ioannis Rubri Vercellani, 1500.

Loh, Maria. *Titian Remade: Repetition and the Transformation of Early Modern Italian Art*. Los Angeles: Getty Research Institute, 2007.

Lomazzo, Gian Paolo. *Scritti sulli arti*, ed. Roberto Paolo Ciardi, 2 vols. Florence: Centro Di, 1974.

Long, Pamela O. "The Openness of Knowledge: An Ideal and Its Context in 16th-Century Writings on Mining and Metallurgy." *Technology and Culture* 32, no. 2.1 (April, 1991): 318-355.

Luchinat, Cristina Acidini. "L'Appennino del Giambologna: uomo, grotto, palazzo – parte I." In *Arte delle grotte: per la conoscenze e la conservazione delle grotte artificiali,* ed. Cristina Acidini Luchinat, Lauro Magnani, Mariachiara Pozzana, 95-107. Genoa: Sagep, 1987.

----------. "Rappresentazione della natura e indagine scientifica nelle grotte cinquecentesche." In *Natura e artificio; l'ordine rustic, le fontane, gli automi nella cultura del Manierismo europeo,* 144-153. Rome: Officina, 1981.

Luchinat, Cristina Acidini, ed. *Arte delle Grotte: per la conoscenza e la conservazione delle grotte artificiali: atti del convegno, Firenze, Palazzo Pitti, Rondò di Bacco, 17 giugno 1985*. Genoa: Sagep, 1987.

----------. *Risveglio di un Colosso: Il restauro dell'Appennino del Giambologna*. Florence: Alinari, 1988.

Lucretius. *The Nature of Things*, trans. A.E. Stallings. London: Penguin, 2007.

Lynch, Martin. *Mining in World History*. London: Reaktion Books, 2002.

Lyotard, Jean-François. "Oikos." In *Political Writings*, trans. B. Readings and K.P. Geiman, 105. London: UCL Press, 1993.

Mazella, Scipione. *Descrittione del Regno di Napoli* (Naples, 1586, 1597), excerpted and trans. In *Quarterly Journal of Science, Literature, and the Arts*, 12 (1822): 424.

MacCurdy, Edward, ed., trans. *The Notebooks of Leonardo da Vinci*. Old Saybrook, CT: Konecky & Konecky, 2003.

MacDougall, Elisabeth Blair. "*Ars Hortulorum*: Sixteenth-Century Garden Iconography and Literary Theory in Italy." In *Fountains, Statues, and Flowers: Studies in Italian Gardens of the Sixteenth and Seventeenth Centuries* (Dumbarton Oaks, Washington, D.C., 1994), 97-98. Originally published in *The Italian Garden, Dumbarton Oaks Colloquium on the History of Landscape Architecture* 5, ed. E.B. MacDougall, 85-114. Washington, D.C., 1978.

Marx, Barbara. "Medici Gifts to the Court of Dresden." *Studies in the Decorative Arts* 15, no. 1 (2007-2008): 46-82.

Maxwell, Susan. "The Pursuit of Art and Pleasure in the Secret Grotto of Wilhelm V of Bavaria." *Renaissance Quarterly* 61, no. 2 (2008): 429-431.

McPhee, John. *Basin and Range*. New York: Farrar, Straus and Giroux, 1981.

Megatti, Giuseppe Maria. *Racconto storico-filosofico del Vesuvio* (1752).

Merchant, Carolyn. *The Death of Nature: Women, Ecology, and the Scientific Revolution*. San Francisco: Harper & Row, 1980.

Miccio, Scipione, ed. *Narrazioni e documenti sulla storia del Regno di Napoli, dall'anno 1522 al 1667*. Florence: Gio. Pietro Vieusseux, 1846.

Milanesi, G., ed. *Le Lettere di Michelangelo Buonarroti, edite ed inedite coi ricordi ed i contratti artistici*. Florence: Le Monnier, 1875.

Miller, Anthony. "Vindicating Vulcan: Renaissance Manuals of Mining and Metallurgy." In *What Nature Does Not Teach*, ed. Juanita Feros Ruys, 449-472. Turnhout: Brepols, 2008.

Miller, Naomi. *Heavenly Caves: Reflections on the Garden Grotto*. New York: George Braziller, 1982.

Miskimin, Harry A. *The Economy of Later Renaissance Europe, 1460-1600*. Cambridge, UK: Cambridge University Press, 1977.

Mitchell, W.J.T. "Gombrich and the Rise of Landscape." In *The Consumption of Culture 1600-1800: Image, Object, Text,* ed. Ann Bermingham, 103-118. London: Routledge, 1995.

----------. "Imperial Landscape." In *Landscape and Power*, second edition, ed. W.J.T. Mitchell, 1-34. Chicago and London: The University of Chicago Press: 2002.

de Montaigne, Michel. *Travel Journal*, trans. Donald M. Frame. San Francisco: North Point Press, 1983.

de Montaigne, Michel. *Works of Michael de Montaigne, Comprising His Essays, Journey into Italy, and Letters*, Vol. IV, ed. O.W. Wight, trans. W. Hazlitt. Boston: Houghton, Mifflin, and Company, 1859.

Morel, Philippe. "Mannerist Grottos in Sixteenth-Century Italy." In *Sixteenth-Century Italian Art*, ed. Michael Cole, 115-134. Malden, MA: Blackwell, 2006.

Morello, N. "The question on the nature of fossils in the 16th and 17th centuries." In *Four Centuries of the Word Geology: Ulisse Aldrovandi 1603 in Bologna,* ed. G.B. Vai and W. Cavazza, 127-151. Bologna: Minerva Edizioni, 2003.

Morgan, Luke. "The monster in the garden: the grotesque, the gigantic, and the monstrous in Renaissance landscape design." *Studies in the History of Gardens and Designed Landscapes: An International Quarterly* 31, no. 3 (2011): 167-180.

Morrison, Fynes. *Itinerary vvritten by Fynes Moryson, gent: first in the Latin tongue, and then translated by him into English: containing his ten yeeres trauell through the tvvelue dominions of Germany, Bohmerland, Sweitzerland, Netherland, Denmarke, Poland, Italy, Turky, France, England, Scotland, and Ireland*. London, 1617.

Mottana, Annibale. "Italian Gemology during the Renaissance: A step toward modern mineralogy." In *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell, 1-22. Boulder, CO: Geological Society of America, 2006.

Nagel, Alexander. *The Controversy of Renaissance Art*. Chicago and London: University of Chicago Press, 2011.

----------. *Michelangelo and the Reform of Art*. Cambridge: Cambridge University Press, 1999.

Nagel, Alexander and Christopher S. Wood. *Anachronic Renaissance*. New York: Zone Books, 2010.

Norway, Arthur Hamilton. *Naples Past and Present*. London: Methuen & Co., 1905.

Ogilvie, Brian W. "The Many Books of Nature: Renaissance Naturalists and Information Overload." *Journal of the History of Ideas* 64, no. 1 (Jan. 2003): 29-40.

O'Loughlin, Michael J.K. "'Woods Worthy of a Consul': Pastoral and the Sense of History." In *Literary Studies: Essays in Memory of Francis A. Drumm,* ed. John H. Dorenkamp, 144-158. College of the Holy Cross: Worcester, Mass.: 1973.

O'Malley, Therese and Amy R.W. Myers, eds. *The Art of Natural History*. New Haven and London: Yale University Press, 2008.

Ostrow, Steven F. "The Discourse of Failure in Seventeenth-Century Rome: Prospero Bresciano's *Moses*." *Art Bulletin* 88, no. 2 (June 2006): 267-291.

Ovid. *Metamorphoses*, trans. A.D. Melville. Oxford: Oxford University Press, 1998.

Palissy, Bernard. *Oeuvres completes*, ed. Paul-Antoine Cap. Paris: Librarie scientifique et technique A Blancard, 1961.

Panofsky, Erwin. "Artist, Scientist, Genius: Notes on the Renaissance-Dämmerung." In *The Renaissance,* ed. Wallace K. Ferguson, 121-182. New York: Harper and Row, 1962.

----------. "'Et in Arcadia Ego': Poussin and the Elegiac Tradition." In *Meaning in the Visual Arts*. Chicago: University of Chicago Press, 1982.

----------. *Idea: A Concept in Art Theory*, trans. S. J. Peake. Columbia, SC: University of South Carolina Press, 1968.

----------. *Perspective as Symbolic Form*, trans. Christopher S. Wood. New York: Zone Books, 1991.

----------. *Renaissance and Renascences in Western Art*. New York: Harper & Row, 1972.

Paoletti, John T. "Ambiguity Maintained through the Palimpsest." *Artibus et Historiae* 21, no. 42 (2000): 53-80.

Paoletti, John T. and Gary M. Radke. *Art in Renaissance Italy*. Upper Saddle River, NJ: Pearson Prentice Hall, 2012.

Patrizi, Patrizio. *Il Giambologna*. Milan: L. F. Cogliati, 1905.

Patterson, Annabel. *Pastoral and Ideology*. Berkeley and Los Angeles: University of California Press, 1987.

Penny, Nicholas. *The Materials of Sculpture*. New Haven and London: Yale University Press, 1993.

Petrarca, Francesco. *Rerum familiarium libri*, I-VIII, trans. Aldo S. Bernardo. Albany: State University of New York Press, 1975.

Pigman, G.W., III, "Versions of Imitation in the Renaissance." *Renaissance Quarterly* 33 (1980): 1-32.

Pizzorusso, Ann. "Leonardo's Geology: The Authenticity of the 'Virgin of the Rocks.'" *Leonardo*, 29, no. 3 (1996): 197-200.

Plato. *The Dialogues of Plato: Republic, Timaeus, Critias,* trans. Benjamin Jowett. New York and London: MacMillan & Co., 1892.

----------. *The Republic of Plato*, trans. Allan Bloom. New York: Basic Books, 1967.

Pliny the Elder. *Natural History*, Vol. X, trans. D.E Eichholz. Cambridge, MA, and London: Harvard University Press, 1962.

----------. *Natural History,* Vol. IX, Books 33-35, trans. H. Rackham. Cambridge, MA and London: Harvard University Press, 1962.

Pliny the Younger. *Letters*, trans. Betty Radice. London and New York: Penguin, 1963.

Podro, Michael. *Depiction*. New Haven and London: Yale University Press, 1998.

Pomata, Gianna. "Observation Rising: Birth of an Epistemic Genre, 1500-1650." In *Histories of Scientific Observation*, ed. Lorraine Datson and Elizabeth Lunbeck, 45-80. Chicago and London: University of Chicago Press, 2011.

John Pope-Hennessy. *Donatello Sculpture*. New York: Abbeville Press, 1993.

Pozzana, Mariachiara. "L'Appennino del Giambologna: uomo, grotto, palazzo – parte II." In *Arte delle grotte: per la conoscenze e la conservazione delle grotte artificiali,* ed. Cristina Acidini Luchinat, Lauro Magnani, Mariachiara Pozzana, 95-107. Genoa: Sagep, 1987.

----------. "I restauri della struttura e del rivestimento esterno." In *Risveglio di un colosso: Il restauro dell'Appennino del Giambologna,* ed. Cristina Acidini Luchinat, 118-131. Florence: Alinari, 1988.

----------. "La struttura e l'esterno," in In *Risveglio di un colosso: Il restauro dell'Appennino del Giambologna,* ed. Cristina Acidini Luchinat, 110-117. Florence: Alinari, 1988.

Prothero, Donald R. *Bringing Fossils to Life: And Introduction to Paleobiology*. New York and Chichester, UK: Columbia University Press, 2013.

Rapetti, Caterina. *Michelangelo, Carrara e "i maestri di cavar marmi."* Florence: All' insegna Del Giglio, 2001.

Rea, John. *Flora: seu, De Florum Cultura, or a Complete Florilege, furnished with all Requisites belonging to a Florist, in III Books*. London: J.G. Marriott, 1665.

del Riccio, Agostino. *Istoria delle Pietre* [1597], ed. Raniero Gnoli and Attilia Sironi. Turin: Umberto Allemandi, 1996.

de Vieri, Francesco. *Delle maravigliose opera di Pratolino & d'Amore*. Florence, 1586.

Reeds, Karen Meier. *Botany in Medieval and Renaissance Universities*. Garland: New York & London, 1991.

Reeds, Karen M. "Leonardo da Vinci and Botanical Illustration: Nature Prints, Drawings, and Woodcuts ca. 1500." In *Visualizing Medieval Medicine and Natural History, 1200-1550*, ed. Jean Ann Givens, Karen Reeds, and Alain Touwaide, 205-238. Aldershot, England, and Burlington, Vermont: Ashgate, 2006.

Rees, Ronald. "Historical Links between Cartography and Art." *Geographical Review* 70 (Jan. 1980): 71.

Reynolds, Ann. *Robert Smithson: Learning from New Jersey and Elsewhere*. Cambridge: MIT Press, 2004.

Roberts, Carmen. "Vegas Heading for 'dry future,'" *BBC News*, 07/29/2005. http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4719473.stm

Roberts, Jennifer. *Mirror Travels*: *Robert Smithson and History*. New Haven and London: Yale University Press, 2004.

Rosand, David. *Drawing Acts: Studies in Graphic Expression and Representation*. Cambridge and New York: Cambridge University Press, 2002.

Rosand, David. "Giorgione, Venice and the Pastoral Vision." In *Places of Delight: The Pastoral Landscape*, exh. cat., ed. Robert Cafritz, 21-81. Washington, DC: Phillips Collection in association with the National Gallery of Art, 1988.

----------. "Pastoral topoi: on the construction of meaning in landscape." *Studies in the History of Art* 36 (1992): 160-77.

Rosenauer, Arthur. *Donatello*. Milan: Electa, 1993.

Rosenberg, Gary D. "The measure of man and landscape in the Renaissance and Scientific Revolution." In *The Revolution in Geology from the Renaissance to the Enlightenment: Geological Society of America Memoir 203*, ed. Gary D. Rosenberg, 13-40. Boulder, CO: Geological Society of America, 2009.

Rubin, Edgar. "Synsoplevede Figurer." PhD diss., University of Copenhagen, 1915.

Rudwick, Martin J.S. *The Meaning of Fossils: Episodes in the History of Palaeontology*. Chicago and London: University of Chicago Press, 2008.

Sannazaro, Jacopo. *Arcadia & Piscatorial Eclogues*, trans. Ralph Nash. Detroit: Wayne State University Press, 1966.

Saslow, James M. trans. *The Poetry of Michelangelo*. New Haven and London: Yale University Press, 1991.

Schaefer, Scott J. "The Studiolo of Francesco I de 'Medici in the Palazzo Vecchio in Florence." Ph.D. diss., Bryn Mawr College, 1976.

Schultz, Juergen. "Michelangelo's Unfinished Works." *The Art Bulletin* 57 (1975): 366-373.

----------. "New Maps and Landscape Drawings by Cristoforo Sorte." *Mitteilungen des Kunsthistorischen Institutes in Florenz,*" 20 (1976): 119.

Scigliano, Eric. *Michelangelo's Mountain: The Quest for Perfection in the Marble Quarries of Carrara*. New York: Free Press, 2005.

Serra, Richard. Interview by Michael Krasny, *Forum*, 88.5 KQED FM, October 10, 2011.

Sgrilli, Bernardo Sansone. *Descrizione della Regia Villa, fontane e fabbriche di Pratolino*. Florence, 1742.

Shearman, John. *Only Connect… Art and the Spectator in the Italian Renaissance*. Princeton, NJ: Princeton University Press, 1982.

Shrimplin, Valerie. "Hell in Michelangelo's *Last Judgment*." *Artibus et Historiae* 15, no. 30 (1994): 83-107.

Simkin, Tom and Lee Siebert. *Volcanoes of the World: A Regional Directory, Gazetteer, and Chronology of Volcanism During the Last 10,000 Years*. Tucson, AZ: Geoscience Press, 1994.

Sinaiko, Herman. *Reclaiming the Canon: Essays on Philosophy, Poetry, and History*. New Haven: Yale University Press, 1998.

----------. *Love, Knowledge, and Discourse in Plato: Dialogue and Dialectic in Phaedrus, Republic, Parmenides*. Chicago and London: The University of Chicago Press: 1965.

Smith, Bruce R. *The Key of Green: Passion and Perception in Renaissance Culture*. University of Chicago Press: London, 2009.

Smith, Jonathan. "The Lie that Blinds: Destabilizing the text of landscape." In *Place/Culture/Representation*, ed., James Duncan and David Ley, 78-92. London and New York: Routledge, 1993.

Smith, Pamela H. *The Body of the Artisan: Art and Experience in the Scientific Revolution*. Chicago and London: The University of Chicago Press, 2004.

Smith, Webster. "Pratolino." *The Journal of the Society of Architectural Historians* 20, no. 4 (December 1961): 155-168.

----------. "Studies on Buontalenti's Villas." Ph.D. diss., New York University, 1958.

Snyder, Gary. *The Practice of the Wild*. San Francisco: North Point Press, 1990.

Solnit, Rebecca. *As Eve Said to the Serpent: On Landscape, Gender, and Art*. Atlanta, Georgia: University of Georgia Press, 2003.

Sousloff, Catherine. "Imitatio Buonarroti." *Sixteenth Century Journal* 20, no. 4 (1989): 581-602.

Steiner, Reinhard. "'All foreground without distance': The Rise of Landscape in Late Medieval Painting." in *Place of Landscape: Concepts, Contexts, Studies*, ed. Jeff Malpas, 207-219. Cambridge, MA: The MIT Press, 2011.

Summers, David. *The Judgment of Sense: Renaissance Naturalism and the Rise of Aesthetics*. Cambridge and New York: Cambridge University Press, 1987.

----------. *Michelangelo and the Language of Art*. Princeton, NJ: Princeton University Press, 1981.

----------. *Real Spaces: World Art History and the Rise of Western Modernism*. London: Phaidon, 2003.

Swan, Claudia. "Illustrated Natural History." In *Prints and the Pursuit of Knowledge in Early Modern Europe,* ed. Susan Dackerman, 186-191. New Haven and London: Yale University Press, 2011. 186-191.

----------. "The Uses of Realism in Early Modern Illustrated Botany." In *Visualizing Medieval Medicine and Natural History, 1200-1550*, ed. Jean Ann Givens, Karen Reeds, and Alain Touwaide, 239-249. Aldershot, England and Burlington, Vermont: Ashgate, 2006.

Symonds, John Addington. *The Life of Michelangelo Buonarroti, Based on Studies in the Archives of the Buonarroti Family at Florence*, Vol. I. London: John C. Nimmo, 1893.

Szafrańska, Małgorzata. "Place, time and movement: a new look at Renaissance gardens." *Studies in the History of Gardens & Designed Landscapes: An International Quarterly* 26, no. 3 (2006): 194-236.

----------. "The Philosophy of Nature and the Grotto in the Renaissance Garden." *Journal of Garden History* 9, no. 2 (1989): 76-85.

Tarr, Roger. "Brunelleschi and Donatello: Placement and Meaning in Sculpture," *Artibus et Historiae* 16, no. 32 (1995): 101-140.

Tasso, Torquato. *Gerusalemme Liberata* [1581, Parma], trans. Edward Fairfax. First published London, 1600; published online by the Electronic Classics Series, Pennsylvania State University, 2000-2013.

Theurillat, Jacqueline. *Les mysteres de Bomarzo*. Geneva, 1973.

Thompson, Craig R. trans. *The Collected Works of Erasmus: Colloquies*. Toronto: University of Toronto Press, 1997.

de Tolnay, Charles. *Michelangelo. IV. The Tomb of Julius II*. Princeton, NJ: Princeton University Press, 1954.

Tomasi, Lucia Tongiorgi and Gretchen A. Hirschauer, eds. *The Flowering of Florence: Botanical Art for the Medici*. Washington, D.C.: National Gallery of Art, 2002.

Torrens, Hugh. "Early Collecting in the Field of Geology." In *The Origins of Museums:*

The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe, ed. Oliver Impey and Arthur MacGregor, 204-213. Oxford and New York: Clarendon Press, 1985.

Tosi, Alessandro, ed. *Ulisse Aldrovandi e la Toscana: Carteggio e testimonianze*. Florence, 1989.

Touwaide, Alaine. *Ancient Botany from Byzantium to the West*. Washington, D.C.: Dumbarton Oaks, 2000.

Tuan, Yi-Fu. *Topophilia: A Study of Environmental Perception, Attitudes, and Values*. Englewood Cliffs, N.J.: Prentice Hall, 1974.

Turner, A. Richard. *The Vision of Landscape in Renaissance Italy*. Princeton, NJ: Princeton University Press, 1966.

Unglaub, Jonathan. "The *Concert Champêtre*: The Crises of History and the Limits of Pastoral." *Arion* 5, no. 1 (1997): 46-96.

Vai, Gian Battista. "The Scientific Revolution and Nicholas Steno's twofold conversion." *The Geological Society of America Memoirs 203* (2009): 187-208.

Vai, Gian Battista and William Cavazza. "Ulisse Aldrovandi and the Origin of Geology and Science." In *The Origins of Geology in Italy: Geological Society of America Special Paper 411*, ed. G.B. Vai and W.G.E. Caldwell, 43-63. Boulder, CO: Geological Society of America, 2006.

Valdré, Giovanni. *Pratolino e la scrittura: bibliografia storico-ragionata della Villa Medicea e della sua gente*. Florence: Alinea, 2003.

Valleriani, Matteo. "Pratolino: The History of Science in a Garden." Max Planck Institute for the History of Science and Ente Provincia of Florence. http://pratolino.mpiwg-berlin.mpg.de.

Van Duzer, Chet. "*Hic sunt dracones*: The Geography and Cartography of Monsters." In *The Ashgate Research Companion to Monsters and the Monstrous*, ed. Asa Simon Mittman and Peter J. Dendle, 387-435. Ashgate: Surrey, UK and Burlington, VT, 2013.

Van Mander, Karel. *Das Lehrgedicht*, trans. Mary Martin McLaughlin in *The Portable Renaissance Reader*. New York: Viking Press, 1953.

Varchi, Benedetto. *Orazione funerale di M. Benedetto Varchi fatta, e recitata da lui pubblicamente nell'essequie di Michelangelo Buonarroti in Firenze, nella chiesa di San Lorenzo*. Florence: 1564.

Vasari on Technique, trans. Louisa S. Maclehose, ed. G. Baldwin Brown. London: J.M. Dent & Company, 1907.

Vasari, Giorgio. *The Lives of the Artists*, trans. Julia Conaway Bondanella and Peter Bondanella. Oxford and New York: Oxford University Press, 1991.

----------. *Lives of the Most Eminent Painters, Sculptors & Architects,* trans. Gaston Du C. de Vere. London: MacMillan & Co. Ld. & The Medici Society Ld., 1912-1914.

----------. *Le Vite de' più eccellenti pittori, scultori e architetti*. Florence: La Giuntina, 1568.

Vezzosi, Alessandro. "Le fortune dell'Appennino e il restauro del mito." In *Risveglio di un colosso: Il restauro dell'Appennino del Giambologna,* ed. Cristina Acidini Luchinat, 38-44. Florence: Alinari, 1988.

Vezzosi, Alessandro and Cristina Acidini, eds. *L'Appennino del Giambologna: anatomia e identità del gigante*. Florence: Alinea, 1990.

Virgil. *The Aeneid*, trans. Robert Fitzgerald. New York: Vintage Classics, 1990.

Virgil. *Aeneid*. trans. Frederick Ahl. Oxford and New York: Oxford University Press, 2007.

Virgil. *Eclogues, Georgics, Aeneid*, trans. H.R. Fairclough, Loeb Classical Library, Vol. 63 and 64, 52-60. Cambridge, MA: Harvard University Press, 1916.

von Henneberg, Josephine. "Bomarzo: nuovi dati e un' interpretatzione." *Storia dell'Arte* 13 (1972): 43-55.

von Henneberg, Josephine. "Vicino Orsini's Sacro Bosco and the Literature of His Time." *Aquila* IV (1979): 219-228.

Waldman, Louis. "'Miracol' nuovo et raro': Two Unpublished Contemporary Satires on Bandinelli's 'Hercules.'" *Mitteilungen des Kunsthistorischen Institutes in Florenz* 38, Heft 2-3 (1994): 419-426.

Wallace, William E. *Michelangelo: The Artist, the Man and his Times*. Cambridge, UK: Cambridge University Press, 2009.

Watson, Robert N. *Back to Nature: The Green and the Real in the Late Renaissance*. Philadelphia: University of Pennsylvania Press, 2006.

Weil-Garris, Kathleen. "Bandinelli and Michelangelo: A Problem of Artistic Identity." In *Art the Ape of Nature: Studies in Honor of H.W. Janson,* ed. M. Barasch and L. Freeman Sandler, 223-251. New York: H.N. Abrams, 1981.

Welch, Evelyn. *Art in Renaissance Italy: 1350-1500*. Oxford and New York: Oxford University Press, 2000.

Whyte, Ian D. *Landscape and History Since 1500*. London: Reaktion Books, 2002.

Wilde, Johannes. "Michelangelo and Leonardo." *The Burlington Magazine* 95, no. 600 (March 1953): 65-75, 77.

Wiles, Bertha Harris. *The Fountains of Florentine Sculptors and their Followers from Donatello to Bernini*. New York: Hacker Art Books, 1975.

Wilkins, David G. "The Invention of 'Pictorial Relief.'" In *Depth of Field: Relief Sculpture in Renaissance Italy*, Donal Cooper and Marika Leino, eds., 71-96. Bern: Peter Lang, 2007.

Wittkower, Rudolf. "Brunelleschi and Proportion in Perspective." *Journal of the Warburg and Courtauld Institutes* 16 (1953): 275-291.

Wölfflin, Heinrich. *Classic Art: An Introduction to the Italian Renaissance*. London: Phaidon, 1952.

Wood, Christopher S. *Albrecht Altdorfer and the Origins of Landscape*. Chicago and London: University of Chicago Press, 1993.

Woodward, David. *Maps as Prints in the Italian Renaissance: Makers, Distributors & Consumers*. London: British Library, 1996.

Wright, D.R. Edward. "Some Medici Gardens of the Florentine Renaissance: An Essay in Post-Aesthetic Interpretations." In *The Italian Garden: Art, Design and Culture*, ed. John Dixon Hunt, 34-59. Cambridge, UK and New York: Cambridge University Press, 1996.

Zangheri, Luigi. "L'acqua a Pratolino, da element natural ad artifizio 'maraviglioso.'" In *Il Giardino Storico Italiano. Problemi di Indagine. Fonti, Letterarie, e Storiche,* ed. Giovanna Ragionieri, 355-362. Florence: Leo S. Olschki, 1981.

----------. *Pratolino: il giardino delle meraviglie,* 2 vols. Florence: Gonnelli, 1987.

----------. "Pratolino: historica y restauraciones." In *Felipe II: el Rey íntimo: Jardin y Naturaleza en siglo XVI*, 467-485. Sociedad Estatal para la Conmemoración de los Centenarios de Felipe II y Carlos V, 1998.

----------. "Restauri e interventi alle fabbriche di Pratolino." In *Pratolino tra passato e presente,* ed. Alessandro Belisario, Paolo Grossoni, and Luigi Zangheri, 9-15. Florence: Alinea, 1999.

----------. "Trasformazioni dell'Appennino tra barocco e romantico." In *Risveglio di un Colosso: Il restauro dell'Appennino del Giambologna,* 22-23. Florence: Alinari, 1988.

CURRICULUM VITAE