

The Pennsylvania State University

The Graduate School

College of Arts and Architecture

**PLANTAE, ANIMALIA, FUNGI:
TRANSFORMATIONS OF NATURAL HISTORY IN CONTEMPORARY
AMERICAN ART**

A Dissertation in

Art History

by

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Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

May 2009

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Abstract

This dissertation examines the ways that five contemporary artists—Mark Dion (b. 1961), Fred Tomaselli (b. 1956), Walton Ford (b. 1960), Roxy Paine (b. 1966) and Cy Twombly (b. 1928)—have adopted the visual traditions and theoretical formulations of historical natural history to explore longstanding relationships between “nature” and “culture” and begin new dialogues about emerging paradigms, wherein plants, animals and fungi engage in ecologically-conscious dialogues. Using motifs such as curiosity cabinets and systems of taxonomy, these artists demonstrate a growing interest in the paradigms of natural history. For these practitioners natural history operates within the realm of history, memory and mythology, inspiring them to make works that examine a scientific paradigm long thought to be obsolete.

This study, which itself takes on the form of a curiosity cabinet, identifies three points of consonance among these artists. First, these artists are concerned with acknowledging, adhering to, or subverting the borders of naturalist taxonomy. They have appropriated this scientific system of classification, that applies names to organisms—“species”—to question and undermine the very nature of culturally-constructed categories. Ultimately, their critiques are concerned with the very categorization of knowledge itself. Second, these artists demonstrate a sustained engagement with organismal bodies, attending to plants, non-human animals and fungi and how they have been applied to our wider culture. Delving into ontology, they provide a space where viewers may come to terms with, and simultaneously envision, what it is to be a human being, in a body, in the late twentieth and twenty-first centuries. Third, in an attempt to resolve a historical past in the present, Dion, Tomaselli, Paine, Ford and Twombly use natural history to explore and negotiate memory and mythology in the process of their retreat into eighteenth- and nineteenth-century natural history, its golden age.

I take Aby Warburg’s (1866-1929) *Mnemosyne*, or Atlas Project (1927-29), as a model for understanding historical natural history as a field of observation and recollection, which attended to memory, or according to Warburg, the past conceptualized in the present. Guided by an associative model, Warburg’s project continues to challenge traditional patterns of conceptualizing objects and images and their relationship to one another, leaving us to contemplate our own evolutionary pasts and place within the order of things. The artists here rely on a similar associative model to reckon with history, memories and presentness in the process of constructing new ways of seeing. They have discovered in natural history, as Warburg himself attempted to do with his “serpent” and “nymph,” a kind of resolution of memory and “trauma.” For these artists, trauma is complex and subtle, scattered across a field of colonialism, ecological destruction, and reductive nature-culture bifurcations. It exists in, among other things, the consolidation of living beings into the homogenous category of “life” and the relegation of the field of nature to the laboratory of science, exterior to our own processes of becoming. These artists beckon us with a Visionary Natural History: Through the space of their own serpents and nymphs—historical natural history—they demonstrate an awareness that acknowledges a past both violent and full of promise, rich with possibilities for constructing new ways of seeing and being.

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Acknowledgements

I arrived at Washington and Lee University in Lexington, VA as an undergraduate determined to go to medical school. I changed my mind, however, after one semester in an anthropology course with Professor John McDaniel and an introductory course in art history with Professor George Bent. Those premedical requirements kept getting postponed as I took courses in anthropology, archaeology and the history of art and architecture. I spent the summer of 1995 as a James G. Leyburn scholar working as an archaeology intern for the Bridger-Teton Forest Service in Wyoming, and the subsequent fall studying art history at the American University in Paris. In addition to these pursuits and interests, I found myself drawn to courses in American art and architecture with Professor Pamela Hemenway Simpson. I have no doubt that the enthusiasm, intensity and excellence with which these individuals pursued their own interests, encouraged me to do the same with mine. These incredibly talented teachers continually inspired me, mentored me and pushed me to do more than I thought I could. I will be forever grateful for all they have given me.

As a master's degree student in American Studies at Penn State Harrisburg, I took courses in the history of film, design and visual culture, greatly bolstered my master's thesis in decorative arts and early American modernism, as well as my doctoral work in art history. I am also most grateful to my M.A. advisor, Simon Bronner, for serving on my doctoral committee through my comprehensive examinations. Having worked full-time through most of the M.A., special thanks should go to the support of my employers during those years: the Admissions and Financial Aid offices at Dickinson College, Carlisle, PA, Tri-Starr Services of Pennsylvania, Lancaster, PA, and the Office of Student Aid at The Pennsylvania State University, University Park, PA.

I worked with a number of truly bright, gifted and inspiring scholars throughout my doctoral work at The Pennsylvania State University, University Park. I would like to thank the entire faculty and staff of the Department of Art History for supporting my work as a student and a colleague: Anthony Cutler, Madhuri Desai, Charlotte M. Houghton, Elizabeth B. Smith, Robin Thomas, and Elizabeth Walters. Among the staff I would like to especially thank Carolyn Lucarelli in the Visual Resources Center for her friendship support, and Christine Butts, Deana Musso and Tracey Accordino for always listening and cutting the red tape of my graduate student life away.

I would like to give special thanks my committee, particularly my advisor, Sarah K. Rich for her tireless support, commitment to my project, and for teaching me so much about art history and life. Her brilliant writing and thinking about so many aspects of modernist art, including her trailblazing study of Dubuffet's butterfly men, inspired and challenged me to construct my own bridges linking the worlds of art and science. I would like to thank Craig Zabel, the department head and fellow architectural enthusiast, for his supportive involvement on my committee and as a professional mentor. He has always made it possible for me to stay on course. Nancy Locke also deserves my sincerest appreciation for her extremely close readings of my work and keeping the project focused. I also thank Brian A. Curran, who joined my committee after his return from a

year in Italy. He has provided me with unflagging support and editorial advice. As a mentor, colleague, and dear friend he provides me with much joy and sardonic humor. I know of no individual who knows more, art historical or otherwise (except sports), than Brian. I simply could not have made it through this program without him. Finally, I thank Richard M. Doyle, a true sage and scholar of universe and beyond, who has been a constant mentor and dear friend. I will never be able to thank him enough for continually challenging me, inspiring me, and reminding me that art history has the capacity to go well beyond the confines of its own “discipline,” and that my own interests in things outside the world of art somehow *do* fit. He has expanded my vision of what is possible, art historical and otherwise.

I have benefited from significant financial support to complete this project. A Douglass Foundation Predoctoral Fellowship at the Smithsonian American Art Museum and National Portrait Gallery, Washington, D.C. gave me invaluable time and space to read and write. I would like to thank Joann Moser for advising my work at SAAM and for mentoring me over cups of coffee. Anne Collins Goodyear (NPG) also advised my work and gave me a lot of advice about my thesis, the job market and life. Her unbounded enthusiasm for everything motivates and continually inspires me to see the good in every situation. I am also so grateful I had the chance to meet Joanna Marsh, who came to SAAM shortly before my arrival, and with whom I share a love of many contemporary artists, notably Walton Ford and Mark Dion. Amelia Goerlitz deserves a special thanks for her mentorship of the fellows at SAAM. She always planned engaging field trips, and I remain in awe of her organization and energy. Finally, I would like to thank Cynthia Mills for providing sound guidance about everything from research projects to potential employers. Her open door always made me feel welcome. I was certainly motivated by walking past her office and watching her always hard at work! I would also like to thank SAAM/NPG for allowing me to publicly present my work during the fellowship.

While at Penn State I was grateful to have received numerous research and travel fellowships and grants. A Susan W. and Thomas A. Schwartz Endowed Fellowship for Dissertation Research in Art History, through the Department of Art History, allowed me to begin my research and travel to the John Cage Mycology Collection, Special Collections and Archives, University Library, University of California, Santa Cruz and the Tina and R. Gordon Wasson Archives at the Harvard University Herbaria and Botany Libraries, among other places. I owe a special thanks to archivist Lisa Ann Decesare for her accommodation of me in August of 2006. I am indebted to the Institute for the Arts and Humanities for a Graduate Student Summer Residence during the Summer of 2007, which gave me a quiet office nestled in the canopies of green trees, where I wrote the introduction and the first two chapters of my thesis. I am forever grateful to the Department of Art History for their support of this project with a Department of Art History Dissertation Fellowship that enabled me to write the third chapter. I would like to thank the Alumni Association and the Graduate School for an Alumni Association Dissertation Award, which allowed me to continue writing from the late spring, when I returned from Washington, D.C. through the summer of 2008.

I would also like to acknowledge the generous funding I received to attend conferences to present work related to my dissertation. I was fortunate to receive a Gulnar Bosch Travel Award from the Southeastern College Art Conference in 2006. I am also grateful to have been awarded an Annette K. Baxter Student Convention Travel Grant from the American Studies Association in 2007. At Penn State I received generous funding for conference travel from the Department of Art History, the Office of the Associate Dean for Research, College of Arts and Architecture, and the Department of Science, Technology and Society, College of Liberal Arts.

In addition to these grants and fellowships, I have been sustained by numerous graduate and teaching assistantships in the Department of Art History and the University Libraries while at Penn State. I would especially like to thank Catherine Grigor in the University Libraries who supported me during my first semester as an art history graduate student by overseeing me in my position as exhibits coordinator. I gained my first experience teaching sections for Jeanne C. Porter and Brian A. Curran, and received my first full-time teaching opportunity at Bucknell University, Lewisburg, PA. I am grateful to Roger Rothman and Janice Mann at Bucknell for giving me that fantastic opportunity, a lot of creative freedom, and for their friendship. I enjoyed my time there immensely and grew from it immeasurably. At Penn State I would like to thank the Departments of Art History and Science, Technology and Society for providing me with a one-year appointment, which allowed me to teach courses in American art and environmental and cultural studies. Special thanks for this opportunity go to Dean Barbara Koerner, Craig Zabel, and Greg Eghigian. I would also like to thank my own teaching assistants who have made my last year in the program all the more painless: Cali Buckley, Rachel Graity, Melissa Mednicov, Laura Sivert, Kate Woodford, and a very special thanks to Kimberly Musial who kept ARTH 100 from completely falling apart in my hands.

I also have other important professional and personal friends to thank. Jana Emmer has been without a doubt a true friend. Her loyalty has meant more to me than she could know. I only wish I could be as good a person and friend to her as she has been to me. I could not have made it through without her and I wish her all the best things in life always. I would also like to thank all the graduate students at Penn State for their support. Special thanks should go to Sarah Holloran, Kimberly Ivancovich, Melissa Mednicov and Laura Sivert. Christiane Wisehart—now a doctoral candidate in art history at Indiana University, Bloomington—also deserves special recognition for introducing me to Walton Ford's work in the early phases of this project. I am forever grateful to Denise Costanzo for putting up with me in our shared office space at the IAH during our summer residencies. Margaret Monrad deserves my sincerest appreciation for good friendship and food, while I was on fellowship in Washington, D.C.

I would also like to acknowledge Janet Lyon in the English Department for her support and inspiration. Her "Modernity" seminar challenged me greatly, but also made me all the more excited to study at the doctoral level. She is a powerful teacher and scholar. I thank the members of the Visualizing Animals Group, especially Joan Landes, who spearheads this effort, and Micaela Amateau Amato, who brainstormed artists with

me at the early phases of this group. Jean Sanders, also a member of VAG, gets credit for keeping me sane with yoga during a taxing summer and fall. I can only hope to have half the career these remarkable women have had, and I thank all of them for their support and friendship. My gratitude also goes out to the associate head of the arts and architecture libraries, Henry Pisciotta, for enhancing the collections in support of my dissertation, especially expensive books on Cy Twombly. Thanks to David Geiser in Plant Pathology for inviting me to participate in and present my work at a meeting of the Mid-Atlantic States Mycology Conference in 2006. And thanks to Dalton Hance for operating the tank, which opened doors and contributed to the flowing of creative juices. Finally, my sincerest appreciation goes to James E. Savage (a.k.a. The Lorax), the Project Coordinator of the Environmental Resources Research Institute. I got to know Jim while taking Horticulture 201, “Tree Climbing and Chainsaw Safety,” a course that gave me real insight into the things that I write about and provided a great deal of perspective during the final phases of editing.

While I was at the Smithsonian I had the good fortune to meet Prudence Peiffer, Asma Naeem, Jennifer Raab, and Melody Barnett Deusner. I thank them for listening to me and counseling me through some rather demanding moments; I will be forever grateful. I am also so glad that Asma and Leo have become sonic associates. As for Prue, I look forward to many more happy hours and shopping sprees in the rain. Thank you for being such a dear friend. I would also like to thank the senior fellows, David Bjelajac and Glenn Willumson who were at SAAM during my tenure, and provided support, along with the other predoctoral fellows: Jobyl A. Boone, Adam Greenhalgh, Caroline Hannah, Wendy Ikemoto, Adrian Kohn, Emily Eliza Scott, Dalila Scruggs, Jennifer Van Horn, Marie Stephanie-Delamaire, and Riccardo Venturi.

There are so many friends-by-marriage that have given me their advice, support and loyalty over the years. I thank them all and give special thanks to Rachael Ziady DeLue, Erika Doss, Clarence Burton Sheffield (aka Chip) and Allen Wallach for their moral support. None of them have read this text and should be in no way accountable for its shortcomings. Chip helped me prepare for my comprehensive examinations, and also kept a flow of mushroom and other articles related to my dissertation coming my way. Rachael provided countless offerings of advice and support over the past year in particular. Erika and Allen collectively provided enthusiasm and empathetic outrage as needed. And to Mary Curran, better half of Brian, words cannot express how much your friendship and support means to my family and me.

Finally, I would like to extend heartfelt thanks to the entire Mazow clan in Houston, and especially thank the “pair-a-docs,” Jack B. Mazow and Julia Wolf Mazow, for all their love and support. And thank you to my parents, Jim Walls and Cathy Umlauf Walls, without whom none of this would have been possible. My dad (aka “The Professor” and “Vista Jim”) continues to amaze me with new pursuits and his genuine zest for life. My mom listened to me more than anyone and deserves endless credit for her patience, understanding and support. I hope we will find ourselves on a beach soon, with Aunt Jenny, sipping something potent! Which leads me to my little sister and my very best friend in the whole universe—“Aunt Jenny.” I love you dearly. And, of course,

my husband Leo Galileo Mazow and son Frank Asa Walls Mazow. I know this program was as fulfilling and difficult for both of you as it was for me, if not more so. I thank Leo endlessly for his love of art history and me. And to Asa, who should get an honorary PhD for having gone through this program with me. Your inquisitive mind, curious nature, and boundless optimism and happiness everyday never cease to amaze me. I love you for everything you have become, and for keeping it all real. And thanks to all those friends, graduate students and teachers who watched you so that I could get something done! The amazing teachers at the Bennett Family Center deserve much gratitude: Miss Heather, Miss Jenn, Miss Alyssa, Miss Kim, Miss Julia, Mr. Brian, Mr. Brandon and Gail Addison Gus.

Finally, I would like to dedicate this dissertation to Frank Edward Umlauf, my grandfather and the man after whom Asa is named. He was a breaker boy in a coal mine and a welder. I always remember him with a newspaper in his hand, and a bag of bread-ends to feed the birds. He was always good for a five-spot, penny candy, a trip to the park or a hike with his dogs. He passed away during my doctoral program after a ride through the hills on his motorcycle. He always told me to “keep going,” something I always interpreted as encouraging advice to continue my formal education. Now, of course, I know he meant much more. Here’s to Poppy (aka Tapo).

Plantae, Animalia, Fungi: Transformations of Natural History in Contemporary American Art

Introduction

Securing Passage and Setting a Course

As for what motivated me, it is quite simple...curiosity...not the curiosity that seeks to assimilate what it is proper for one to know, but that which enables one to get free of oneself...¹

--Michel Foucault

Now it seems that the paradigm of the curiosity cabinet has become remarkably familiar...the model has been rescued from the dustbin of history. Even very official and safe institutions, such as the Smithsonian, have tried their hand with the cabinet...Yet many of the attitudes toward these cabinets merely reenact them, or constitute them only as a historical model rather than as a living one.²

--Mark Dion

I. Natural History

Natural History: A confounding paradoxical term.³

II. Plantae, Animalia, Fungi

“Plantae, Animalia, Fungi: Transformations of Natural History in Contemporary American Art” examines the ways in which five contemporary artists—Mark Dion (b.

¹ Michel Foucault, *The Use of Pleasure, The History of Sexuality: Volume Two* (London: Penguin Books, 1987), 8-9.

² Colleen J. Sheehy, Ed. *Cabinet of Curiosities: Mark Dion and the University as Installation* (Minneapolis: University of Minnesota Press in Cooperation with the Weisman Art Museum, 2006), 42.

³ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon gallery, 1997), 66. This definition is provided by the artist Mark Dion. Others appear at the beginning of each chapter as signposts. They provide not only insights into their artist's own linguistic preoccupations, but also the ways in which certain words are defined one way, but often carry diverse connotations as their cultural baggage fills up. We can also read Dion's lexicographer self as a way to understand his own attempts to order his world as he conceives it, against the systemized order of standardized dictionaries.

1961), Fred Tomaselli (b. 1956), Walton Ford (b. 1960), Roxy Paine (b. 1966) and Cy Twombly (b. 1928)—have adopted the visual traditions and theoretical positions of historical natural history. Using motifs such as curiosity cabinets and systems of taxonomy, for instance, these artists demonstrate a growing interest in the paradigms of natural history. For these practitioners natural history operates within the realm of history, memory and mythology, inspiring them to make works that retreat into a science long past and thought to be obsolete. Their work recalls the eighteenth-century natural history of field work, renderings of botanical and zoological imagery, and ordering by way of morphology, or the shapes and features of external forms. Dion, Tomaselli, Ford, Paine and Twombly have turned to supposedly antiquated modes of looking to explore longstanding divisions between nature and culture, offering new paradigms, in which plants, animals and fungi engage in symbiotic, ecologically-conscious dialogues.

This study, which itself takes on the form of a curiosity cabinet, addresses a fundamental set of questions: How do these contemporary artists adopt and revise eighteenth- and nineteenth-century naturalist modes of representation? Why have they found the visual culture and theoretical underpinnings of natural history to be a compelling force for making art? How have their artistic practices engaged concurrent political and scientific developments?

Within this layered discursive space, I have organized my dissertation into three chapters: one on plants, one on animals and a final one on fungi. This ordering parallels, in some ways, Carolus Linnaeus's (1707-78) three-chapter treatment of nature in his *Systema Naturæ* (1735).⁴ But there are differences as well. When Linnaeus wrote his now

⁴ Carolus Linnaeus [Carl von Linné], *Systema Naturæ per regna tria naturæ: secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis* [A General System of Nature:

classic text he divided the world hierarchically into the kingdoms of animals, plants and minerals. His inclusion of zoological, botanical and geological material speaks to the wide investigations of early naturalists. The fact that inanimate minerals might enter into his discussion seems forward thinking, especially considering our relatively recent understanding of the dynamic relations between earth's organic and inorganic matter.⁵ And yet Linnaeus' divisions suggest a tiered system in which animals tower above amorphous crystalline forces below. Artists like Tomaselli and Roxy Paine make no such assumptions. As Paine has said:

I haven't really been that interested in animals. It's an overrun territory. The metaphors are too specific and grounded. And also, when I first started dealing with fungus and weeds I was interested in consciously foregrounding these aspects of nature so that they weren't just backdrops for something else. I'm consciously not making animals or insects my focal point.⁶

My organizational scheme seeks to subvert, in part, such systems by placing plants first and animals second. Minerals may only be alluded to in this study, having become bound up in the geological attention paid to such works as Smithson's *Spiral Jetty*. Smithson's piece acknowledges with the grand counterclockwise swirl of a spiral the way in which inanimate crystalline structures reproduce themselves, accretions of complexity that spur

Through the Three Grand Kingdoms of Animals, Vegetables, and Minerals: Systematically Divided into their Several Classes, Orders, Genera, Species and Varieties with their Habitations, Manners, Economy, Structure and Peculiarities]. (1735).

⁵ See Alexander Graham Cairns-Smith, *Evolving the Mind: On the Nature of Matter and the Origin of Consciousness* (Cambridge: Cambridge University Press, 1996); Cairns-Smith, *Clay Minerals and the Origin of Life* (Cambridge: Cambridge University Press, 1986); Cairns-Smith, *Seven Clues to the Origin of Life: A Scientific Detective Story* (Cambridge: Cambridge University Press, 1985); Cairns-Smith, *Genetic Takeover and the Mineral Origins of Life* (Cambridge: Cambridge University Press, 1982); Cairns-Smith, *The Life Puzzle: On Crystals and Organisms and On the Possibility of a Crystal as an Ancestor* (Toronto: University of Toronto Press, 1971); Cairns-Smith, "An Approach to a Blueprint for a Primitive Organism," in C.H. Waddington, *Towards a Theoretical Biology: An IUBS Symposium* Vol. 1 (Edinburgh: Edinburgh University Press, 1968): 57-66; and Cairns-Smith, "The Origin of Life and the Nature of the Primitive Gene," *Journal of Theoretical Biology* Vol. 10 (1966): 53-88. See also J.D. Bernal, *The Origin of Life* (London: Weidenfeld & Nicolson, 1967); and Bernal, *The Physical Basis of Life* (London: Routledge and Paul, 1951).

⁶ Roxy Paine: *Bluff* (New York: Public Art Fund, 2002), 21.

the beginnings of new bacterial life. Scientists' focus on life in some ways has overshadowed the seemingly barren mineralogical and geological forces that have aided in the production of life and the relationship between the two.

In response, I diverge from Linnaeus's organization and place animals in the middle, making man neither the beginning nor the ending of the story. I also replace his chapter on minerals with one on fungi, organisms that are biological hybrids of sorts, demonstrating characteristics of both plants and animals. Minerals, instead, intersperse themselves throughout the text, notably through the geological and crystallographic works of Smithson, an artist who had his own naturalist inclinations. The headings of *plantae*, *animalia*, and *fungi*, then, operate as signals for a reordering, but also a disordering, from the formation of bodies to their dissolution. With this in mind, the reader will find elements of all three subjects interwoven as we find, for instance, in chapter one, which not only attend to plants, but also Smithson's rocks. There is a way, in keeping with the model of associations we will see in Warburg's *Mnemosyne*, that some relationships are more overtly observed than others.

In chapter one, "Plantae (Vegetable Values): Embarking on the Voyage," I begin with an examination of select projects by Mark Dion, who, I would argue, stands among the most resonant art produced in our era, particularly among those using science in their work. Through the medium of his installation "portraits" of naturalists from Linnaeus (1992) to Wallace (1994), Dion uses the motifs of the naturalist to critique the role of taxonomical systems within the structures of exhibiting institutions. His *Linnaeus* box, for instance, read against Robert Morris's *I-Box* (1962), marks a space where words and images, subjects and objects lose their stability and definitiveness. In this chapter I come

to terms with the notion of “species” by reading works of art that are invested in the paradigms of botanical nomenclature, summoning naturalists from Linnaeus to Darwin. In addition to Dion and Smithson’s work, paintings by Fred Tomaselli and Roxy Paine’s *Crop* (1997-98) further an understanding of the slippages that occur in historical conceptions of the fixity of species, particularly in light of a dispersal of subjectivity in the contemporary era.

Tomaselli, whose chromatically-charged tableaux explode with flora and fauna that include actual botanical specimens and songbirds cut from ornithological guidebooks. Through a process of paint and collage the artist appropriates the subject of natural history and the human desire to order plants, knowledge and ultimately ourselves. He affixes collaged leaves of the delirium-inducing *Datura* plant onto his paintings, along with other mind-altering compounds, such as marijuana and various pharmaceuticals. Throughout these “loaded” compositions, Tomaselli creates patterns of order with a variety of plants and compounds, colors and shapes, that bring the artist’s paintings to life.

Roxy Paine’s species-specific poppy fields, composed of polymers and paints, recast bifurcations of nature and culture, order and chaos. His *Crop* poppies articulate the role of taxonomical classification within the scheduling criteria of the Drug Enforcement Administration (DEA), as a place in which the line between the treasured and the taboo often becomes blurred. Paine places his artificial specimens within a naturalist framework, his species-specific poppies, for instance, becoming avenues for discussing hybridity, and the space in which one thing becomes another.

In chapters two and three, the theme of the dissolution of the box and the egoic self expands into a space of the un-body, a distributed and fissuring of self. Dion contributes significantly to this phenomenon of decorporealization, conflating art and arthropods, human subjects and insect specimens (2000) in chapter two, “Animalia (From Man to Zoophyte): Recording and Observing Fauna.” In one case, the artist presents the stuffed figure of Mickey Mouse as the esteemed French naturalist and comparative anatomist, Baron Georges Cuvier (1990), the better to highlight past and present debates between pre-evolutionary thinkers and transmutationists, and the slippage of taxonomical categories (the mouse-man here operating as a zoophyte, a hybrid-like creature).

As with Dion, works by Tomaselli and Walton Ford illuminate contemporary artists’ appropriation of naturalist modes of representation, as we see with Audubon, as well as the theoretical positions of naturalists from Linnaeus to Cuvier. Tomaselli’s paintings simultaneously speak to the wonder so often embedded in interactions with nature, from the age of the Renaissance *Wunderkammer* to the Enlightenment-era naturalist to contemporary notions of biodiversity. Tomaselli has us “floating fast” like a *Hummingbird* (2004), between these points of view and other naturalist-inspired milieux.

Drawing on the visual tradition of John James Audubon, Walton Ford’s heroically-scaled watercolors of birds, mammals, and reptiles enact human dramas, from those of personal betrayal to naturalist conquest, while questioning the environmental claims of nineteenth-century naturalists. Influenced by the work of John James Audubon, his paintings repeat the visual characteristics of time-worn maps, aged documents and weathered field guides. Ford’s yellowing edges and graphite writing mimic antique naturalist prints. Like many naturalist artists, Ford’s animals enact private and human

dramas, from betrayal to colonialist conquest. His paintings *Eothen* (2001) and *Space Monkey* (2001) explore, respectively, the role of charm and sexual selection in the naturalist project, a Darwinian evolutionary strategy that has not received as much attention as natural selection. These watercolors, vibrating as if Audubon birds on LSD, display a sensuality and aesthetic “charm,” in the midst of their engagements with evolutionary discussions of the origin of the eye and the origin of man. These debates evidenced the way in which becoming other or originating from an other (i.e. primates), for the human, was all too powerfully repulsive and intoxicating at once.

I use these artists’ works to better understand, through Ernst Gombrich, Jean Baudrillard, and Walter Benjamin, the nature of observation and representation. Their texts provide a locus for discussing the anxieties produced by the naturalist theories, which brought man into a shared evolutionary history with the “lower” animals. Dion’s mouse-man (1990) and Ford’s *Space Monkey* (2001) and his peacock, along with Darwin’s vision of himself as the peacock-man, reveal how animal hybridity speaks to our seduction or fear of transgressing genetic boundaries, either in our evolutionary past or future, or in our imaginations. Here the implications are that we are no longer merely humans, but animal species that have the potential to evolve into something entirely else. Our subjectivity is no longer metaphorically dispersed within the space of a room, but physically displaced through potentially new genetic codes.

In chapter three “Fungi: Navigating a Route Home,” I consider mycology as an intellectual nexus for Morris, Twombly, Tomaselli, Paine and Cage. We will examine Tomaselli’s exploration of shamans and celestial spheres in *Fungi and Flowers* (2002) and *Field Guides* (2003), as the artist combines crops of fungi with celestial cogitations

amongst a bursting array of butterflies and botanicals. Tomaselli's selection and reassembling of a new species offers a material artifact of entwinement, which I regard as a visual parallel to the cut-up technique of William S. Burroughs. Roxy Paine's polymer and resin fungi map spaces between the mechanized and the organic, the machine-made and the handmade craft, and enunciate overlaps between the preoccupations of naturalists and contemporary scientists, and nature-culture continuums rather than bifurcations. His *Amanitas* (2000) and *Psilocybe mushroom fields* (1997) provide a species-specific forum for the discussion of representation, reproduction and replication, and transformation, all areas related to the naturalist project.

I conclude the main body of the text with the work of Cy Twombly, who has produced a series of collages and prints on fungi, namely his little-studied *Natural History Part I Mushrooms* (1974) that, like Paine's mushroom fields, illuminates a world of observation and classification through the act of contemplation. These prints situate themselves at a crossroads of taxonomical methodologies, between morphological classification and DNA analysis. I pose several questions about the omission of representational idioms in the existing Twombly literature, and examine his fungi prints in relation to the composer John Cage's own interest in mushrooms. Twombly's use of the mushroom to explore empirical claims to knowledge is matched by Cage's zeal for mycology as a subject requiring the same acute skills of perception as music. Cage's mycological activities provide a critical foil against which to view Twombly's mushrooms, allowing us to cast *Natural History Part I Mushrooms* as more than a mere gestural performance.

By “Natural History—Concluded: Transforming the Specimens,” I hope to demonstrate how these artists’ works have transformed naturalist motifs in the contemporary era, directing our gaze toward symbiotic and symbiogenic paradigms of living. These artists, I conclude, engage natural history as a way to resolve a historical past in the present; do so, in large part, in their attention to bodies; and seek out a historical notion of natural history as a way to resolve, or at the very least conceptualize and temper what Aby Warburg himself would have called the serpent or nymph.

III. *Wunderkammern*...Unfolding

On the occasion of his exhibition *Natural History and Other Fictions* (1997) the artist Mark Dion provided his definition of natural history as one among many in his “Lexicon of Relevant Terms,” back matter in the catalog which accompanied his show.⁷ In his definition Dion considers natural history as something that simultaneously addresses the history of nature and of *human* history; a history of humans that has somehow been naturalized. His assertion also alludes to the way in which history itself operates as something rather *unnatural*, as constructed by the very humans whose story it seeks to tell. Taken in the present day of disciplinary specialization, it would also make sense for Dion to call natural history “confounding;” as a subject of study it asks its practitioner to engage a wide stream of science from geology to zoology and botany. But why has Dion preoccupied himself with natural history at all? Why not genetics, for instance, a topic that seems all the more timely in our increasingly particular world of

⁷ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon Gallery, 1997), 53-77. This exhibition traveled: Ikon Gallery, Birmingham, January 25-March 21, 1997; Kunstverein, Hamburg, June 19-August 10, 1997; De Appel Foundation, Amsterdam, August 29-October 19, 1997.

inquiry? What is it about natural history, with its aura of creaky anachronism and physicality that is so compelling to Dion and other contemporary artists in this age of cyberspace and digital image-making? Could it be that their work marks a shift in the “order of things,” where the materials collections of the digital age have manifested themselves as distributions, cut-ups and dissolutions, rather than whole artifacts, beings and bodies?

Before rushing to answer these questions I would like to consider the much wider lens through which artists have embraced the natural sciences, which surely does not begin and end with natural history. While the artists I attend to here focus on intersections of art and natural history, many of their strategies parallel contemporary engagements with the natural world through science and art. I would like to look, briefly, at these differing strains of art-science investigations with the hope that it will allow us to better appreciate the unique approach of contemporary artists employing natural history. Within art’s intersection with the natural sciences it makes sense to articulate at least three areas of focus: art and genetics, art and the environment, and art and natural history.⁸ We should also draw out the area of art and the environment to include both reconsiderations of landscape and land, as well the visual discourses of sustainability (of course, the considerations within these two realms overlap at times).

When we think of art in relation to the study of genetics, the biotechnological morphings of the artist Eduardo Kac come to mind—namely, his glowing bunny Alba

⁸ These do not include wider considerations of art and science, and excludes the array of resources in the physical sciences and technology studies. Some of these sources include Roy Ascott, *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*, edited with an essay by Edward A. Shanken (Berkeley: University of California Press, 2003); Lynn Gamwell, *Exploring the Invisible: Art, Science and the Spiritual*, edited by Neil deGrasse Tyson (Princeton: Princeton University Press, 2002); Thomas S. Kuhn, “Comment on the Relations of Science and Art,” in *The Essential Tension: Selected Studies in Scientific Tradition and Change* [reprinted from *Comparative Studies in Society and History* 11 (1969): 403-12].

(April 2000), who grew from an albino rabbit embryo injected with a fluorescent jellyfish protein (**Fig. Intro. 1**). The transgenic crossing, a marvel of science, nature and art, took genetic cloning out of the hands of scientists (e.g. a sheep named “Dolly”) and bestowed the magic of genetic mutation upon artists. The creation of Alba was inspired, at least in part, by one of the largest genetic research endeavors of the twentieth century, the Human Genome Project (HGP), a three-billion dollar project organized and funded by the United State Federal Government in an effort to sequence and map every gene. The effort marked one of many in a long line of government-funded exploratory efforts, from “the settling” of the American West to the frontiers of outer space. The HGP and the paradigms it produces have no doubt spurred the number of artists working for the last two decades in the area of art and genetics.⁹

The artist and theoretician Suzanne Anker provides some of the best scholarship on this relatively recent, “genetic” movement in the visual arts. In her book with the sociologist Dorothy Nelkin, *The Molecular Gaze: Art in the Genetic Age* (2004),¹⁰ Anker argues that the DNA molecule became a metaphor for artists seeking to understand what it means to be a human and to understand identity in an increasingly coded world. In a sense they were using the body turned on itself, its internal forms and functions, to understand the new dynamics of the world around them.¹¹ As one of the practitioners in

⁹ For a critical account of this time period see Daniel J. Kevles and Leroy E. Hood, *Code of Codes: Scientific and Social Issues in the Human Genome Project* (Cambridge, MA: Harvard University Press, 1992).

¹⁰ Suzanne Anker, and Dorothy Nelkin, *The Molecular Gaze: Art in the Genetic Age* (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press, 2004).

¹¹ Foucault, *The Order of Things*, 230, 251. This focus on the internal speaks to Foucault’s notion of the vertical as it relates to the investigations of life in the age of biology. This verticality is in contrast to the external, horizontal observations of morphological investigations in the age of natural history; See also Doyle, *On Beyond Living: Rhetorical Transformations of the Life Sciences*, 13. Doyle here discusses bodies in the realm of natural history versus biology, the latter of which “focuses on the animal and its thickness,

the field of art and genetics, Anker's work appeared in the group show *Paradise Now: Picturing the Genetic Revolution* (2000) that featured artists engaged in genetics and biotechnology.¹² The fact that biological projects like the HGP arouse the sense of the curious that runs through the area of genetic and biotechnology art—from the microsphere in which DNA research takes place to the technology that enables experiments with the small—indicates a similarity these artists share with the contemporary artists who draw on natural history (who have themselves addressed the naturalist *curiosa*).¹³

But there is one key difference between the “genetic” artists and the “naturalist” artists, and this has to do with the respective temporalities of their engagements with science. For the most part, the so-called genetic artists are concerned with imagining a *future* as it might exist in the realm of mapped genes, or, more historically, have directed their investigations of the HGP up to its final phase in 2000. In these cases, the artists

the unseen unity called life that dwells in the depths of bodies.” I believe this “thickness” mirrors Foucault's notion of the “vertical.”

¹² *Paradise Now: Picturing the Genetic Revolution* (Saratoga Springs, NY: The Tang Museum, Skidmore College, 2000). This exhibition traveled: Exit Art, September 9-October 28, 2000; The University of Michigan Museum of Art, March 17-May 27, 2001; The Tang Museum, Skidmore College, September 15, 2001-January 6, 2002. The other artists included in this show were: Heather Ackroyd and Dan Harvey, Action Tank for ®™ARK, Dennis Ashbaugh, Aziz + Cucher, Brandon Ballengée, Christine Borland, Nancy Burson and David Kramlich, Helen Chadwick, Kevin Clarke, Keith Cottingham, Bryan Crockett, Hans Danuser, Christine Davis, Mark Dion, George Gessert, Rebecca Howland, Natalie Jeremijenko, Ronald Jones, Eduardo Kac, David Kremers, Jane Lackey, Julian Laverdiere, Iñigo Manglano-Ovalle, Karl S. Mihail and Tran T. Kim-Trang, Larry Miller, Steve Miller, Frank Moore, Alexis Rockman, Bradley Rubinstein, Nioclas Rule, Christy Rupp, Gary Schneider, Laura Stein, Eva Sutton, Catherine Wagner, Carrie Mae Weems, Gail Wight, and Janet Zweig and Laura Bergman. While Dion was included in this show, I would not say that the piece typifies the naturalist pieces of his at play in this dissertation. Instead Dion's piece in *Paradise Now—Daily Planet* (1991)—riffs on Frankenstein and potential monstrosity of biogenetic engineering, see pages 58-59. Themes like these, that engage the anxieties produced by genetic engineering, can also be seen in the work of Alexis Rockman, whose paintings appear on the surface to engage natural history, but more heavily mine a future evolution gone wrong. See Peter Ward, *Future Evolution*. Images by Alexis Rockman. New York: Times Books, 2001; *Alexis Rockman*, with essays by Stephen Jay Gould, Jonathan Crary and David Quammen (New York: Monacelli Press, 2003); Maurice Berger. *Alexis Rockman: Manifest Destiny*. Brooklyn, NY: Brooklyn Museum, 2004; Douglas Blau, et al. *Alexis Rockman: Second Nature*. Normal, IL: University Galleries of Illinois State University, 1995.

¹³ *Paradise Now: Picturing the Genetic Revolution*, 7.

attend to an essentially contemporary time, or a distinctly immediate past. The *Paradise Now* exhibit was timely in its address of DNA research, but it did not explore the kind of historical distance that the artists making use of natural history have. These naturalist artists, through their explanation of the “antiquated” naturalist motifs and theories, repeatedly take up a historical and aesthetic epoch that has been consigned to a half-remembered past, whose products and visions seem impossibly obsolete to most contemporary audiences.¹⁴

Just as there are similarities and differences between artists working in art and genetics and art and natural history, so too, we find areas of overlap in the paradigms addressed by those who make connections between art and the environment. In artistic encounters with the environment, two spheres can once again be articulated: on the one hand those works dealing with landscape and land itself, and on the other those interested in ecology and sustainability. This first sphere leads us, at least in terms of American art history, from the traditions of nineteenth-century landscape painting, as with the Hudson River School, to Earthworks and those artists indebted to this movement since the 1970s. The second sphere brings us into a new realm of engagements with art that emerge from the concerns of the 1960s/1970s environmental movement.

Many exhibitions have addressed these artistic dialogs with the environment, but I choose two among the most exemplary in terms of landscape and land. The first—

¹⁴ Anker and Nelkin, 2-3. I think it is important to note that Anker and Nelkin themselves underscore the temporal closeness of genetic and biotechnology artists to their time period, and they provide a short chronology of artists acting in the same fashion throughout the twentieth century. “Artistic interpretations in the past have provided insight into the social impacts of the most critical sciences and technologies of their days. In the early 20th century, the splitting of the atom influenced the work of early European abstractionists such as Wassily Kandinsky and Piet Mondrian. In the 1940s American abstract painters such as Mark Rothko and Barnett Newman expressed their vehement reaction to the atomic bomb by creating biomorphic images of a primordial world. Pop artists Andy Warhol and Robert Rauschenberg commented on technological progress by incorporating inventions such as the electric chair and the X-ray into their art.”

Unnaturally—curated by Mary-Kay Lombino, opened at the Contemporary Art Museum at the University of South Florida, Tampa in 2003.¹⁵ This particular show forces us to rethink the boundaries of the “Garden of Eden.”¹⁶ Are we really able to make distinctions between nature and culture? Lombino suggests that the two areas, the natural and the built environments, have instead collapsed upon one another. What makes this show of particular interest to me is the range of examples it offers, from the landscape tables of Jason Middlebrook to the computer-generated flower models of Frances Whitehead. The exhibition also brings to light the extent to which technology can become wrapped up in new visions of the landscape and the flora it produces.

A second group show—*Badlands: New Horizons in Landscape*—proves all the more engaging, above all because of its scope.¹⁷ The show features Jennifer Steinkamp’s video *Mike Kelley* (2007), a deciduous tree blowing in the wind, morphing from one

¹⁵ Mary-Kay Lombino, *Unnaturally* (New York: Independent Curators International, 2003). This show traveled: Contemporary Art Museum, University of South Florida, Tampa, FL, January 13-March 8, 2003; H & R Black Artspace at the Kansas City Art Institute, Kansas City, MO, September 19-October 29, 2003; Fisher Gallery, University of Southern California, Los Angeles, CA, November 21, 2003-January 17, 2004; F. Donald Kenney Museum, The Regina A. Quick Center for the Arts, St. Bonaventure University, St. Bonaventure, NY, February 3-March 30, 2004; Copia: The American Center for Wine, Food & the Arts, Napa, CA, April 20-August 16, 2004; Lowe Art Museum, University of Miami, Coral Gables, FL, September 14-November 14, 2004. Artists included in this show were: Chris Astley, Gregory Crewdson, Jacci Den Hartog, Allan deSouza, Keith Edmier, Iñigo Manglano-Ovalle, Jason Middlebrook, Nicoletta Munroe, Roxy Paine, Michael Pierzynski, Marc Quinn, Michelle Segre, Alyson Shotz, Frances Whitehead, Clara Williams. Notably Roxy Paine’s *Psilocybe Cubensis Tray* (1997) and *Tapioca Slime Pudding* (2001) are included in this show. But they are included primarily for their “real”-ness, rather than any overt engagement with natural history. Its species variety is noted primarily for its “hallucinogenic properties” (page 43).

¹⁶ Lombino, 18.

¹⁷ Denise Markonish, et. al. *Badlands: New Horizons in Landscape* (North Adams, MA: MASS MoCA, 2008). This show runs from May 25, 2008-April 12, 2009 and includes projects by: Robert Adams, Vaughn Bell, Boyle Family, Melissa Brown, the Center for Land Use Interpretation, Leila Daw, Gregory Euclide, J. Henry Fair, Mike Glier, Anthony Goicolea, Marine Hugonnier, Paul Jacobsen, Nina Katchadourian, Jane D. Marsching and Terreform, Alexis Rockman, Ed Ruscha, Joseph Smolinski, Yutaka Sone, Jennifer Steinkamp, and Mary Temple. Three other particularly good sources on art and the environment include: John K. Grande, *Art Nature Dialogues: Interviews with Environmental Artists*, with a foreword by Edward Luce-Smith (Albany, NY: State University of New York Press, 2004); Rebecca Solnit, *As Eve Said to the Serpent: On Landscape, Gender and Art* (Athens, GA: University of Georgia Press, 2003 [2001]); and Gail Gelburd, *Creative Solutions to Ecological Issues*, with a foreword by Vice President Al Gore (New York: the Council for Creative Projects, 1993).

brilliant Technicolor hue to the next. And then there are the plexiglass terrariums of Vaughn Bell, suspended from a ceiling. With the help of a step stool one can “enter” each terrarium of Bell’s *Village Green* (2008) through circular holes cut into their bottoms, leaving one’s feet in an art house and one’s head in a greenhouse. You can even spritz the moss, ferns and other plants with water while exploring your own twenty-first century hanging garden. There are plenty of “traditional” works in the show, from paintings to photographs, including Joseph Smolinski’s *Biosphere* (2007), a pencil drawing of Biosphere 2 in ruins next to his rendition of the remains of Buckminster Fuller’s dome. Paired with one of Smolinski’s turbines in the form of a tree, installed outside the museum, this show marks the space in which works dealing with land and landscape unavoidably intersect with sustainability discourses. The entwinement begins to appear inevitable. In another twist, the catalog for the show becomes its own handy guide for the show in its relatively small size and color-coded section breaks. Indeed, the back cover of the book describes the publication as a “field guide to new landscape art.” Issues of art and the environment increasingly play out not only in the field of the art museum and art history, but the naturalist’s field as well.

While many of these works have roots in the realm of ecology and environmental activism, they are not as overt in this orientation as some earlier efforts that date to the early 1970s. More recently, we have seen the proliferation of works inspired by sustainability movements, which have contributed to the effect of establishing “green” as the new “black” among contemporary artists and those who write about their works. This movement is exemplified by the forward-thinking exhibition—*Beyond Green: Toward a Sustainable Art* (2005)—co-organized by the Smart Museum of Art at the University of

Chicago and Independent Curators International.¹⁸ Breaking down the boundaries between making art and building architecture, as well as between schematic plans and projects fully executed, curators Stephanie Smith and Victor Margolin present the temporary houses, known as *paraSITEs*, of Michael Rakowitz, made from plastic bags and inflated by the air exhaust vents on buildings. These forms provide inexpensive, mobile and safe shelters for homeless persons that also happen to make free use of energy otherwise wasted in heating and cooling totally enclosed structures.

Other green-art projects include Free Soil's *F.R.U.I.T.* (2005), which traced the distribution routes of oranges throughout the world, from farm to market; JAM, whose hip bags power laptops, phones and iPods via solar energy (*Jump Off*, 2005); and People Powered, a group of artists who collect and redistribute paint in new cans and package compost derived from neighbors' food waste in sachet (*Transport I: Loop and Soil Starter*, both 2005, and *Soil Starter*, 2002). The works in this show demonstrate the ways in which an ecological consciousness increasingly informs artists working with the environment. While many of these issues are also bound up in considerations of the body in the state of a genomic revolution, their ecological engagements transcend the borders of media, geography, and notions of the artist. In fact, many of these projects have been conducted by artist collaboratives, rather than individuals.¹⁹

¹⁸ Stephanie Smith, *Beyond Green: Smart Museum of Art* (Chicago: Smart Museum of Art, University of Chicago): 2006. This show traveled: Smart Museum of Art, University of Chicago, Chicago, IL; October 6, 2005-January 15, 2006; Museum of Arts & Design, New York, NY; February 2-May 7, 2006; Contemporary Arts Center, Cincinnati, OH, May 5-July 15, 2007; Richard E. Peeler Art Center, DePauw University Art Museum, Greencastle, IN, September 14-December 7, 2007. Artists included in this show were: Allora & Calzadilla, Free Soil, JAM, Learning Group, Brennan McGaffey in collaboration with Temporary Services, Nils Norman, People Powered, Dan Peterman, Marjetic Potrč, Michael Rakowitz, Frances Whitehead, WochenKlausur, and Andrea Zittel.

¹⁹ Another excellent resource for the intersections of art and the environment, and specifically sustainability discourses and ecology is Amy Lipton and Sue Spaid, *Ecovention: Current Art to Transform Ecologies* (Cincinnati, OH: co-published by greenmuseum.org, The Contemporary Arts Center, Cincinnati,

The art-science discourses surrounding genomics and biotechnology, as well as those that reconsider human relationships with the environment, indicate an art that can be described as moving into a post-humanistic space through nature-culture bifurcations and the anxieties of technologies that challenge organismal boundaries. The artists included in the exhibitions I have discussed, tend to look back only briefly, or at least not in a sustained way; they are, instead, concerned with developing new paradigms of being in their focus on a post-humanistic era.²⁰ In this way their art-science interactions remain quite distinct from those artists working with natural history in the contemporary era. To take on natural history in one's current moment means looking back beyond recent technological advancements and environmental crises, to the work of such historical naturalists as Carolus Linnaeus, Baron Georges Cuvier (1769-1832), and Charles Darwin (1809-82), and beyond these emblematic figures, to the ordering strategies that preceded the natural history of the eighteenth and nineteenth century, including, most notably, the Renaissance *Wunderkammern*, or cabinets and rooms of curiosities of the sixteenth and seventeenth centuries that epitomize, for modern observers, the early modern "age of the marvelous."²¹

Of course, most people today associate natural history with the discrete moment of eighteenth and nineteenth-century naturalists in the field, and with the monumental collections of natural history museums that we see today at the American Museum of Natural History, New York City, the National Museum of Natural History, Washington,

OH, and ecoartspace, 2002). In the area of architecture and sustainable projects globally see Architecture for Humanity, Ed. *Design Like You Give a Damn: Architectural Responses to Humanitarian Crises* (New York: Metropolis, 2006).

²⁰ Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991): 149-81.

²¹ A invaluable resource into this period is Joy Kenseth, Ed. *The Age of the Marvelous* (Hanover, NH: Hood Museum of Art, Dartmouth College, 1991).

D.C., and the Field Museum of Natural History, Chicago. These collections emerged originally from the aesthetic of Renaissance *Wunderkammern*, which gave rise, in turn, to the display of art and science in separate institutions in the nineteenth century. The establishment of the Metropolitan Museum of Art in 1870 and the American Museum of Natural History in 1874 on opposite sides of New York City's Central Park exemplifies the institutionalization of this disciplinary and epistemological split.

That said, the art historian Carla Yanni points out in her invaluable book *Nature's Museums: Victorian Science and the Architecture of Display* (1999), that some art historians have identified considerable continuities and affinities between the early modern cabinets and modern museums, despite the fact that their missions seem entirely antithetical.²² The earlier Renaissance collections produced the marvelous and wondrous through displays of objects "where they looked good, or where there was space." The later collections in natural history museums favored a rational organization of objects according to likeness and the ability to convey "general principles in natural history—not nature's quirks."²³ Yanni explains that *Wunderkammern* served an elite class of collectors who asserted power over the natural world in microcosms of "scarcity" and oddity.²⁴ These collections also granted to their owners a degree of knowledge over the natural world that, in turn, asserted power over those who did not have access to the

²² Carla Yanni, *Nature's Museums: Victorian Science and the Architecture of Display* (Baltimore, MD: The Johns Hopkins University Press, 1999). Here Yanni is referred to the work of Douglas Crimp. Yanni argues, in keeping with Foucault, that it is not as significant that the collections of *Wunderkammern* and modern natural history museums make use of different display techniques, but rather that the difference marks a paradigm shift. Their projects still remain, in many ways, more similar than contradictory. She cites the work of the art historian Paula Findlen in her move away from Crimp's reasoning. See Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994). I should also note that Yanni's book includes a study of the Museum of Jurassic Technology (MJT), Los Angeles, CA, a kind of *Wunderkammer* for the masses in the modern era. See pages 164-66.

²³ Yanni, 18.

²⁴ Yanni, 17.

collections.²⁵ More importantly, they bestowed upon their well-to-do owners a potent form of visual power in which works became wonders and artifacts were granted a measure of auratic authority.

In the last two decades natural history museums, along with study of early modern and modern natural history, have produced a profusion of scholarship. And in addition to the work of Yanni, we should include the contributions of Amy R.W. Meyers and Margaret Beck Pritchard, Paula Findlen, Thomas DaCosta Kaufmann, David Freedberg and Claudia Swan.²⁶ The work of these scholars has spurred and marked a burgeoning literature in art and natural history. But although these studies provide critical

²⁵ Yanni, 8, 12, 14. Yanni acknowledges her debt to Michel Foucault's *The Order of Things*, as well as to his "The Eye of Power," in *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977* (New York: Pantheon, 1981), and "Of Other Spaces," in *Diacritics*.

²⁶ Amy R.W. Meyers, and Margaret Beck Pritchard, *Empire's Nature: Mark Catesby's New World Vision*, with a foreword by Graham S. Hood & Edward J. Nygren (Chapel Hill, NC: University of North Carolina Press, 1998); Paula H. Smith and Paula Findlen, eds. *Merchants & Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002); Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994); Thomas DaCosta Kaufmann, *The Mastery of Nature: Aspects of Art, Science, and Humanism in the Renaissance* (Princeton: Princeton University Press, 1993); Claudia Swan, *Art, Science, and Witchcraft in Early Modern Holland: Jacques de Gheyn II (1565-1629)* (Cambridge: Cambridge University Press, 2005); Londa Schiebinger and Claudia Swan, Eds. *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005); David Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: The University of Chicago Press, 2002). See also Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: The University of Chicago Press, 2006); Henrietta McBurney, *Mark Catesby's Natural History of America: The Watercolors from the Royal Library, Windsor Castle*, with an introductory essay by Amy R.W. Meyers (Houston: The Museum of Fine Arts, Houston in association with Merrell Holberton Publishers, London, 1997; and Judith Magee, *The Art and Science of William Bartram* (University Park, PA: The Pennsylvania State University in association with the Natural History Museum, London, 2007). Other helpful sources on museums include: Douglas J. Preston, *Dinosaurs in the Attic: An Excursion into the American Museum of Natural History* (New York: St. Martin's Press, 1986); Joseph Wallace, *A Gathering of Wonders: Behind the Scenes at the American Museum of Natural History* (New York: St. Martin's Press, in conjunction with the American Museum of Natural History, 2000); Stephan T. Asma, *Stuffed Animals & Pickled Heads: The Culture and Evolution of Natural History Museums* (Oxford: Oxford University Press, 2001); Susan Sheets-Pyenson, *Cathedrals of Science: The Development of Colonial Natural History Museums during the Late Nineteenth Century* (Kingston and Montreal: McGill-Queen's University Press, 1988); Philip Kopper, *The National Museum of Natural History* (New York: Harry N. Abrams, Inc., in association with the Smithsonian Institution, 1982; and Paisley S. Cato and Clyde Jones, Eds. *Natural History Museums: Directions for Growth* (Lubbock, TX: Texas Tech University Press, 1991). On the increasing role of natural history museums in sustainability efforts see Peter Davis, *Museums and the Natural Environment: The Role of Natural History Museums in Biological Conservation* (London and New York: Leicester University Press, 1996).

illuminations of the golden era of natural history, they have not considered the later impact of these collections and modes of thought on the making of contemporary (that is, late twentieth- and twenty first-century) art and culture, and thus do not attend to the ways that natural history is experiencing a resurgence in art today, or what we might call an “afterlife.”²⁷ This neglect obviously is to a large extent, inevitable, given the specialization of these scholars in early modern and modern studies. Contemporary scholarship on natural history is no doubt stimulated by and indebted to these earlier works, but is also driven by new art-science paradigms.

Crossing disciplinary boundaries and fundamental to any consideration of natural history (in historical and conceptual terms), particularly in the contemporary era, is Michel Foucault’s *The Order of Things: An Archaeology of the Human Sciences* (1970). In this influential study, Foucault proposed a transformation in the human sciences from the sixteenth to the nineteenth centuries, in which grammar (the science of words), natural history (the science of beings), and wealth (the science of needs) shift toward the specialized fields of philology, biology, and economics, respectively.²⁸ For Foucault and the contemporary artists directly or indirectly influenced by him, the emergence of biology fundamentally diverted our attention away from natural history, a science which

²⁷ This term, of course, comes from the German translation of *Mnemosyne* as *Nachleben*, or “afterlife,” a term used by Aby Warburg to identify the survival of antiquity into the Renaissance period, and ostensibly into his own contemporary moment. I am also taking the use of his term from Brian A. Curran, *The Egyptian Renaissance: The Afterlife of Ancient Egypt in Early Modern Italy* (Chicago: University of Chicago Press, 2007), 2. Curran provides a genealogy for his own use of the term “‘afterlife’ or ‘mnemohistory’” in the work of Jan Assmann. Curran’s book far more ably tackles what I begin to address here, which is in some ways bound up in reception and memory. In other words, how is the history of natural history or of *Wunder* received in the contemporary period? What is the process by which one’s knowledge of the past is articulated through an often very different and present moment. This is the project of Egypt in relation to the Italian Renaissance, for Curran, and, of course, the project of Aby Warburg, who we will see, articulates Ancient art through the Italian Renaissance in the moment of late nineteenth and early twentieth-century Western European (and, arguably, American) culture.

²⁸ Michael Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1970).

had for centuries occupied our ordering of the natural world through the systematic observation and classification of living beings. This change did not mark the acquisition of new knowledge, but the development of new *ways* of knowing. In *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (2002), David Freedberg critiqued Foucault's characterization of this shift as a "rupture," as too essentialist.²⁹ Freedberg makes this assertion in light of his own work on Federico Cesi (1585-1630) and his Academy, which Freedberg proposes as an expansion of Foucault's explanation of "the transition from one *episteme* to another."³⁰ In addition to this valuable contribution to Renaissance history, I would argue that Freedberg's characterization of Foucault's "rupture" as "too clear" begs us to consider how life(s) and its study have been too concrete, often progressing from one state of understanding to another, rather than being, as is more likely the case, in a constant state of becoming.

Since the last third of the twentieth century artists have repeatedly employed motifs (e.g. curiosity cabinets) and paradigms of natural history in their work. With this development in mind, serious studies of natural history in the contemporary era are needed and warranted. But while no scholarly book has attempted to frame and define this phenomenon of our present era, many individual and group art exhibitions have begun to ask some of the more salient questions. Some of the more notable of these include: *Tigers of Wrath: Watercolors by Walton Ford*, held at the Brooklyn Museum (2006-07); *Cabinet of Curiosities: Mark Dion and the University as Installation*, held at the Weisman Art Museum at the University of Minnesota, Minneapolis, MN (2006); *Fred Tomaselli: Monsters of Paradise*, held at the The Fruitmarket Gallery, Edinburgh;

²⁹ Freedberg, *The Eye of the Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History*, 4.

³⁰ Freedberg, 1-4.

Scotland (2004) and *Roxy Paine: Bluff*, organized by the Public Art Fund and installed in Central Park, New York City (2002).³¹ While these exhibitions have gone a long way toward opening dialogues about natural history in contemporary art, they tend to limit their scope to the work of a single artist, or address so many artists in a group show that finding a thread of continuity can be difficult. Furthermore, group shows and catalogs on natural history tend to focus on animals (perhaps because they look more like humans than plants or fungi), to the exclusion of other life forms, an effect that ultimately limits our understanding of the naturalist world in its entirety.³²

There are other facets of these art works that have not been very well addressed in the current scholarship, including: the categories of body and life, the role of memory, and the collapse of history, which complicates the ways we might read the afterlife of natural history in the contemporary period. I will attend more comprehensively to these issues, in order to clarify and define the places of natural history in contemporary American art. In the process, I hope to enliven the provocative but rather scattered existing scholarship on the topic, and to articulate the ways in which these art works and readings of them can be opened up well beyond the scope of natural history.

As discussed in part four of this introduction, my method takes a number of significant cues from the work of the German art historian Aby Warburg (1866-1929), and specifically from his *Mnemosyne*, or Atlas Project (1927-29). Before fully exploring

³¹ Steven Katz and Dodie Kazanjian, *Tigers of Wrath: Watercolors by Walton Ford* (New York: Harry N. Abrams, Inc., 2002); Colleen J. Sheehy, Ed. *Cabinet of Curiosities: Mark Dion and the University as Installation* (Minneapolis: University of Minnesota Press, 2006); Fred Tomaselli, Fiona Bradley, John Yau, and Jonathan Lethem. *Fred Tomaselli: Monsters of Paradise* (Edinburgh: Fruitmarket Gallery, 2004); and *Roxy Paine: Bluff* (New York: Public Art Fund, 2002).

³² See such catalogues as: *Endangered Species: Ecological Commentaries* (New York: Alternative Museum, 1987); Harriet Ritvo, Tommy L. Lott, and Ron Platt, *Next of Kin: Looking at the Great Apes* (Cambridge: MIT List Visual Arts Center, 1995); Nato Thompson, *Becoming Animal: Contemporary Art in the Animal Kingdom*, foreword by Joseph Thompson (North Adams, MA: MASS MoCA, distributed by The MIT Press, 2005).

this vision, however, I think it would be helpful to describe and define some of the phenomena that encompass natural history in its “golden age,” the early modern notions of wonder that give way increasingly to positivist approaches of understanding in the eighteenth century, and other themes that broaden my study of natural history in the contemporary period. Historically, natural history as a field of inquiry and epistemology sought to gain understanding of the natural world largely through observations, rather than experiments. As a discipline, it brings to mind a host of associations of time and place from classical antiquity to the present. As a basis for knowledge natural history has deep roots in antiquity, exemplified by the work of Aristotle (384 BCE-322 BCE) and Pliny the Elder (23-79), who sought to record their observations of plants and animals and catalog them, as well as compile the naturalist observations and comments of earlier authors.³³

During the eighteenth and nineteenth centuries, the work of Baron Georges Cuvier and Charles Darwin informed and provoked many of the revolutions that paved the way for the emergence of modern science. Naturalists of this period would have had studies and libraries, rather than the laboratories of scientists today. They maintained studies filled with books, field notes and specimens. These naturalists relied on an exchange of information through letters, through observations shared with colleagues often from one country to another, and the shipments of pressed plants, preserved animal bodies and minerals that they had collected on their travels. These collections were characteristically contained and displayed in imposing pieces of furniture typically known as curiosity cabinets (**Fig. Intro. 2**), which are probably the most familiar visual

³³ Trevor Murphy, *Pliny the Elder's Natural History: The Empire in the Encyclopedia* (Oxford: Oxford University Press, 2004).

artifacts of this “golden age” of natural history today and also a vestige of the Renaissance age of *Wunder* with its room-sized curiosity cabinets. The survival of these cabinets gives material evidence to the argument that natural history was not strictly a post-Enlightenment investigative tool. It was the world of Cuvier, Carolus Linnaeus, and John James Audubon (1785-1851), but also, to be sure, Charles Darwin. Natural history does not end as a field of inquiry with the evolutionary theories of Darwin and Alfred Russel Wallace (1823-1913). For most of the history of natural history, naturalists, whether amateur or professional, engaged the flora and fauna of the natural world with a distinct view of *wunder*. As the art historian Alexander Marr has argued, the concept of wonder originates with Aristotle who linked a “desire to know” with “the passion of wonder.”³⁴ In the early modern period, Marr argues, wonder and curiosity were bound up together, but in ways that were filled with “ambiguity,” “inconsistency and variety.”³⁵ Today natural history remains, through disciplines like organismal biology, zoology and botany, the study of objects through such a lens of “wonder.”³⁶

³⁴ R.J.W. Evans and Alexander Marr, *Curiosity and Wonder from the Renaissance to the Enlightenment* (Hants, England: Ashgate, 2006): 1.

³⁵ Evans and Marr, 1-2. Per Marr also see: Lorraine Daston and Katherine Park, *Wonders and the Nature of Order, 1150-1750* (New York: Zone Books, 1998); Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World* (Chicago: University of Chicago Press, 1991); Barbara Benedict, *Curiosity: A Cultural History of Early Modern Enquiry* (Oxford: Oxford University Press, 1991); Mary Baine Campbell, *Wonder and Science: Imagining Worlds in Early Modern Europe* (Ithaca and London: Cornell University Press, 2004); and Peter G. Platt, *Wonders, Marvels, and Monsters in Early Modern Culture* (London and Newark: University of Delaware Press, 1999).

³⁶ The notion of wonder was central in the formulation of *Wunderkammern*, or rooms of wonder in the sixteenth century. An excellent resource on this concept is Joy Kenseth, ed., *The Age of the Marvelous* (Hanover, NH: Hood Museum of Art, Dartmouth College, 1991). See also Pamela H. Smith and Paula Findlen, eds. *Merchants & Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002). The Museum of Jurassic Technology, Culver City, CA provides an excellent current example of a museum of the marvelous. For those who cannot make the trip see Lawrence Weschler, “Inhaling the Spore: Field Trip to a Museum of Natural (Un)history,” in *Harper’s Magazine* (Sept. 1994): 47-58; Lawrence Weschler, *Mr. Wilson’s Cabinet Of Wonder: Pronged Ants, Horned Humans, Mice on Toast, and Other Marvels of Jurassic Technology* (New York: Vintage, 1996) [first printed by Pantheon as *Mr. Wilson’s Cabinet of Wonder*, 1995]; *The Museum of Jurassic Technology: Primi Decem Anni Jubilee Catalogue*, with Contributions from The Society for the Diffusion of Useful Information (Los Angeles: The Museum of Jurassic Technology Trustees, 2002); *Inhaling the Spore: A Journey Through the Museum*

This association of natural history with the aesthetics of wonder finds itself rooted in the room-sized curiosity cabinets of the mid-sixteenth and seventeenth centuries—*Wunderkammern*, *Kunstammern* and *Kunstkabinett* (**Fig. Intro. 3**). These grand cabinets of marvels housed the colorful Renaissance collections of unique and often peculiar specimens. In these places one could find carefully prepared taxidermic animals: wading birds, joeys, brilliantly multicolored parrots, African finches, a toucan and a peacock, black crows about to take flight, a brown and black mottled sparrow, an owl, mother ducks, gray and white pigeons and gulls, domestic cats striped black and gray, crouching tigers and jaguars, a squirrel, a sneering raccoon, fluffy white polar bears, black bears and brown bears, a statuesque bison, a boar's head, a gesturing gibbon, a reclining fox, the head of a black rhino, nested in a just-opened shipping crate and many other four-legged mammals contained in the shells of their former selves. A pallid carp, snakes, and a rat preserved in spirit-filled glass jars. Yellow butterflies accented with orange and black, coffee-colored moths, green beetles and other winged insects displayed in glass cases.³⁷ These cabinets catalog the remains of formerly live beings, alongside an abundance of inanimate matter: exoskeletons of crustaceans, volcanic rocks, fossils, animal skeletons, nuts and seeds, maps and books of faraway places, globes, marble portrait busts of notable intellectuals and public figures, hourglasses, architectural models from antiquity, artifacts and musical instruments from exotic locales, mummies, ceramics, metal tools, and even unicorn horns.

of *Jurassic Technology*, film produced, directed and edited by Leonard Feinstein, 2004; Carla Yanni, *Nature's Museums: Victorian Science and the Architecture of Display* (Baltimore, MD: The Johns Hopkins University Press, 1999), 164-66.

³⁷ I compiled this general list from an amalgam of representations of modern and contemporary *Wunderkammern* and *Kunstammern*, from the collector Ole Worm to the artist Mark Dion.

Eighteenth and nineteenth-century naturalists often brought an order to the associative “poetics” and assemblages that composed *Wunderkammern*. The Renaissance assemblages were increasingly replaced with the ordered and rational aesthetics of the study and the laboratory, Enlightenment-era spaces where materiality could be contained, examined and ordered. In the working spaces of Cuvier and then Darwin one could find the tools of the laboratory and the field: butterfly nets, scales, small and large glass storage jars, bell jars, protective gloves, writer’s desks, specimen pins, scissors, variously sized knives, shovels, hammers, machetes, hatchets, files, string and rope, display cases, magnifying glasses, plant presses, animal traps, collecting cabinets, ink bottles and quill pens, mosquito nets, trunks, shot guns, vasculum, and animal and botanical guidebooks. These are the tools of the individuals who exemplify the naturalist project in its golden age. These men—and they certainly were most often men—often traveled to distant parts of the earth by ship and across vast tracts of land. They observe flora and fauna, and collected samples for transport back to Europe, examining them further in their studies and sharing many of these new-found specimens with their colleagues in the scientific community.

The naturalist projects of *wunder* that began at least as early as the Renaissance ended with positivist rationalities of nineteenth-century science. This latter scientific mode prized specialization, separating out the study of things with life into biology, zoology and botany, and those things without life into geology. The informatics of total system structures, the *Wunderkammern*, gave way to the single lens of the microscope, which gave more precise and, literally, focused data, but dissociated it from other information. The single small lens splintered the visual world into bites, making it more

difficult to achieve a macro focus amidst the newly accumulating details. This and subsequent technologies of magnification stirred minds and imaginations and stimulated new micro fields of investigations, but they also contributed to the replacement of the naturalist field of observation with the scientific laboratory of experimentation, a new age in which specimens smaller than the tip of a needle can be purchased online. There is an engagement with the whole organism, its morphology, ethology and ecology that is often lost in the shift from the organismal studies of Cuvier and Darwin, for example, to the discrete micro-taxonomies that take place in most areas of scientific inquiry today.

Some readers may detect a romantic or nostalgic quality in my comparison of traditional natural history to modern science. It might appear as if I am conveying the notion that contemporary scientists are “getting it wrong,” and that in Cuvier and Darwin, in comparison, got it right. My sympathies for the golden age of natural history—a discipline that survives on the peripheries of scholarly science and more frequently in the world of amateur bird watchers and mushroom hunters—certainly remain rooted in its fierce desire, driven by curiosity in large part, to embrace and understand the entire scope of our material world, a world that so often seems lost among a contemporary focus on subatomic particles that stand in for whole organisms. These naturalists traveled the world, from Surinam to Lapland to the Americas. Their travels were often rife with the perils of the age, taking them on dangerous voyages across continents in search of butterflies and birds, flowers and trees, mammals and reptiles—species that were rare, that had yet to be named, but needed to be known. These experiences cast their project today in a certain heroic light that is difficult to ignore. Although it is true that many of their efforts were fueled by larger nationalistic missions and colonialist enterprises that

placed many species (and peoples) in jeopardy, the sheer drive and passionate desire that spurred them on can hardly fail to attract the imagination.

In the eighteenth and nineteenth centuries naturalist studies included minute investigations as well as broader surveys that were inclusive in scope. Examples include Cuvier's *Histoire naturelle des poissons* (1801), a wide-reaching study that examines over 5,000 fishes, and, conversely, Darwin's *A Monograph on the Fossil Lepadidæ, or, Pedunculated Cirripedes of Great Britain* (1851), a more discrete study of barnacles.³⁸ These illustrated texts were just two of many naturalist texts that described certain species or, alternately, a larger group of organisms within a larger taxonomical set. Although some of these studies covered a small geographic region, others embraced phenomena gathered from a larger region, country or continent, as with John Gould's *The Mammals of Australia* (1863).³⁹ What we can say about the diversity of these studies is that naturalists cast narrow and wide lenses on the natural world and their work, and they interpreted what they saw through the immediacy of their sensory experiences. They also, however, tried to look at species in relation to larger and more sweeping views of biological and geological change—connecting studies of life with studies of their traces, fossils, and through their relationships to geological formations. Naturalists of the golden age produced a range of micro and macro-oriented studies that contributed to the understanding of organisms and their complexities.

³⁸ Baron Georges Cuvier, *Historical Portrait of the Progress of Ichthyology: From its Origins to Our Own Time* (Baltimore: Johns Hopkins University Press, 1995 [1801]); Charles Darwin, *A Monograph on the Fossil Lepadidæ, or, Pedunculated Cirripedes of Great Britain* (London: Palæontographical Society, 1851).

³⁹ John Gould, *Gould's Mammals: Selections from John Gould's Mammals of Australia* (London: David and Charles, 1978 [1863]).

From all of this, it is hardly surprising that the scope of my study is wide. The works I consider invoke a plurality and diversity of life beyond museum and gallery walls, from contemporary ornithological prints to large-scale Audubon-esque watercolors to elaborate tableaux of naturalists at work. Many research projects in art history approach inquiry microcosmically, focusing on some particular aspect of the work of an artist, a group of artists, movement, or historical moment. It appears that today macrocosmic studies are out of vogue, and yet there remains much to be gained from this kind of approach, which has the potential to make interconnections across a field of being, especially when modernity has, instead, given us so many spaces of anomie. But it is possible that we are arriving at a moment in which the macro- and the micro-study have entered increasingly into conversation.

Notably, the American ecologist and systems theorist H.T. Odum proposed the “macroscope” in his book *Environment, Power, and Society* (1971), an idea he continued to promote throughout his career.⁴⁰ Odum poses his view in contradistinction to a microscopic lens, arguing that “the contemporary world [is] beginning to look through the macroscope.”⁴¹ One of his students, Scott Nixon, explained that after “years of specialized academic minutiae,” people were “drawn” to study with Odum, who “was working at a large scale, on the ‘big picture.’”⁴² While objects themselves remain important, their relationships to other things, ideas, beings and systems provide a broader

⁴⁰ H.T. Odum, *Environment, Power, and Society* (New York: John Wiley & Sons Inc, 1971).

⁴¹ Odum as quoted in William J. Mitsch and John W. Day, Jr., “Thinking big with whole ecosystem studies and ecosystem restoration—legacy of H.T. Odum,” *Ecological Modelling* 178 (2004): 135-36. For a fascinating summary and review of Odum’s work see *Ecological Modeling* Vol. 178, Nos. 1-2 (2004): 1-292. This volume includes two special editions and a plethora of articles dedicated, posthumously, to Odum’s scholarship; the special volume is entitled, *Through the MACROSCOPE: The Legacy of H.T. Odum*, edited by M.T. Brown and C.A.S. Hall.

⁴² Scott Nixon as quoted in Mitsch and Day, 136. These “big picture” items included, as Nixon says, “ecosystems, diurnal curves, network diagrams, and models.”

story of their larger roles and operations within our human ecology and the many forces, histories, times, and spaces that which lies beyond description and classification.

While the work of Aby Warburg and his “Atlas” approach to art history, speaks most profoundly to the tone and vision of my dissertation—I do in fact see his work as a kind of guide in this project—I would also like to acknowledge the works of more recent scholars whose works have provided other helpful models—Michel Foucault (1926-1984), the late Robert Rosenblum (1927-2006), and Jennifer L. Roberts (b. 1969). Any misreading of their work, or errors of interpretation that appear here are surely my own and only made in the spirit of inquiry. I look to Rosenblum broadly, in his having urged art historians to “be as flexible, various and comprehensive as possible in their approaches, and be willing to consider anything.” “Works of art, he said, “should not be forced into a single perspective...there is no end to the way we can understand human beings and no end to the way we can learn to understand the art they make.”⁴³ I embrace Rosenblum’s invitation to throw the cabinet doors open to all objects and modes of inquiry, though, as always some scholars have guided me more definitively than others.⁴⁴ I also bring to my readings his approach to studying the “*terra incognita*” of the “hydra-headed” late eighteenth century “in a kaleidoscopic manner that constantly shift[ed] in vantage point and even move[d] freely from one nation and medium to another.”⁴⁵ I ask the reader to be patient with me as we embark on this trip, and consider that naturalists

⁴³ Robert Rosenblum and H.W. Janson, *19th-Century Art* (New York: Harry N. Abrams, 1984), 10.

⁴⁴ I admit also having an ulterior motive of collapsing methodologies, and use as my guide E.H. Gombrich who broke down the boundaries between the high arts of painting, drawing, sculpture, and architecture and decorative (and useful) arts in his article on Renaissance *cassone*. E. H. Gombrich, “Apollonio di Giovanni: a Florentine *cassone* Workshop Seen Through the Eyes of a Humanist Poet,” *Journal of the Warburg and Courtauld Institutes* (18 Jan. 1955): 16-34.

⁴⁵ Robert Rosenblum, *Transformations in Late Eighteenth Century Art* (Princeton: Princeton University Press, 1967), viii.

often stray the course on their own journeys of discovery and on their way to their own conclusions.

Rosenblum reminds us that the eighteenth century was a period of great geographic and visionary breadth. Foucault, for his part, signals not only this dynamism, but also antecedent shifts in conceptions of nature, history and natural history in the sixteenth and seventeenth centuries that no doubt enlivens contemporary artists' treatment of this epoch. In *The Order of Things*, Michel Foucault describes history before *natural* history, where organisms in many ways illuminated their own histories and becomings. Foucault argues that writings on plants and animals constituted histories, rather than natural histories, until circa 1657, with the publication of Jan Jonston's (1603-75) *Natural history of quadrupeds*. Pierre Belon's (1517-64) *History of the nature of birds* (1555), Claude Duret's (d. 1611) *Admirable history of plants* (1605) and Ulisse Aldrovandi's (1522-1605) *History of serpents and dragons* (1640) constitute the histories of life as conveyed prior to "the gap that is now opened between things and words."⁴⁶ For Belon, Duret and Aldrovandi, Foucault explains, the living being itself recounted its own story:

...to write a history of a plant or an animal was as much a matter of describing its elements or organs as of describing the resemblances that could be found in it, the virtues that it was thought to possess, the legends and stories with which it had been involved, its place in heraldry, the medicaments that were concocted from its substance, the foods it provided, what the ancients recorded of it, and what travelers might have said of it. The history of a living being was that being itself... The division, so evident to us, between what we see, what others have observed and handed down, and what others imagine or naïvely believe, the great tripartition, apparently so simple, and so immediate, into *Observation, Document, and Fable*, did not exist. And this was not because science was hesitating between a rational vocation and the vast weight of naïve tradition, but for the much more precise and much more constraining

⁴⁶ Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 129-30.

reason that signs were then part of things themselves, whereas in the seventeenth century they become modes of representation.⁴⁷

I would argue that natural history, as it emerged from the work of Jonston and others in the seventeenth century, constituted a moment as significant for the development of art history as it was for the sciences, given Foucault's assessment of histories and signs—being one with things (i.e. organisms) and representations of them before the seventeenth century and separate from them after the seventeenth century. While Linnaeus and others continued with their projects of describing plants and animals, the name of the species became its central identifier and way with which to discuss the organism. Things and words increasingly “communicate in representation.” “What one is about to *say*,” increasingly marks the space of “*seeing*,” and codes it with words even before a visuality has been accounted for.⁴⁸ I would hope that my study begins to renew a space that the likes of Belon, Duret and Aldrovandi articulated, and offers a reading of the world itself in its visual becoming before words; before science and language coded images and organisms with specific structures of signs and meanings.

In her book *Mirror-Travels: Robert Smithson and History* (2004), Jennifer L. Roberts reads Robert Smithson's *Spiral Jetty* (1970) in light of its span of historical cues, from the Golden Spike (1869) to the earthwork's execution. Roberts argues that photographs reproduced of the *Jetty* in Gyorgy Kepes's book *Arts of the Environment* (1972), appeared with increased detail, “in a telescopic progression.”⁴⁹ The result, in the case of Smithson's photographs is that they abstract into a place and space that resists

⁴⁷ Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 129.

⁴⁸ Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 130.

⁴⁹ Jennifer L. Roberts, *Mirror-Travels: Robert Smithson and History* (New Haven: Yale University Press, 2004) 129.

location in a historical context. In this sense, they read more clearly as forms detached, even estranged from the larger work:

The *Jetty* lifts history into scales beyond the reach of historical narrative, insisting upon its material preservation of history but nevertheless refusing to allow it to be grasped...Although the *Jetty* is made entirely of material, peripheral details, it does not offer up those details as material for the construction of a new historical narrative. It offers no isolable points, parts, or products that can be selected for progressive narrative construction of a traditional (“trivial”) history. Rather the *Spiral Jetty* preserves peripheral histories by pulling them out of range of history itself. It redeems lost histories by incorporating them into the crystalline fractal of universal time, where they may resonate but do not, precisely, reside.⁵⁰

In Smithson’s spiral, or so Roberts suggests, “a Morellian progression” of images gives way to a cosmological view, the micro to the macro, allowing us to glimpse at once history as single moments and as accretions of disparate times.⁵¹ But just as we leave the detail of Smithson’s crystals, we find ourselves floating across the entire spiral, whether a few or hundreds of feet away. In these moments history slips away and leaves us briefly in the single moment, before it returns again to reassert itself. It is this reading of history that I find so illuminating in Roberts’s work, which allows us at once to deal with the image on its own terms, as part of specific events (here the joining of the Union Pacific and Central Pacific Railroads, an oil field and *Spiral Jetty*), an accumulation of them, and as things of the world that function very much outside of the world of history, in particular.⁵²

Some recent studies in art history have used works of modern art to resituate the contemporaneity of a past moment, or to enliven a discussion of a previous era.⁵³ These

⁵⁰ Roberts, 138.

⁵¹ Roberts, 130.

⁵² Roberts, 1, 114-39

⁵³ Charlotte Houghton, “This Was Tomorrow: Pieter Aertsen’s *Meat Stall* as Contemporary Art,” *The Art Bulletin* 86 (June 2004): 277-300; Jennifer L. Roberts, “Dreams of Transmission: Fred Tomaselli’s

temporal folds have emerged most recently in Roberts's work on Smithson, which makes a case for an elision of the eighteenth century and the post war decades, both eras grappling with issues of materiality (she also reads the eighteenth-century artist John Singleton Copley with as much rigor as the twentieth-century artist Robert Smithson and attends, in her work on the nineteenth century, to Audubon through the contemporary artist Fred Tomaselli). By looking closely and by considering the ways in which facts and forms both adhere to and elude history, we find ourselves struggling to internalize temporality, materiality and corporeality as experienced within linear time and, simultaneously, what lies beyond that space, what transcends it. In other words, how do we ultimately arrive at a working cosmology?

I hope that I engage here the kind of temporal oscillation between the synchronic and diachronic, a collapse of time and space that Roberts has achieved. But in a wider sense I hope that it sheds light on what it means to be human in an age of post-Darwinian evolutionary science and actively engaged in our own processes of becoming.⁵⁴ Readers will find that some areas of this project feel more like a study of a past, than an investigation of a contemporary moment. I envision this text as its own cabinet of curiosity, interspersing methods and histories, science with art, bodies with minds-at-large. On almost every page, I attempt to come to terms with what artists and naturalists have visually consumed, analyzed, and re-imagined in the realm of terra firma. These contemporary art images unfold a history of eighteenth- and nineteenth-century work in art and science, producing an ebb and flow of the diachronic and the synchronic. Taking

Bird Collages and American Ornithological Illustration," talk given May 5, 2007 at Princeton University's *American Views: A Symposium in Honor of Professor John Wilmerding*.

⁵⁴ See Roberts, *Mirror-Travels: Robert Smithson and History* and Roberts, "Copley's Cargo: Boy with a Squirrel and the Dilemma of Transit," *American Art* 21 no. 2 (Summer 2007): 20-41.

direction from Darwin, whose engagements with flora, fauna and geological formations ask us to look up and out as much as down and in, I hope to invoke the oscillation between the discrete and the aggregate, providing not so much an explanation for the project of contemporary artist-naturalists, but rather a balance of “thick” and “thin” description. I hope that this approach helps to explain the ways this mode of contemporary art-making functions as a place where the continuities and discontinuities of history, where the fold and the unfold become mutually constitutive, or at the very least, in conversation.

The artist Mark Dion has engaged directly with the history of natural history, attests to the importance of avoiding limits and embracing a wide scope in managing the visual possibilities of his own work:

I find that sense of fragmentation ripe with possibility. I view my work as an expansive practice which is unified by a commitment to a core of concerns, best characterized as an investigation of the representation of nature. This practice materializes through a diverse field of expression which include[s] sculpture, installation, photography, writing, teaching and lecturing, as well as practical collaborations with institutions such as zoos, wildlife conservation organizations, museums, public art venues, and community groups. Since most projects employ the same set of conceptual tools and challenges, I do not view the various possible approaches to a project or problem hierarchically.⁵⁵

Dion addresses his problems with a wide net, piecing together the theoretical and material fragments into a set of visual solutions; Odum might call his working method a systems problem. Dion, like the artists I examine, address similar problems with a range of solutions, but in a way that so often views the earth and the universe through a macroscopic lens. In spite of differences in style and display, the artists with whom I engage remain united in their shared concern with issues of observation and description,

⁵⁵ Thompson, *Becoming Animal: Contemporary Art in the Animal Kingdom*, 53.

classification and order, the histories of science and art, the subject and the object, the known and the sensed.

IV. Aby Warburg: Snake Charmer

In 1895, Aby Warburg traveled to the United States to visit relatives. Restless, he took a research trip to Washington, D.C. to visit the Smithsonian Institution, where he met the anthropologist Frank Cushing. He also traveled into the American southwest, to Arizona and New Mexico, where he visited Pueblo communities to observe their customs and rituals.⁵⁶ Warburg found the imagery, mythology and symbolism of the serpent in Pueblo culture of great interest, particularly in terms of what he termed its “demonic” and cosmological meaning, exemplified by a Native American drawing of a snake and a house, the symbolic microcosm of the universe.⁵⁷

While conducting his ethnographic work in the southwest, Warburg asked a number of Native Americans to draw pictures that represented their conception of the cosmos, and symbolically-rich phenomena of the material world, such as lightning. In one case he asked the priest and painter Cleo Jurino and his son, Anacieto Jurino, to draw their vision of the cosmos.⁵⁸ The image that resulted portrayed Jurino’s taming of a venomous snake in order to produce rain, something Warburg attributed to the priest’s

⁵⁶ *Aby Warburg: The Renewal of Pagan Antiquity: Contributions to the Cultural History of the European Renaissance*, introduction by Kurt W. Forster and translated by David Britt. (Los Angeles: the Getty Research Institute for the History of Art and the Humanities, 1999), 7. It should be noted that other texts have marked the year as 1896. See, for example, Aby Warburg, “A Lecture on Serpent Ritual,” *Journal of the Warburg Institute* 2, No. 4 (April 1939) [first delivered as a lecture on April 25, 1923]: 277. The footnote that provides this information was provided by an editor, W.F. Mainland, not Warburg himself. Of course, it may not be that the differing dates, 1895 or 1896 are conflicting at all, but rather that Warburg’s state was extended over several months, from the end of 1895 through the beginning of 1896. This article provides an account of Warburg’s time in the American southwest, an account delivered, initially, to a “non-professional audience” in German on April 25, 1923. It was a personal account that was not initially intended for wider public dissemination.

⁵⁷ Aby Warburg, “A Lecture on Serpent Ritual,” 277.

⁵⁸ Aby Warburg, “A Lecture on Serpent Ritual,” 280.

“magic arts.” Most notable for our purposes is Warburg’s observation that the drawing produced the charming of the demonic in a ritual practiced to produce order.⁵⁹

Though Warburg does at times conceptualize these magic arts as primitive antitheses to the Western rational mind, he also struggles with what would later be called the “Dialectic of Enlightenment,” that is the costs paid for the apparent benefits of modernity.⁶⁰ In his own cost analysis of modernity, Warburg observed:

How is mankind freeing itself from this coercive bond with a venomous reptile in which it sees the cause of things? Our technical age does not need the serpent to explain and control the lightning. The lightning no longer frightens the dwellers in our cities, nor do they long for a storm as the only hope of relief from drought. We have our water supply, and the lightning-snake is led down into the ground—by the lightning conductor. Scientific argument puts an end to the mythological explanation. We know that the snake is a reptile which must succumb if we set our minds to it. Where the technical explanation of cause and effect replaces the mythical imagination, man loses his primitive fears. But we should be loth [sic.] to decide whether this emancipation from the mythological view really helps mankind to find a fitting answer to the problems of existence.⁶¹

Warburg’s ethnographic work with the Pueblos of the American southwest revolves around the art historian’s attempts to make sense of persistent myth culture in an otherwise positivist, post-Enlightenment Western culture. Rather than viewing magic and myth as exclusively “primitive” or primordial remnants, Warburg saw their basic principles as a vital part of later historical and contemporary life and culture, a continuity represented by, among other things, Benjamin Franklin’s activity as a modern shaman

⁵⁹ Aby Warburg, “A Lecture on Serpent Ritual,” 286. Warburg says, “The amazing thing is that the Indians have a way of handling the most dangerous of reptiles, the rattle-snake, so that it can be tamed without violence and will join in the ceremonies for days on end with complete docility, or at least without showing its usual propensities unless it is specially provoked. Such a feat would inevitably end in disaster if attempted by Europeans.”

⁶⁰ Max Horkheimer and Theodor W. Adorno, *The Dialectic of Enlightenment: Philosophical Fragments*, edited by Gunzelin Schmid Noerr and translated by Edmund Jephcott. (Stanford: Stanford University Press, 2002 [1944]).

⁶¹ Aby Warburg, “A Lecture on Serpent Ritual,” 291.

who “stole the lightning.”⁶² In Warburg’s investigations of Native American rituals, then, we find him seeking to understand certain symbols and motifs of the past in relation to contemporary experience. And yet even his contemporary experience became a matter of recollection and reconstruction for Warburg, likely imbued in its recounting, almost three decades after his trip, with its own mythological underpinnings.

Issues of memory, ritual, fear, and attempts to control the irrational forces of nature (including, of course, human nature) also defined Warburg’s study of the Italian Renaissance in the field of art history. Attempting to arrive at a conception of “collective historical memory,” as the art historian Benjamin H.D. Buchloh has characterized it, Warburg extended his study of symbols like the snake to the other figures, like the classical motif of the swiftly moving nymph.⁶³ It is the nymph that allows us to understand the way in which his project operated. As Buchloh explains, Warburg’s method relied on an attempt to negotiate the space between memory, on the one hand, and trauma, on the other. I would argue that his attempt to resolve these points within his own period (the early twentieth century), makes Warburg’s project all the more applicable to the current study, since he sought to understand the past as it was received and “restored” to new life in the present.

The nymph was fundamental to Warburg’s concept of the *pathosformel*, or “pathos formula.” This concept addressed the recurrence of “motifs of gesture and bodily

⁶² Very often a cultural paradigms present themselves most clearly in children’s books. One in particular focuses on Benjamin Franklin as a hero for conquering nature through his experiments with a kite and key and development of the lightning rod. See Rosalyn Schanzer, *How Ben Franklin Stole the Lightning* (New York: Harper Collins, 2002). The example stands in clear distinction to the Pueblos who, rather than harnessing the lightning, used nature itself to persuade, rather than control.

⁶³ Benjamin Buchloh, “Gerhard Richter’s *Atlas*: The Anomic Archive,” *October* 88 (Spring 1999): 122.

expression” in new forms and contexts over time.⁶⁴ In the case of Italian Renaissance art, Warburg viewed the figures of fleet-footed young women with fluttering classical drapery as embodiments of this idea. He noticed that these nymph figures looked remarkably similar to the draped figures that appear in antique Dionysian scenes on vases, marble reliefs, and other works. Warburg viewed the reappearance of these figures in the Italian Renaissance period as evidence of a trauma. As Buchloh observes:

[It] is in the area of orgiastic mass seizure that one should look for the mint that stamps the expression of extreme emotional paroxysm on the memory with such intensity that the encryptions of that experience of suffering live on, an inheritance preserved in the memory.⁶⁵

In other words, the nymph, for Warburg, became a site where images offered evidence; nymphs, in this way, provided solace for an otherwise ineffable trauma, and pictures of the past became facts of the present. The nymph figures functioned for Warburg, I would argue, in a manner similar to the serpents he examined in his investigation of Pueblo rituals. They became focal points in his quest to, as Buchloch states, “construct...a model of historical memory and continuity of experience.”⁶⁶ The movements and gestures of the nymphs, like the serpents, provided a visible sign of emotional trauma, and his attempts to reckon with these figures and the construction of a “collective historical memory” runs through his *Mnemosyne*, or Atlas Project (1927-29), which I consider in greater detail below.

Warburg’s richly nuanced theories, along with his montage-like Atlas, provide a useful model for thinking about natural history in our own period, a view of the past as

⁶⁴ Buchloh, 122.

⁶⁵ Buchloh, 124. Warburg’s quote appears in the unpublished introduction to his *Mnemosyne Atlas*. Buchloh’s source: Aby Warburg, “Introduction to *Mnemosyne Atlas*,” Warburg Archive, No. 102.1.1.6; quoted in Matthew Rampley, “Mimesis and Modernity: Aby Warburg and Walter Benjamin,” unpublished manuscript.

⁶⁶ Buchloh, 124.

received through the present. It may be possible, in fact, to enliven this discussion by conceptualizing natural history as the nymph and the serpent, as a site of reckoning with memory and trauma. We can conceive of “memory” (in the Warburgian sense) as the past conceptualized in the present, but trauma becomes a concept a bit more difficult to elucidate. Is the trauma of natural history a product of its association with the colonialist mission? Is it the destruction of natural history, its own classification and appropriation to de-contextualized disciplines and collections? Or is this trauma something a bit more complex and subtle? I would argue that this trauma does indeed operate in the space I have described. But I would also point out that it exists in, among many things, the consolidation of living beings into the category of “life,” the relegation of the field of nature to the laboratory of science, and, finally, the extinguishing of distance.⁶⁷ Before I extrapolate this concept of distance, which I see as a descriptor of Warburg’s notion of “remoteness,” I think it would be useful to consider Warburg’s Atlas Project in some detail.⁶⁸

Warburg’s *Mnemosyne* consists of a series of visual atlases, to which the art historian affixed photographic reproductions of paintings and sculptures, diagrams, and

⁶⁷ Michael Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 66, 127-29, 150, 160, 209, 217, 232, 238, 244, 252, 256-57, 265, 268-69, 272-73. A great number of passages illuminate Foucault’s distinction between living beings and life, which parallels his distinction between natural history and biology. But two passages in particular make this distinction directly and can be found on pages 127-28 and 160, respectively. “Historians want to write histories of biology in the eighteenth century; but they do not realize that biology did not exist then, and that the pattern of knowledge that has been familiar to use for a hundred and fifty years is not valid for that previous period. And that, if biology was unknown, there was a very simple reason for it: that life itself did not exist. All that existed was living beings, which were viewed through a grid of knowledge constituted by *natural history*,” and “This, no doubt, is why natural history, in the Classical period, cannot be established as biology. Up to the end of the eighteenth century, in fact, life does not exist: only living beings.” The Foucault passage from pages 127-28 is also quoted and expanded upon in Richard Doyle, *On Beyond Living: Rhetorical Transformations of the Life Sciences* (Stanford: Stanford University Press, 1997), 10-13. Doyle argues that it was the reorganization of living beings within the object matrix of the life sciences that allowed for such modern fields of study as molecular biology.

⁶⁸ Warburg, “A Lecture on Serpent Ritual,” 292.

contemporary images. In Greek mythology *Mnemosyne* was the goddess of memory, the daughter of the Earth goddess Gaia, and in English *Mnemosyne* means “remembrance” and “memory.” In his *Intellectual Biography* of Warburg, the art historian Ernst Gombrich argues that the project:

...shows the memories of a scholar’s life as if they were woven into a dream. To those who can read its mute language and expand its references it has indeed the intensity of a dream; its affinities are less with works of history than with certain types of poetry, not unknown to the twentieth century, where hosts of historical or literary allusions hide and reveal layers upon layers of private meanings.⁶⁹

Gombrich characterized Warburg’s arrangements of unrelated elements as displaying sequences of juxtapositions, a pattern of transparency and occlusion that Gombrich suggests lacks clear points of continuity. But as the art historian Charlotte Schoell-Glass has explained, the scholar’s theoretical collage indeed provided many points of connection, offering multiple visual and textual commentaries, perhaps a series of revelations through analogy.⁷⁰ Warburg’s tableaux, then, operate as planes of negotiation, in which what is here, there and in between provides a continual field of presence, direction and redirection, producing relationships between images that are more fluid than flux.⁷¹

Warburg places his own serpents and nymphs in his *Mnemosyne*, and included new ones as well, like the famous classical statute of the *Laocoön*, which had been rediscovered during the Italian Renaissance and became a talisman of classical culture for

⁶⁹ Ernst Gombrich, *Aby Warburg: An Intellectual Biography* (London: The Warburg Institute, 1970), 302.

⁷⁰ Charlotte Schoell-Glass, “‘Serious Issues’: The Last Plates of Warburg’s Picture Atlas *Mnemosyne*,” *Art History as Cultural History: Warburg’s Projects*, edited by Richard Woodfield (Amsterdam: G+B Arts International, 2004), 194.

⁷¹ Gregory Volk, “Transportive Visions,” *Art in American* 87 (July 1999): 78-80. Brooklyn-based art critic and independent curator Gregory Volk has also viewed Tomaselli’s paintings through the lens of “negotiations.”

centuries. The Trojan priest *Laocoön* appears at the center of this sculpture group, writhing against the aggressions of a gigantic serpent who has wound himself around the priest's legs and arms.⁷² His sons stand astride this central figure, engaged in their own battle to free themselves from the ever-constricting serpent. At the center of Warburg's sixth panel, we see a photographic reproduction of the *Laocoön* group (**Fig. Intro. 4**). Why was this particular statue of such interest to Warburg? I would argue that this has to do with this sense of the orgiastic, contained within the notion of the *pathosformel*, which again is crucial to Warburg's quest to establish a "collective historical memory." Like the nymph in perpetual motion, *Laocoön*'s demon serpent is akin to the serpent of the Pueblos that needs to be tamed or charmed; both for Warburg operate as markers of unrestrained chaos. But they also suggest, conversely, the potential to give a certain order to the chaos, to tame the trauma, to bring it a degree of charm.

The art historian Horst Bredekamp observes that serpentine statues like the *Laocoön* had a particular function within the early modern *Kunstammern*. In the case of the sixteenth- and early seventeenth-century *Kunstammer* of Rudolf II (1583-1612), in Prague, the sculpture imbued the objects it surrounded, as well as the viewer, with movement and life.⁷³ With the addition of ancient sculptures like the *Laocoön*, and even later reproductions of bodies in motion, as the image of a woman golfing, Warburg's Atlas Project also manifests itself as an installation of movement (**Fig. Intro. 5**).

Photographic reproductions of the *Laocoön* and "modern" figures like the golfer imbued

⁷² J.J. Pollitt, *Art in the Hellenistic Age* (Cambridge: Cambridge University Press, 1986), 121-22. Pollitt explains that it was *Laocoön* who tried to warn the Trojans not to bring the Trojan horse into Troy, a story passed down in Virgil's *Aeneid* 2.199-277 and Greek poetry, namely Arktinos's *Ilious Persis* (Sack of Troy), he says.

⁷³ Horst Bredekamp, *The Lure of Antiquity and the Cult of the Machine: The Kunstammer and the Evolution of Nature, Art and Technology* (Princeton: Markus Wiener Publishers, 1995), 48.

the images surrounding them with kinetic energy through their own suggestive movements. Placed within the context of his working library, Warburg's screens enliven the books we find closed on his shelves, provide new windows onto the world, so to speak (**Fig. Intro. 6**).⁷⁴ Warburg's space of creative formulation, then, operates as an amalgam of screens and shelves, collages and books, reproductions and references.

The *Laocoön* sculpture group operated as a device of movement, granting the effects of animation to otherwise inanimate and stilled objects in both the Prague *Kunstammer* and Warburg's *Mnemosyne*. In other *Kunstammern*, however, sculptures of plants and animals, not of mythological figures, animated the objects surrounding it. These figures were often arranged, as Bredekamp explains, in small boxes that could be shaken, activating mechanical apparati internal and external to the reproduced fauna (**Fig. Intro. 7**).⁷⁵ The creatures then, as we see with a box from the second half of the sixteenth century, "appear to move, as though twitching and squirming."⁷⁶ Their insertion into the *Kunstammer* operated as a way to activate otherwise inanimate objects. But of course this inflection went both ways—at times it was a sculpture like the *Laocoön* that conferred movement to a taxidermic animal. In the *Kunstammer*, then, nature and culture, art and technology, operated along a continuum, imparting movement between images, between screens (as was the case with Warburg) and across the space of a room. The effectiveness of the *Kunstammer*, its ability to produce wonder, relied very much on the display of an abundant variation of things able to interact and enliven one another, to ultimately represent life.

⁷⁴ Admittedly the stacks are indeed open today at Warburg's Library, but here I am referring to the actual books themselves that read only as a series of bindings on the shelf until they are taken off the shelf and awakened, enlivened and activated in our opening of them.

⁷⁵ Bredekamp, 46-47.

⁷⁶ Bredekamp, 48.

There is a way in which the visual accumulations of Warburg's project mirror those found in the displays and classifications of the naturalist who has collecting at the center of his project. And yet the artist finds himself floating between the ideals of the Renaissance *Kunstammer*, where things living and inanimate were piled one on top of the other in an effort to create a room of Wonder, and the increased rationality of later curiosity cabinets, not to mention the discrete museums of natural history and art of the nineteenth century. *Kunstammern* prized metaphor and analogy, rather than the ways in which things should be separated out into neat tables of difference.⁷⁷ Admittedly, this strategy seems rather outmoded today as likeness was circumscribed by general concepts, such as animals with four feet or those that eat fruit. This system of sympathies today garners thoughts of menageries, rather than ordered museums. It can be difficult to appreciate the ways in which our own taxonomical systems, largely founded on Linnaeus and expanded by Cuvier's work on internal structures, produce their own sense of marvel, not merely rational tables ordered around organisms' differences. We should remember that both of these organizing strategies both contain within them their own degrees of likeness and difference, order and chaos, rationality and marvel.⁷⁸ While Linnaeus did in fact bring rationality, clarity and distinction to the natural world with his sexual and binomial system of nomenclature, he retained many of the visual traditions of

⁷⁷ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1970). Foucault often used the term "antipathy" as a synonym for difference, and as the antonym of "sympathy." On antipathy see Foucault, *The Order of Things*, 24-25, 40. Foucault marked "tables" as the visual site on which difference was linguistically marked out. On Foucault's discussion of the table see Foucault, *The Order of Things*, xvii, xx, 73-75, 131, 152, 154, 156, 160, 185, 189, 218, 220-21, 225, 230-32, 239, 243, 251, 264, 271, 273.

⁷⁸ Stephen Hawking, *A Brief History of Time* (New York: Bantam Books, 1998 [1988]). Hawking suggests alternatives to linear time, temporal possibilities for our conceptions of space and place, by investigating how we read order from and into the universe through our conceptions of time.

the maximalist *Kunstkammer* in his daily practice, as we will see come to see in section four of this introduction.

While I am less anxious to consider Warburg as a naturalist than as an ethnographer, his project is certainly in the spirit of Linnaeus, who sought, as did many other naturalists, to arrive at a view of the world, a sense of it all. Today we call scientists who attempt to understand our place in our new frontier—outer space—cosmologists. And I would argue that few people have demonstrated a richer grasp of the potential of art history to contribute to these cosmological formulations, to arrive at a working cosmos, than Aby Warburg. I would further argue that his view of a “collective historical memory” was just that, a cosmos; the Atlas Project, in this sense, operates as a microcosm of this endeavor.

The reader will likely not find it immediately clear why the “cosmos” proves so important to a study of natural history in contemporary art. In defense, I would argue that having looked rather closely at the projects of the five main artists in this dissertation—Mark Dion, Walton Ford, Roxy Paine, Fred Tomaselli, Cy Twombly—I have found certain correspondences in their transformations of natural history; these artists are looking back to the nymphs and serpents that permeate natural history, but their doing so presents us with a new way to view the present through the past. In doing so these artists have provided us, whether intentionally or not, with visual maps that open up spaces in which we can envision and begin to negotiate both our own individual cosmologies and those of a more collective orientation.

Warburg, for his part, was deeply invested in working out a cosmology, a metaphysics arrived at through the space of art history.⁷⁹ This fact may strike the reader as particularly odd because we do not typically think of art historians as regularly engaged in constructing visions of the universe. This agenda has generally been left to the

⁷⁹ It should be noted that Warburg has been thought of at least as much as an anthropologist and/or ethnographer than an art historian. See, for example, Kurt W. Forster, "Aby Warburg: His Study of Ritual and Art on Two Continents," translated by David Britt *October* 77 (Summer 1996): 17. (This fact is particularly intriguing considering Mark Dion, an artist central to this project, has himself been considered an "artist as ethnographer." See Alex Coles, "Critical Strategies of Fictional Address: Field Work and the Natural History Museum," *de-, dis-, ex-*. Issue on *The Optic of Walter Benjamin* Vol. 3 (London: Black Dog Publishing Limited, 1999), 38.) On page 16 Forster also argues that Warburg was, ultimately, "working toward a psychohistorical interpretation of human destiny based upon the corpus of documentary evidence supplied by art." And on pages 23-24 Forster explains that Warburg's cosmology, which very much operated as a conceptual space, was itself manifested in the real physical space of his, significantly oval, library. The oval of the library's reading room marked, for Warburg, Johannes Kepler's discovery, according to Gertrud Bing, that the orbits of planets were not, in fact, circular. Kepler's discovery, Bing argues, marked the opening up by Kepler of a mental space, something Warburg constantly worked toward. Further evidence for Warburg seeking a cosmology derives from a variety of sources. See *Aby Warburg: The Renewal of Pagan Antiquity: Contributions to the Cultural History of the European Renaissance*, introduction by Kurt W. Forster and translated by David Britt. (Los Angeles: the Getty Research Institute for the History of Art and the Humanities, 1999, 57. Forster states: "In his investigations, Warburg's understanding pivots upon the historical moment: the point at which particularities hold each other in balance, and the flux of time is momentarily halted. Both in its unique conditioning and in the most general aspects, every historical moment appears to him under a particular star. Warburg's instinct for the auguries of a historical situation led him on to consider the astrological beliefs of the recent and distant past. The curious congruence, in his case, between chosen objects of study and profound personal experience, goes far beyond the anecdotal level: to Warburg, this very congruence is in the shape of historical experience. Erwin Panofsky, a Hamburg colleague, prefaced his obituary of Warburg by reading the auguries of Warburg's professional life in the words of Leonardo: "'No turning back for one who is bound to a star.' For never, perhaps, have the tracks of a scholarly life, though they seemed to lead onto not merely untrodden but forbidden ground, been so rigorously guided by an ineluctable and immutable force."

Warburg's destiny thus acquires a definition and purpose deduced from the specific circumstances of his life. But, with this notion, Panofsky also touches on a sore point: for what ailed Warburg (in the most literal sense of the word) was that in every historical object that he examined he ultimately sought to read the workings of fate." Here the motif of the star provides in a most literal sense Warburg's looking to the cosmos for an answer to life's biggest question, accessed through the space of history. Arriving at a cosmology for Warburg could be equated with seeking purpose. I am not entirely sure that Warburg sought to read "fate," but he certainly struggled to understand those things we could not be controlled (i.e. events long past) within the space of that which we can control, at least to some degree (i.e. the contemporary moment); See also Matthew Rampley, "Archives of Memory: Walter Benjamin's Arcades Project and Aby Warburg's Mnemosyne Atlas," in *de-, dis-, ex-*. Issue on *The Optic of Walter Benjamin*, Vol. 3 (London: Black Dog Publishing, 1999). Rampley observes that on one of the plates for his Atlas Project, Warburg includes "a diagram of the solar system from Kepler's cosmological text *Mysterium Cosmographicum* of 1596, and also an image of Mars from a medieval astrological manuscript in Tübingen." While this is itself is not a cosmology, it at least offers a visual space of imagining the universe. It is also important to remember that in general Warburg's search for a cosmology revolved around his attention to origins, which relates to his notion of the *pathosformel*, which I address in the body of the text. Amusingly, too, it should be noted that the very name *Mnemosyne* conjures up Greek origin myths, most particularly because *Mnemosyne*, or Memory, is the daughter of Gaia, the Earth.

astronomers, and in an ever earlier age to astrologers. Some might construe it as a rather mystical project for the originator of a library and study center—The Warburg Institute—that has come to be identified by some as a place of art historical conservatism. As the Swiss curator Kurt W. Forster has said:

It is one of those curious contradictions and reversals that happen in the scholarly world—the destiny of methodologies, as it were—that, in the minds of American art historians in particular, Warburg’s name and that of his eponymous institute have come to be associated with iconographic nitpicking and anemic typological speculations. Warburg’s own infirmity—both metaphorical and psychological—was if anything the very reverse of this.⁸⁰

The Italian Renaissance encompassed Warburg’s main area of focus, though his work extends well beyond its temporal scope. He leads us from the Italian Renaissance into antiquity, back into his own moment of scholarship. He negotiated time and space to arrive at his cosmological position. In doing so his work opens up a space for reading the transformations of natural history in the contemporary period.

What Warburg achieved in the Atlas Project was a slowing down of the present moment by inviting observers to consider the past, the distant past, and the present within the space of a single slide, or across the space of multiple canvases. His visual arrangements effectively cancel out the causality of Cartesian thinking, producing associations that operate through likeness, or what Foucault would call “sympathy,”

⁸⁰ Kurt W. Forster, “Aby Warburg: His Study of Ritual and Art on Two Continents,” translated by David Britt *October* 77 (Summer 1996): 18. I think it is worth noting that those “American art historians” more familiar with Warburg’s project and the Institute do indeed appreciate the forward-thinking nature of his life’s work and his Library. And there are many excellent scholars on his work, like that conducted by Elizabeth Sears, for instance. But I do think Forster’s comment has merit as it speaks to Warburg’s neglect by Americanists and art historians of contemporary art alike, who have long preferred to reference the work of Walter Benjamin. There are of course obvious examples of those who have attended to Warburg, and they have been cited here, namely Benjamin Buchloh and Hal Foster. And one must also include, for example, the work of Elizabeth Sears. See

within the realm of natural history.⁸¹ But not every relationship between images is obvious, and without an accompanying explanatory text, we are often left to read Warburg's project as we would a work of visual art. Warburg's Atlas project mediates what is here, there and in between to provide a continual field of presence, direction and redirection.

Gombrich read Warburg's Atlas as an "abortive project," annotations of a larger and more diachronic research endeavor, that was unfinished and yet to be explained in textual form.⁸² And yet his canvases also convey the ways in which the scholar becomes not merely the investigative reporter, but the generator of creative ideas and spaces. It may be possible to consider Warburg's atlases as works of art that, in and of themselves that could be read synchronically, in different directions and without the illuminations of any text. These carefully crafted slides force multiple perspectives, temporal and thematic drifts across the space of a room and one's mind. Indeed, I think it is clear that Warburg's visual notes amount to a collage of associations, a shorthand on a single panel that taken together constitute a larger room more readily identified in the *Kunstkammer*, at least one flattened out through the reproductive technologies of photography.

In this way Warburg achieved something rather unexpected—a sustained contemplation of the past through a present moment; unexpected in the way that he arrives at this process through the medium of the photograph, which itself contributes to the destruction of memory, the companion of trauma in his collective historical memory project. Near the end of his essay on the serpent rituals of the American southwest, Warburg reveals the core of his project—to unearth "the remoteness needed for

⁸¹ Foucault, *The Order of Things*, 23-28, 40.

⁸² Ernst Gombrich, *Aby Warburg: An Intellectual Biography*, 59.

contemplation.”⁸³ I have called this remoteness distance. It is in the visual negations of his memory project that Warburg presses for a reanimation, of magic, of aura, of myth; call it what you will, but all of these things speak to his production of memory in the face of its destruction, through the photograph and other increasingly modern horrors of visualization. It is the triumph of Warburg, not his failure, that his project used the photograph to achieve this. His operation was like that of the Pueblo priest who negotiated nature through the snake to harness the lightning, rather than to steal it, per se.

In his memory project, an endeavor that was likely as personal as it was a collective, Warburg struggles with the past in the present, myth in the face of reason, and memory with the awareness of an increasingly technological future. Warburg’s project, guided by an associative model, continues to challenge staid patterns of thinking about objects and images and their relationship to one another. The artists in my own research endeavor rely on a similar associative model to reckon with history, memories and the construction of new ways of seeing. Warburg’s Atlas disturbed patterns of positivist thinking, leaving room open for magic, and for us to contemplate our place in the order of things. Through his *Mnemosyne* and the Atlas of his mind Warburg finds himself leading the way in the negotiations of history, memory and presentness. It would not be inappropriate, then, to view Aby Warburg as a guide for our own observations and recollections of natural history; the snake charmer who tames the beasts of our own evolutionary pasts.

⁸³ Aby Warburg, “A Lecture on Serpent Ritual,” 292.

V. Transforming Visions/Envisioning Transformations

Coming to terms with the intentions of early naturalists may prove as difficult to determine as an artist's artistic objectives. What motivated them to leave the comfort of home, to embark on distant voyages that almost always posed risks that included capsizing, drowning, scurvy and death via a range of tropical diseases, not to mention the more mundane seasickness, and general discomfort with the conditions of one's travel? Taking the time to consider the various factors that motivated these men, and to understand what they gained from their travel, exploration and investigations may be a key to understanding what "transformations of natural history" mean within contemporary American art. The works of artists like Dion, Ford, Paine, Smithson, Tomaselli and Twombly in the latter part of the twentieth century operate on at least two levels. On the one hand, these artists almost literally take up the motifs and theoretical underpinnings of eighteenth and nineteenth-century naturalists, incorporating naturalist *wunder* into their work. On the other hand, we can see that many of these works operate as visionary illuminations of an era that has often deemed obsolete. Not only do these artists allow us to peer into an era we can only recollect in our dreams, but they suggest their own transformative potential as individuals living on a planet webbed in a complexity of post-Darwinian naturalist traditions.

The historian Dorinda Outram has noted that for Cuvier, for example, the explorations of natural history provided respite from the "pressures from powerful others," and gave "the asocial worlds of nature a powerful attraction." Further, Cuvier may have enjoyed the opportunities that sciences allowed for him "to exercise power on

the peripheries, in the outlying provinces of the Empire, in the ...Academy.”⁸⁴ For Cuvier, natural history operated less as a place in which colonialist imperatives were asserted than as a theoretical zone where the scientist’s own hopes for scientific renown could be realized, as well as his intellectual curiosities satisfied.

Carolus Linnaeus, for his part, became increasingly interested in plants as a commodity that could make Sweden economically competitive within the sphere of rising nation-states in Western Europe. The historian of science Lisbet Koerner explains this aspect of the naturalist’s work in her book *Linnaeus: Nature and Nation* (1999). Linnaeus was known to send his students on botanical excursions as far away as the Americas in an effort to locate specimens that could be grown in Sweden and would provide the otherwise isolated Scandinavian country with an export product of high demand. It was in this nationalistic, economically utilitarian light that Linnaeus sought to instruct his countrymen in his *Philosophia botanica*, with what Koerner describes as “a series of one-page instructions on how to set up an herbarium, organize an excursion, plant a garden, and embark on a voyage of discovery.”⁸⁵ In this way, the naturalist concerned himself with the loss of plant knowledge, and its possible repercussions for a country vying for self-sufficiency through the exploitation of exotic and imported botanicals as Sweden’s new natural resources. “Our own economy is nothing else but knowledge about nature adapted to man’s needs,” he said.⁸⁶ Linnaeus’s assertion begs the question of just what constitutes “man’s needs.” Koerner argues convincingly that Linnaeus’s naturalist

⁸⁴ Dorinda Outram, *Georges Cuvier: Vocation, Science and Authority in Post-Revolutionary France* (Manchester, England and Dover, New Hampshire: Manchester University Press, 1984), 8.

⁸⁵ Koerner, *Linnaeus: Nature and Nation*, 41.

⁸⁶ Koerner, 104.

endeavors centered on this effort to bring wealth and political clout to Sweden, but there are aspects of Linnaeus's naturalist project that speak to other interests.

Although Linnaeus's work illuminates the economics of the naturalist project, it also proposes a more imaginative engagement with the natural world. Linnaeus's fantastic visions for plants were ripe with romantic overtones, and were concerned not only with establishing an intellectual understanding of them. Just as Warburg surrounded himself with his collaged Atlas, Linnaeus retained fantastic visions for plants and the imaginatively rich journeys that encounters with them could present. Koerner details the ways in which even Linnaeus's private residence was a microcosm of the natural world. Koerner's lengthy description of Linnaeus's house, a veritable shaman's den, is worth consulting in its accumulation of visual materials, illuminating the ways Warburg's *Mnemosyne* reiterates the layering project of the naturalist and the attention to a abundance, variation and display. For the Swedish naturalist, the botanical and zoological worlds offered a world of *wunder*, which as Koerner observes, he erected in his private residence as a microcosm of the natural world:

Parrots and monkeys played among stuffed animals, potted plants, insect specimens, mineral samples, scientific instruments, and herbaria sheets. The walls...disappeared behind tangled branches—some thirty species of songbirds nested in them...botanic prints as wallpaper...on the walls framed portrait engravings of botanists, sheets of paper with botanic annotations, and pressed plants...Shells and conches dangled from iron nails. Next to family portraits and plaster medallions of royalty, he arranged likenesses of guenon monkeys, a sketch of his tame raccoon, a drawing of a whale captured off Norway in 1719...Over doorways Linnaeus penciled Latin mottoes...on top of cabinets, he balanced pieces of china decorated with his own heraldic flower, *Linnaea borealis*...Over the...floors, he strewed his botanic manuscripts, which blinded nightingales splattered with droppings while raccoons played and clawed among them. He clad the ceilings in birdskins and hung his Lapp costume on the wall 'together with other curiosities.'⁸⁷

⁸⁷ Koerner, 110-111.

It would be difficult not to marvel at the rich description of curiosities displayed in Linnaeus's home. The abundance of material artifacts is nothing less than astonishing. The naturalist's home takes on the feel of a montage in a layering of one material form upon another—art and animals, pottery and plants, fossils and souvenirs. His quest to acquire, identify and classify nature becomes lost amidst a piling up of nature and art that was so dense that it must have had its own transformative effects on the naturalist. Establishing any semblance of order and rationality, according to post-Enlightenment ideals, would be difficult to achieve in Linnaeus's house of *wunder*. But Linnaeus embraced, at least while he was at home, a certain disordering of nature that spoke to his own aesthetic inclinations toward variety and provided a sense of being one with his own curiosities. The distance from Linnaeus to Warburg, then, is not very far in light of the naturalist's and the art historian's tableaux of materiality and knowledge.

Charles Darwin, too, tended to become enraptured by nature's abundance and variety, as evidence from his first encounter with tropical vegetation on January 23, 1832 in St. Jago:

Tamarinds, Bananas and Palms were flourishing at my feet. It is not only the gracefulness of their forms or the novel richness of their colours, it is the numberless and confusing associations that rush together on the mind, and produce the effect. I returned to the shore, treading on Volcanic rocks, hearing the notes of unknown birds, and seeing new insects fluttering about still newer flowers. It has been for me a glorious day, like giving to a blind man eyes. — he is overwhelmed with what he sees and cannot justly comprehend it.⁸⁸

Since he was financially independent, Darwin did not necessarily experience natural history as a reprieve from the pressures of political and educational power structures, as did Cuvier, or find himself interested in the economy of natural history, like Linnaeus.

⁸⁸ Charles Darwin, *Charles Darwin's Beagle Diary*, edited by R. D. Keynes (Cambridge: Cambridge University Press, 2001), 23.

Darwin found his way to the botany of natural history through his interests in entomology and geology, and to the *Beagle* by his chance appointment as the ship captain's companion. He apparently shared with Linnaeus the full range of the naturalist's vision, a maximalist lens which allowed for taking it all in at once, for appreciating the grand scale of the world, while still attending to the intricate material structures (including life) that it contained. Writing in his journal from Bahia, February 23-25, 1832, Darwin anticipated the pleasures of calling up these tropical visions at a future time:

Excepting when in the midst of tropical scenery, my greatest share of pleasure is in anticipating a future time when I shall be able to look back on past events; and the consciousness that this prospect is so distant never fails to be painful. To enjoy the soft & delicious evenings of the Tropic; to gaze at the bright band of Stars which stretches from Orion to the Southern Cross, and to enjoy such pleasures in quiet solitude, leaves an impression which a few years will not destroy.⁸⁹

Not long after his *Beagle* tour, Darwin found work and repose at his home in Down, England where he would reside for the rest of his life. Holed up at a distance remote enough from London to discourage visits from unannounced guests, Darwin, like Linnaeus, was able to devote his attention to the diaries and sketches from his voyage, the shipments of specimens and reports from other scientists, and his continued observations and experiments with plants and animals to construct the main body of work for which he would long be known.

This distance of time and space presented challenges when he set out to reconstruct his experiences years after the fact. Upon his return he expressed the frustration he felt, as he attempted to call up his original observations as he had first

⁸⁹ Darwin, *Charles Darwin's Beagle Diary*, edited by R. D. Keynes (Cambridge: Cambridge University Press, 2001), 41.

perceived them, at least once calling the task “absolutely impossible.”⁹⁰ Darwin’s difficulty in recalling his trip and describing the event years later speaks to the distance field researchers experience in accounting for the event as it occurred and their ability to recount it through memory at a later date. But there is another element at work here: As a naturalist, Darwin would have felt the need to report his findings to a scientific community, but the emotion attached to his need to write it all down mirrors, oddly enough, the impulse for writing “trip reports.” These texts offer a glimpse of a psychedelic or mind-altering experience as recorded, most commonly, *after* the trip. Darwin’s writings share something in common with trip reports, so compellingly investigated by the scholar Richard M. Doyle in his forthcoming book *The Ecodealic Hypothesis: Plants, Rhetoric and the Evolution of the Noösphere*.⁹¹ In his rhetorical epic on ecodelics (i.e. psychedelics), evolutionary thinking and the noösphere, Doyle examines those who assay mind-altering plants and their need to report their trips on paper. He argues that ecstatic experience can be found in the very form of rhetorical writing, and that to write a “trip report” is both a part of the actual psychedelic experience, but also a way to extend the experience into a future moment. Those writing trip reports often express their frustration at being unable to recapture the authentic psychedelic moment that has passed.⁹² It is this distance between the actual event, the trip, and the trip as recounted in writing that similarly quite frustrated Darwin. And yet Darwin continued his attempts to get the authenticity of his observations, the correctness

⁹⁰ Charles Darwin, *The Autobiography of Charles Darwin*, 1728.

⁹¹ Richard M. Doyle, *The Ecodealic Hypothesis: Plants, Rhetoric and the Evolution of the Noosphere* (Forthcoming Seattle, WA: University of Washington Press).

⁹² The frustration of expressing the ineffable experience has been noted by many, including the psychiatrist Sidney Cohen, who studied the effects of LSD on subjects before it was illegal in the United States. See Sidney Cohen, *The Beyond Within: The LSD Story*, with a foreword by Gardner Murphy (New York: Atheneum, 1965), 3-4.

of his scientific findings and the emotion the experience of his trip aroused, down on paper:

Nobody but a person fond of Natural History can imagine the pleasure of strolling under cocoa-nuts in a thicket of bananas and coffee-plants, and an endless number of wild flowers...It is utterly useless to say anything about the scenery; it would be as profitable to explain to a blind man colours, as to a person who has not been out of Europe, the total dissimilarity of a tropical view. Whenever I enjoy anything, I always either look forward to writing it down, either in my log-book...or in a letter; so you must excuse my raptures, and those raptures badly expressed.⁹³

The log-book or the letter served as Darwin's own version of the trip report that was inspired by his *Beagle* wanderings. Darwin as physical wanderer often took on the gaze of the transcendental wonderer. "Whilst standing in the midst of the grandeur of a Brazilian rain forest," he wrote that it was "not possible to give an adequate idea of the higher feelings of wonder, admiration, and devotion which fill and elevate the mind."⁹⁴ He faced the same difficulty of the rhetor in conveying the sublimity of his feelings, like those who have embarked on their own voyages of the mind with ecodelics.

My comparison of Darwin's need to report on his trips with "trip reporters" offers the reader an unexpected leap from the world of natural history and early evolutionary theory to the world of psychedelics. But I would argue that this comparison is, as we will see throughout my dissertation, fundamental to my arguments about classification, control, and boundaries. Several of the artists on whom I focus engage psychotropics and their discourses on their way to investigating the role of taxonomical systems. What their works illuminate, very often, is the way in which these knowledge systems both construct understanding, but also exert forces of control that get taken up in the modern era by government agencies like the Drug Enforcement Administration (DEA). In fact the DEA

⁹³ Charles Darwin, *The Autobiography of Charles Darwin*, 1679.

⁹⁴ Charles Darwin, *The Autobiography of Charles Darwin*, 1627.

still uses Linnaeus's binomial system of classification to identify what plants are appropriate for consumption and what plants warrant prosecution when used.

This entwinement of the naturalist and psychedelic projects has indeed been a longstanding one. Fred Tomaselli acknowledges his own entrance into the world of plant identification in the process of growing marijuana:

First I started growing pot. Then I started growing tomatoes to hide the pot. Then I started getting into all these cool vegetables camouflaging the pot. Then I started growing flowers.⁹⁵

Projects like Tomaselli's were not viewed so subversively in the years that preceded Nixon's establishment of the DEA in 1973 and Nancy Reagan's "Just Say No" drug campaigns of the 1980s. Historically, for instance, Erasmus Darwin, Charles's grandfather, himself grew England's first *Cannabis indica* plant, along with Royal Society president Sir Joseph Banks.⁹⁶ Erasmus Darwin proclaimed upon reading Charles's *On the Origin of Species* (1859) that he felt like he was "getting into a new world."⁹⁷ Linnaeus, too, was aware of the ability of plants not only to provide visions via their observation, but also through their consumption. Koerner explains that "Linnaeus

⁹⁵ Dorothy Spears, "Where Art Imitates Gardening (And Vice Versa)," *The New York Times* (8 Oct. 2006): AR 29. See also Moira Jeffrey, "The Natural Thing to Do," *The Herald* (30 July 2004), where Tomaselli says: "It seems like all my hobbies eventually got into my work I guess. Getting high and birdwatching, going out kayaking and camping." See also: Susan Emmerling, "Artist's Little Helper," *Salon.com* (29 Oct. 1999), where Tomaselli connects the hallucinogenic experience with the ecology movement. "He also credits the ritual dropping of acid in the woods, handed down from one hippie to another and culminating in the requisite semi-mystical 'oh, wow man, now I get it' experience, with the founding of the ecology movement and the eco-tourism industry." Tomaselli is aware of the link between mind-altering drugs and our current economic system, calling "alcohol, tobacco and stimulants...the drugs of capitalism." He calls "coffee and cigarettes" the dominant drug of choice when painting and "peyote or acid" less desirable in attempting to "create anything of lasting beauty." Though, he readily admits that his past partaking of these substances heavily informs his painting. Emmerling also observes Tomaselli's fascinating connection between cuisine and drug consumption observing that "this return to nature and the current obsession with gourmet foods, wines and cigars dates back to the hippie quest for good pot."

⁹⁶ Timothy Leary, *Flashbacks: A Personal and Cultural History of an Era*, with a Foreword by William S. Burroughs (New York: Putnam, 1983).

⁹⁷ Erasmus Darwin, letter to Charles Darwin (23 Nov. 1859), *The Autobiography of Charles Darwin*, 1747; Charles Darwin, *On the Origin of Species*, with an Introduction by Ernst Mayr (Cambridge: Harvard University Press, 1964 [1859]).

had endorsed marihuana, ‘which has the same effect as aquavit, chasing away melancholy’ and making you ‘happy and funny.’”⁹⁸ Plant-induced transformations, then, could be as much about a subtle shift in mood than by occupying a sublime and powerful visionary effect on the viewer and/or taker. Charles Darwin was himself attuned to the potentially subtle effects of plants, and their own capacity to be transformed:

In the summer of 1860 I was idling and resting near Hartfield, where two species of [Sundew] abound; and I noticed that numerous insects had been entrapped by the leaves. I carried home some plants, and on giving them insects saw the movements of the tentacles, and this made me think it probably that the insect were caught for some special purpose. Fortunately a crucial test occurred to me, that of placing a large number of leaves in various nitrogenous and non-nitrogenous fluids of equal density; and soon as I found that the former along excited energetic movements, it was obvious that there was a fine new field for investigation.⁹⁹

Darwin fashioned himself his own botanical shaman, guiding the Sundew to an “excited” state induced by nitrogenous alkaloids. His experiment and subsequent observations illuminated the capacity of plants to become chemically inflected. His reports on these experiments seem calculated in a way that his own trip reports do not.

Darwin may have struggled to achieve what Doyle would call “eloquence” in his trip reports, but the naturalist’s observations provided a luminosity of vision that regularly transported him, if not others. “The glories of the vegetation of the Tropics rise before my mind at the present time more vividly than anything else; though the sense of sublimity, which the great deserts of Patagonia and the forest-clad mountains of Tierra del Fuego excited in me, has left an indelible impression on my mind,” Darwin mused.¹⁰⁰ Darwin could not forget the sublimity produced in this experience, as it was as fixed to his mind as much as was a stone that once had a “deep impression” on him. Two or three

⁹⁸ Koerner, 132.

⁹⁹ Charles Darwin, *The Autobiography of Charles Darwin*, 1616-1617.

¹⁰⁰ Charles Darwin, *The Autobiography of Charles Darwin*, 1602.

years after seeing the “well-known large erratic boulder,” Darwin still “meditated over this wonderful stone.”¹⁰¹ The voyage then became, for Darwin, as much about a quest for the *curiosa* of the naturalist vision as it did for compiling the facts of a discipline.

We should also consider the ways in which Darwin’s natural history journey itself and the interconnectivity he observed, served to transform him:

However others may look back to the *Beagle*’s voyage...I think it far the *most fortunate circumstance in my life* that the chance afforded by your [Captain Fitz-Roy] offer of taking a Naturalist fell on me. I often have the most vivid and delightful pictures of what I saw on board the *Beagle* pass before my eyes. These recollections, and what I learnt on Natural History, I would not exchange for twice ten thousand a year.¹⁰²

In part, the gratitude Darwin paid to his Captain in this letter is that of a student to his mentor, a transformation from student to professional enabled by the offer to join the *Beagle* crew shortly after his Cambridge graduation. This opportunity succeeded in steering Darwin away from a life in the ministry, toward one in which he instead tended to the earth’s weighty mysteries through natural history. Darwin began to observe the interconnectivity of the earth and her species in his early years as a naturalist: while on the *Beagle*, the scientist noticed similarities between Galapagos finches and those on mainland South America. What Darwin also noticed among those connections, however, was the unique divergences among the beaks of the birds. In other words, their individuation suggested a great proliferation of difference, of diversity—what Darwin termed “variation.” These imaginative interpretations of his experiences, often worked out on paper in his notes, journals and other expository writings became essential to arriving at the evolutionary theories of natural selection and variation.

¹⁰¹ Charles Darwin, *The Autobiography of Charles Darwin*, 1591.

¹⁰² Charles Darwin, letter to J.S. Henslow, (6 Oct. 1836), *The Autobiography of Charles Darwin*, 1686.

And this leads to the ways in which Darwin's transformation operates in another way. When he arrived home, the young naturalist "recollected" his voyages, having just embarked on the longest field trip of his career, remarking that he had "the most vivid and delightful pictures" [of his travels] "pass before [his] eyes." Darwin's actual voyage remained with him as a kind of visionary trip of the senses while back in England, less a mere "recollection" of a temporal nature. William Wordsworth's 1798 poem "Tintern Abbey" records the poet's own recollections overlooking the banks of the Wye River "a few miles above Tintern Abbey." Wordsworth assesses the landscape, somewhat lamenting that his eyes, more "experienced," and his body unable to enact "animal movements," can only stop briefly to examine the lushness of the earth's foliage that he reveled in his youth, just "five years" before. Darwin's *Beagle* voyage, ironically, transformed him in the same number of years—five—1831-36. Wordsworth is "changed, no doubt, from what I was when first / I came among these hills." But like Darwin, Wordsworth continues to conjure up the great diversity that abounds, even after five years, and observes with all his senses the great diversity of nature and its connectedness to "something far more deeply interfused."

Darwin's trips, whether actual events as experienced, as recorded in journals during his trip, or as narratives constructed from recollections while at home after his travels, occurred not through the "trips" as conceived by the counterculture of the 1960s, but under the umbrella of the naturalist's project, within the overarching discipline of natural history. The kind of observations encouraged by the naturalist's inquiry provided a way for Darwin to see new connective tissues within nature, and thus the multitude of ways in which his own existence enabled him to "delight" in these "vivid" images. The

descriptions, both textual and visual, that the naturalist amassed as a result of his observations, served to transform his own world view and that of others. For Darwin the very discipline of natural history offered a place of transformation, particularly in its wide range of vision used to observe the material world.

Darwin had expertise in a range of fields included within natural history, particularly geology, entomology and ornithology.¹⁰³ His vision stemmed from an ability to look closely, applied to the wide-angle lens of a naturalist, something he shared with many of the foremost scientific minds in the twentieth century. Consider that James Watson and Francis Crick had to master realms of biology, physics and chemistry in order to arrive at the double-helical formation of the DNA molecule. Although many today view Darwin as the first modern scientists, as a result of his theory of evolution via the mechanism of natural selection, I think to take Darwin outside the realm of natural history misses the possibilities of interdisciplinary scope that natural history often afforded, and for which modern scientists like Watson and Crick ventured outside their fields in order to get a more holistic view. Crick, notably, also admitted imagining the structure of a DNA molecule after his own psychotropic experiments with LSD. Natural history, modeled as an umbrella of observation, sustained scientists like Darwin as “objective” observers, as well as “subjective” philosophizers, discrete discriminators of apparent facts, as well as synthesizers of less visible holistic knowledge.

¹⁰³ For a history of the disciplines that have been included under the rubric of natural history, see the exhibition catalogue by Sue Ann Prince, *Stuffing Birds, Pressing Plants, Shaping Knowledge: Natural History in North America, 1730-1860* (Philadelphia: American Philosophical Society, 2003). Prince notes that the focus of her exhibition is on living history, organisms. Early natural history, however, also included the sciences of the sky and earth. This latter designation would include mineralogy and astronomy, for instance. It is worth noting here that Linnaeus’s *Systema Naturae* (1735) included chapters not on plants, animals, and fungi, but plants, and animals, and minerals. See Koerner, *Linnaeus: Nature and Nation*, 115. Koerner notes that the “sequence of reportage” Linnaeus established was “first minerals, then plants, animals, and local technologies, and finally ethnography.”

Darwin claimed that “truth compelled [him] to write what [he] did.”¹⁰⁴ In his *Autobiography*, the naturalist describes reading *Wonders of the World* with his schoolmates as a child. They argued over the veracity of statements made in the book, disputing fact from fiction. The book of wonders, Darwin said, spurred his desire to travel to the most distant places. His blooming curiosity, he explains, was largely fulfilled by the encounters he had with nature on his *Beagle* voyages.¹⁰⁵ While scientists have long tested their own work against Darwin’s theory of evolution, the discrete truths of Darwin’s trip observations are more difficult to substantiate and not as easily tested as the details in an LSD trip report. As is the case with experiments in science, we only ever really verify truths through our own testing of them. We continue to live in a society that values empirical data and conclusive results. However we can no doubt gain much from the world of experience, welcoming that which cannot be measured and quantified as much as that which can.

Even Darwin himself could not determine the nature of the “mechanism” of natural selection. He took a leap of creative license in articulating his startling new world view. Living in our own post-evolutionary moment, we too must acknowledge an awareness of our consciousness as collaborative and collective beings through journeys of our own minds, bodies and environments, and embrace our own new vivid and vibratory truths as Darwin and other naturalists did in their own day. Likewise, Dion, Ford, Paine, Tomaselli and Twombly have registered many paradigms of the life sciences through their disparate musings on natural history. Their work allows us to grapple with

¹⁰⁴ Charles Darwin, letter to Ernst Haeckel, (21 May 1867), *The Autobiography of Charles Darwin*, 1781.

¹⁰⁵ Charles Darwin, *The Autobiography of Charles Darwin, 1809-82*, Edited by Nora Barlow (London: Collins, 1958), 44.

epistemological shifts from the age before Darwin to that of DNA, shifts that continued to engage the naturalist projects. They inspire us to wonder whether the investigations of discipline-specific sciences will somehow bring us closer to a cosmology or leave us with disconnected bits and pieces of ourselves. It is these artists, whose work will be encountered in my study, who will help us to steer a course between those who have already seen and transcribed their visions, whether in word, image, or both, and those who have just begun to perceive their own visions of natural history. This study will seek to convey information like this to the reader, opening a door to examples of art that imaginatively stimulate what Darwin and Wordsworth describe as “recollections” five years after their initial wanderings.¹⁰⁶

¹⁰⁶ Wordsworth’s use of “recollect” is actually from his *Lyrical Ballads*, in which he famously remarked that “Poetry . . . takes its origin from emotions recollected in tranquility.” See William Wordsworth, *Lyrical Ballads*, edited by Michael Mason, 2nd Ed. (Harlow, England and New York: Pearson Longman, 2007). The comparison of Darwin’s sentiments with those that found in Wordsworth’s poetry is not inappropriate here. Darwin himself claim during the year Oct. 2, 1836-Jan. 29, 1839 (the years that marked his return from the *Beagle*) that “about this time [he] took much delight in Wordsworth’s and Coleridge’s poetry; and can boast that [he] read the *Excursion* twice through.” Charles Darwin, *The Autobiography of Charles Darwin*, 1604.

Chapter 1

Plantae (Vegetable Values): Embarking on the Voyage

The method, the soul of science, designates at first sight any body in nature in such a way that the body in question expresses the name that is proper to it, and that this name recalls all the knowledge that may, in the course of time, have been acquired about the body thus named: so that in the midst of extreme confusion there is revealed the sovereign order of nature.¹⁰⁷

--Carolus Linnaeus

I imagine each piece as a field. A field as in a place where the mind can play—a playing field of a court...the way in which each game progresses is unique and infinitely varied.¹⁰⁸

--Roxy Paine

I. Species, Specimen

Species: One or more populations of a type of organism, members of which can interbreed and produce fertile offspring.

Specimen: An element, or individual, or part taken as representative of the entire set or whole; sample, example.¹⁰⁹

¹⁰⁷ Carolus Linnaeus, *Systema Naturæ* (1735), 13 as quoted in Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Pantheon Books, 1970), 159.

¹⁰⁸ Roxy Paine: *Bluff* (New York: Public Art Fund, available through D.A.P./Distributed Art Publishers, 2002), 11.

¹⁰⁹ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon Gallery, 1997), 72. See also John McCarthy, "Roxy Paine in Ponderland," No. 1 *Art and Living* (2006). In discussing his sculpture *Weed Choked Garden* (1998-2005) in this article the artist makes an observation about this concept of the "field" that can surely be extended to his oeuvre: "The field is a concept that's very appealing to me. I want my pieces to be fields, like fertile fields for the mind; I want them to provoke thought. But I don't like to be controlled, preached at, or told what to think. So I don't want to make pieces that tell people what to think. But I do want to make them very fertile grounds for thought, if that distinction makes sense. I want it to be a meditation on this conflict of trying to impose our grid on nature, the lines that have been established for the plants, and the way the weeds have not a care for that grid at all."

II. The I/Eye Box

The Swedish naturalist Carolus Linnaeus (1707-1778), also known as the “flower king,” played a fundamental role in the development of natural history as a modern discipline and the establishment of taxonomical systems. His most renowned work, *Systema Naturae* (1735), provided a system of binomial classification, in which organisms could be identified by a pairing of genus and species names.¹¹⁰ He based his classification scheme for plants on a sexual system of identification. As we now find ourselves in an age of microbiology, DNA analysis and bar-codes, it would be fair to argue that Linnaeus’s efforts to create a system for ordering the natural world provided a gateway to more contemporary taxonomical systems. In 1992, the artist Mark Dion created a portrait of the naturalist with his *Linnaeus*, a vertically-oriented wall box (**Fig. 1.1**).¹¹¹

The white wood cabinet has been identified as a key box in the Corrin text, although its appearance, with its molded top and simple knob, suggests instead a simple bathroom medicine cabinet.¹¹² Both readings, however, would offer resonance with the naturalist’s own life preoccupations. The key speaks to Linnaeus’s efforts to bring opportunity and understanding to individuals through the study of nature with his

¹¹⁰ Carolus Linnaeus, *Systema Naturae* [A General System of Nature: Through the Three Grand Kingdoms of Animals, Vegetables, and Minerals: Systematically Divided into their Several Classes, Orders, Genera, Species and Varieties with their Habitations, Manners, Economy, Structure and Peculiarities.], 1735; a particularly good secondary source on Linnaeus is Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge: Harvard University, 1999); see also Gunnar Broberg, *Carl Linnaeus* (Stockholm: Swedish Institute, 2006 [1992]); a good articles on the impact of Linnaeus’s work 300 years after his birth include David Quammen, “A Passion for Order,” *National Geographic* (June 2007): 73-87; and “The Legacy of Linnaeus,” *Nature* 446 (15 March 2007): 231-32; John Whitfield, “Linnaeus at 300: We are Family,” *Nature* 446 (15 March 2007): 247-49; Emma Marris, “Linnaeus at 300: The Species and the Specious,” *Nature* 446 (15 March 2007): 250-53.

¹¹¹ Lisa Graziose Corrin reproduces an image of Dion’s *Linnaeus*-box in her essay “Mark Dion’s Project: A Natural History of Wonder and Wonderful History of Nature,” in Lisa Graziose Corrin, Miwon Kwon and Norman Bryson, *Mark Dion* (London: Phaidon, 1997), 53.

¹¹² Corrin, Kwon and Bryson, 53.

binomials, an efficiency that employs the shorthand of map keys. The white medicine speaks to the spare and sanitary surfaces of hospitals, and makes us recall Linnaeus's own training as a physician. Linnaeus himself, as a physician and naturalist, sought out botanical medicinals for Swedish export that could bolster the economy and national pride.¹¹³ Inside the box—to extend the metaphor of the medicine cabinet—one finds not only a print of botanicals, but a dried-up leaf specimen ready for smoking in the long peace pipe that Linnaeus holds in his full-length portrait. Portraits of Linnaeus typically depict him in one of two ways; either as a young naturalist dressed up in the Laplander costume that recalls his visits to the North of Sweden in his youth in search of botanicals; or, as an older man, dressed in his white ruffled shirt and red coats with gold buttons and finery, the very embodiment of an established scholar. In his *Linnaeus*, Dion mounts this second type of portrait on top of the botanical print that lines the back of the cabinet. Along with the dead leaf Dion also includes some specimen pins, which were used to fasten flora and fauna to a fixed surface of paper or wood for ease of study and display.

Mark Dion began his artistic studies at the Hartford Art School in Connecticut in 1981, where he received his BFA.¹¹⁴ He also enrolled in the School of Visual Arts in New York, and the Whitney Independent Studio program in 1984-85, studying with Craig Owens, Hal Foster and Douglas Crimp.¹¹⁵ This foundation in studio art, critical theory, and the institutional practices and paradigms of galleries and museums, obviously, informed Dion's work early on. But Dion reports that his entrée into critical

¹¹³ Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, MA: Harvard University Press, 1999).

¹¹⁴ Mark Dion is currently represented by the Tanya Bonakdar Gallery, New York.

¹¹⁵ Nato Thompson, Ed. *Becoming Animal: Contemporary Art in the Animal Kingdom* (North Adams, MA: MASS MoCA, distributed by MIT Press, 2005), 46; Alex Coles, "Critical Strategies of Fictional Address: Field Work and the Natural History Museum," *de-, dis-, ex-*. Issue on *The Optic of Walter Benjamin* Vol. 3 (London: Black Dog Publishing Limited, 1999), 38.

theory was hampered by a lack of knowledge of antecedent philosophical texts. “We were reading Foucault, but had never read Kant, reading Jameson without having studied Hegel. Most of us who survived this trial by fire later went back to fill in the gaps,” he observes.¹¹⁶ One gathers that Dion’s formal education, like that of many artists and scholars, began to look a bit like an accumulation of disparate parts stitched back together at a later moment. The artist’s work of the last twenty years displays an accumulation of disparate parts similar to the process of knowledge acquisition in his studies. As curators Andrea Tarsia and Iwona Blazwick have pointed out, Dion’s project effectively fuses the aesthetics of *wunderkammer*, later natural history museum and the modernist white cube.¹¹⁷ My treatment of the *Linnaeus*-box in this chapter is intended to build upon this point, and in the process, provide new insights into Dion’s larger project.

With his early exposure to the intellectual history of museums and critical theory in the formation of art canons, and his numerous projects that draw on these discourses, it is no wonder that Dion’s project has itself been theorized through the lenses of museological discourse and institutional critique. Some of the more notable efforts to identify aspects of institutional critique in Dion’s oeuvre include *Mark Dion* by Bryson, Corrin, and Kwon (1997), as well as: *Natural History and Other Fictions*, Ikon Gallery, Birmingham, England (1997); *Archaeology*, edited by Alex Coles and Mark Dion (1999), Alex Cole’s “Field Work and The Natural History Museum,” (1997) in *de-, dis-, ex-.*; Ralph Rugoff, Lisa G. Corrin, Rachel Berwick, *The Greenhouse Effect* (2000); *Cabinet of Curiosities: Mark Dion and the University as Installation*, edited by Colleen J. Sheehy (2001); *Cryptozoology: Out of Time Place Scale* (2006); and Flora Viches’s “The art of

¹¹⁶ Coles, 39.

¹¹⁷ Andrea Tarsia and Iwona Blazwick, *A Short History of Performance—Part II* (London: Whitechapel, 2003), 16.

Archaeology: Mark Dion and His Dig Projects,” in the *Journal of Social Archaeology* (2007).¹¹⁸ These studies also examine other lenses through which scholars and critics have read the artist’s work, including Dion’s consideration of nature-culture boundaries, environment and ecological crisis, art-science bifurcations and interdisciplinarity.¹¹⁹

Most recently, scholars have hone in on the artist’s more recent attention to natural history, and the numerous topics this subject prompts, from archiving, field studies, taxonomy, taxidermy, curiosity cabinets and natural history museums, to name a few.¹²⁰ Prominent among Dion’s naturalist productions are pieces that refer to the eighteenth-century French zoologist and geologist Georges Cuvier and the nineteenth-century Welsh naturalist Alfred Russel Wallace.¹²¹ The reference to Linnaeus, in particular, speaks to Dion’s interest in collecting specimens as part of his art process as well as his penchant for interrogating prevailing notions of species hierarchy. In 1992 he gathered and classified marine animals and plants in New York City. This was followed

¹¹⁸ Alex Coles and Mark Dion, Eds. *Archaeology* (London: Black Dog Publishing, 1999); Ralph Rugoff, Lisa G. Corrin, Rachel Berwick, *The Greenhouse Effect* (London: Serpentine Gallery, 2000); Marvin Heiferman and Carole Kismaric, *Paradise Now: Picturing the Genetic Revolution* (Saratoga Springs, NY: The Tang Teaching Museum and Art Gallery at Skidmore College, 2001); *Cryptozoology: Out of Time Place Scale* (Lewistown, MW: Bates College Museum of Art, 2006); and Flora Vilches, “The Art of Archaeology: Mark Dion and His Dig Projects,” *Journal of Social Archaeology* 7 (2007): 199-223.

¹¹⁹ Joshua Decter, review of an exhibit at American Fine Arts Co., New York *Arts Magazine* 64 (Summer 1990): 97; Lynne Cooke, “Arnhem and Chicago: Outdoor Exhibitions of Contemporary Art,” *The Burlington Magazine* 135 (Nov. 1993): 786-87; Arnold J. Kemp, in conjunction with Yerba Buena’s Ecotopias Festival, *Mark Dion: Where the Land Meets the Sea* (San Francisco: Yerba Buena Center for the Arts, 1998); Stephanie Smith, *Ecologies: Mark Dion, Peter Fend, Dan Peterman* (Chicago: The David and Alfred Smart Museum of Art, The University of Chicago, 2001); *Bureau of the Centre for the Study of Surrealism and its Legacy* (Manchester, England, Manchester Museum, University of Manchester: The AHRB Research Centre for the Studies of Surrealism and its Legacies, 2005); René Morales, “Mark Dion: South Florida Wildlife Rescue Unit” (brochure) (Miami: Miami Art Museum, 2006).

¹²⁰ In addition to the already mentioned five sources see: Mark Dion, Richard Klein, and Bree Edwards, *Mark Dion: Drawings, Journals, Photographs, Souvenirs, and Trophies 1990-2003*, edited by Richard Klein (Ridgefield, CT: The Aldrich Museum of Contemporary Art, 2003); and *The Greenhouse Effect* (London: Serpentine Gallery, 2000).

¹²¹ Martin J.S. Rudwick, *Georges Cuvier, Fossil Bones, and Geological Catastrophes: New Translations and Interpretations of the Primary Texts* (Chicago: The University of Chicago Press, 1997), ix. This source is particularly good at honing in on Cuvier as a geologist, not merely the comparative anatomist as many scholarly texts treat him.

by one of his first large entomological endeavors, his 1993 *Great Munich Bug Hunt*.

Massachusetts was the site for his 1994 botanical survey. And in 1997-98, Dion dredged the Lagoon of Venice for specimens of flora and fauna.

This focus on natural history, the artist explains, derives from his “passion for interacting with nature, and a great passion for its forms of representation, whether that be the Natural History Museum, television, or the apparatus of collecting.” Having established the “methodology of institutional critique” early in his work, explains Alex Coles, Dion applied this structure to the subject of natural history.¹²² In her interview with the artist, Kwon also notes Dion’s increased attention to natural history museums in his institutional critiques.¹²³ But I would argue that, although certain continuities are undeniable, we should not be too quick to extend Dion’s early project of institutional critique to natural history and natural history museums. I would argue that natural history more clearly marks the space beyond the museum, a place where art and art history seem startlingly relevant to larger considerations of power structures, systems of knowledge, and the classification of everything from museum spaces to academic disciplines to the natural world. Norman Bryson conveys the full complexity of Dion’s naturalist projects:

In Dion’s work, nature always appears in highly mediated guises, emerging from within organized systems of power/knowledge that attempt to classify, taxonomize, tabulate and control the natural world. His interests belong to a later moment than that of the pioneer ecologists, such as [Rachel] Carson...Dion’s concern is with the role of system and representation in scientific thought, with the historicity of knowledge and that obsessive will-to-order (wonderfully parodied through his work) that typifies institutional forms of knowledge. His central gesture is to foreground not nature, but the interface between nature and the history of the disciplines and discourses that take nature as their object of knowledge.¹²⁴

¹²² Coles, 47.

¹²³ Corrin, Kwon and Bryson, 18.

¹²⁴ Corrin, Kwon and Bryson, 96.

As we will continue to see with *Linnaeus* and other works, Dion concerns himself with the persistence of eighteenth- and nineteenth-century knowledge structures in the present. But his naturalist projects not only represent a past moment of knowing, but also illuminate continuities between older theoretical positions of natural history, exemplified by Cuvier, and evolutionary theory as arrived at by Darwin and Wallace, who actually arrived at the theory of natural selection just before Darwin himself. As Bryson has amply pointed out, our ordering systems, while not maintaining the God-centered system of the eighteenth-century Great Chain of Being, are still informed by an anthropocentric view of man's place in the natural world. Today many scientists would argue for the obsolescence of Linnaeus in a world of DNA technologies.

I would like to extend the rich interpretations Bryson and others offer to Dion's oeuvre, to conventional views of nature as a place apart.¹²⁵ Dion's attention to natural history not only broadens his ability to engage a range of institutional discourses, knowledge and power structures, but also has real implications for conceiving of our conceptual "time place space" in a post-evolutionary universe. It is no longer satisfactory to simply consider the overarching structures of institutions, disciplines and systems at work in the construction of nature and art. In an age of environmental crisis and ecological meltdown Dion's works draw on (natural) history to compel us to create new structures of being.¹²⁶ In many ways this process bears comparison to Aby Warburg's

¹²⁵ For recent compelling considerations of longstanding nature-culture boundaries, and nature as place apart see: Jennifer Price, *Flight Maps: Adventures with Nature in Modern America*. New York: Basic Books, 1999; and Rebecca Solnit, "The Thoreau Problem," in Bill McKibben, Ed. *American Earth: Environmental Writing Since Thoreau*, with a Foreword by Al Gore (New York: The Library of America, 2008): 971-74.

¹²⁶ The catalogue *Cryptozoology Out of Time Place Scale* comes the closest to bridging Dion's interest in natural history and the "age of the marvelous" in art with something entirely outside of art, a

project, where the scholar attempts to construct, out of the ashes of history and memory, a new contemporary space for working, writing, reading and being. In some ways Dion's new project could be characterized as anthropocentric, but the artist remains ever-attuned to the larger world in which he works; the centrality of the human being has to an extent been diminished, and ends up as little more than starting point for his extrapolations.

And yet it was naturalist systems like the Great Chain of Being that so clearly distinguished the world of human beings from the world of other organisms, including animals. It was through these now "obsolete" modes that early scientists could begin to articulate, through language, humanity's categorical difference from other living things. In the catalogue for Dion's exhibition *Natural History and Other Fictions* (1997), the artist provides a dictionary of terms—from Aardvark to Zyzzyua ("a leaf-hopping weevil of tropical America)—that were relevant to the eighteenth-century naturalist as well as more contemporary scientists.¹²⁷ The artist-as-lexicographer defines "animal" as:

An organism distinguished from other living things by structural and functional characteristics. (non photosynthetic, multicellular, generally mortal organisms that lack cell walls and eat their nutrients). Note: humans are the only animals that feel insulted when called an animal.

broader worldview. One should also note Dion's recent project with his longtime partner J. Morgan Pruett and others—Mildred's Lane. According to the project website, at www.mildredslane.com: "This project is a long-term experiment in large-scale project based practices with a living museum and an educational institution attached. This active site is their 96-acre compound in the upper Delaware River Valley region of Pennsylvania near New York City. It means to be a revolutionary rigorous rethinking (the 3 Rs) of the contemporary art complex.

The core of the project practice and educational philosophy at Mildred's Lane is an attempt to collectively create new modes of being in the world."

See also Tarsia and Blazwick, 6, 16-19. I think Tarsia, to some extent, in her introduction to this group show, which includes Dion, begins to acknowledge the implications of Dion's work to mind-body relationships. But the specificity of this critique is limited in this short catalogue, and does not extend to the ways in which performance art's dematerialization of the body as object expands to the realms of evolution and cosmology, when infused with the art-science and art history-natural history paradigms in Dion's work.

¹²⁷ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon Gallery, 1997), 53-77.

Notably, Linnaeus appreciated the continuities of humans with other animals, first classifying humans with mammals in his *Systema Naturæ*. But *Homo sapiens* continued to be viewed by Linnaeus as somehow superior to all other plants and animals. I would argue that Dion's work suggests that many of our standard scientific practices, including the perpetuation of phylogenetic mapping, DNA barcoding and other means of DNA classification, result in our ability to articulate what makes *Homo sapiens* distinct from other animals; for many, this distinction defines what makes us more sophisticated than other animals, a designation that continues to place us atop the *scala naturae*. Of course, these micro-molecular identification techniques also illuminate the ways in which we are not all that much different from other animals. As with Dion's or any other artist's work, there are always *at least* two ways to read the data, to interpret that which we see represented before us.

Given what we now know about Dion's project, what might have prompted him to place a portrait of Linnaeus in a box? How does a rather conventional box installation elicit new categories of being? In the reproduction, Linnaeus stands stiffly erect, a pose emphasized by the vertical folds in the curtain behind him and contrasted with the curvilinear plants on which his image is stamped. Without the context of his desk and his books, his pose seems staged, set in the space of a portrait studio than at home in his library. Placing the image of Linnaeus in a box highlights both the naturalist himself and his sexual system of classification, and creates a kind of trophy case for his taxonomical schema by physically storing them, through a representation of their author, in a precious wooden shelter or reliquary.¹²⁸ To gaze at Linnaeus in the box, surrounded by a variety of

¹²⁸ These boxes also recall the wooden boxes of the artist Joseph Cornell (1903-72), who assembled found objects in such a way as to evoke surreal dream states through the arrangement related

botanicals in the form of the print, is to recall the very project of observation associated with the naturalist. It is a work that simultaneously speaks of the artist, the scientist, the viewer, and the observer.

Dion's work focuses on the often obsessive and perverse qualities of identification and classification; what determines what we collect and how we categorize both animate and inanimate organisms and objects.¹²⁹ Here Linnaeus's pose suggests his own shaky resolve for his scholarly convictions, and reminds us of the persistence of his ideas and classification scheme in America in the nineteenth century, long after many European scientists began using other taxonomical systems.¹³⁰ Here, Linnaeus's gaze is hardly one of a self-assured scientist, but suggests instead an insecurity regarding his station and the stability of his ideas. Dion's representation subtly reminds of our own limits, and the instabilities of our own knowledge and its structures. To look at Linnaeus is not merely to observe a reproduction of the former naturalist, but to consider his contributions to science, and the ways in which his ordering systems have influenced not only the natural world, but our own positions as subjects and species. Dion's *Linnaeus* box, then, operates as a way to consider the self as a specimen, and the way in which a type that represents a whole comes to stand in for the particularity of an individual.¹³¹ In

and seemingly unrelated of objects. See Adam Gopnik, "Sparkings: Joseph Cornell and the Art of Nostalgia," *The New Yorker* (17, 24 Feb. 2003): 184-89; Malcolm Jones, Jr., "Gifts That Keep on Giving: Joseph Cornell's Alchemical Boxes Still Beguile Us," *Newsweek* (28 Dec. 1992): 60; Paul Richard, "Joseph Cornell: Out of the Dread, the Wonder, The Universe on Utopia Parkway," *The Washington Post* (19 Nov. 1982): E1+; Kay Larson, "The Cage of Anxiety," *New York* (24 Nov. 1980): 62+.

¹²⁹ Nato Thompson, ed., *Becoming Animal: Contemporary Art in the Animal Kingdom* (North Adams, MA: MASS MoCA, 2005), 46. Thompson makes the point that Dion is interested in two distinct forms of classification, "one that names living creatures as they are found, and the other names them as they become extinct."

¹³⁰ Barbara Novak. *Nature and Culture: American Landscape Painting, 1825-1875* (Oxford: Oxford University Press, 2007), 91, 93, 101, 108.

¹³¹ There is a darker side of conceiving of the self as a species that must be acknowledge, and something that has historically been done, often, to the subject of colonialist conquest, the *Other*. See for instance, Douglas J. Preston, "Skeletons in Our Museums' Closets: Native Americans Want Their

his medicine cabinet Linnaeus himself becomes a taxidermic animal on display in a diorama, himself the specimen of our visual consumption.¹³²

As a critical foil to Dion's *Linnaeus* box we can consider a portrait box from an earlier moment in American art, Robert Morris's (b. 1931) *I-Box* (1962) (**Fig. 1.2**). Morris's *I-Box* marks an important moment of subjective release from any fixed point of view, and continues to serve, almost half a century after its completion, as a harbinger of new subjective possibilities. In the process of destabilizing the notion of the heroic artist, and the human being with his ego, Morris also breaks down relationships between subjects and objects, words and their corresponding images. For Morris, the "I" references both the self as in the self-portrait seen beyond the "I"-door, and the "eye" that discerns the self—the gaze that consumes the body and frames it within the finite boundaries of the box. The door of the box features a void in the shape of the letter "I" that connotes the authoritative font of Times New Roman print culture, further enhancing the play of our subjective "eye" with the word-ness of the door as "I" and the image of the artist as yet another "I."

Ancestors' Bones Back," *Harper's Magazine* (Feb. 1989): 66-75. Preston explores the role of the American Museum of Natural History in the collection, preservation and study of Native Americans and their disinterred bones. Preston explores the controversies surrounding the maintenance of these "specimens" in light of increased pressure to return these deceased ancestors to Native American tribes.

¹³² One might consider that the same person who conceived of the diorama, *Louis-Jacques-Mandé Daguerre*, also played a vital role in the development of modern photography with the daguerreotype. This fact might enable us to think about the ways in which natural history as a subject came to be bound up with new, and increasingly advanced, technologies of display, perhaps even making sense of the variety of displays from the continuance of natural history dioramas, magazines such as *Natural History* and even the newest arrival on the scene of nature films, the BBC's *Planet Earth*. See L.-J.-M. Daguerre, *An Historical and Descriptive Account of the Various Processes of the Daguerreotype and the Diorama* (New York: Kraus Reprint Co., 1969) [London: Haymarket, 1839] and Helmut and Alison Gernsheim, *L.J.M. Daguerre: The History of the Diorama and the Daguerreotype* (London: Secker & Warburg, 1956); for more general sources on natural history dioramas see Mimi Colligan, *Canvas Documentaries: Panoramic Entertainments in Nineteenth-Century Australia and New Zealand* (Victoria, Australia: Melbourne University Press, 2002); David R. Foster and John F. O'Keefe, *New England Forests Through Time: Insights from the Harvard Forest Dioramas* (Petersham, MA: Harvard University, 2000); and Karen Wonders, *Habitat Dioramas: Illusions of Wilderness in Museums of Natural History* (Uppsala: Almqvist & Wiksell, 1993).

The representational disruption of the subject that the *I-Box* offers—the “I” as specimen—further illuminates Dion’s *Linnaeus*. In the *I-Box* Morris pasted a photograph of himself standing naked inside a small vertically-oriented rectangular box, which had as its door, the letter “I.” This portrait box operates interactively, with a door that opens and closes, as is the case with Dion’s *Linnaeus*. But Morris’s nudity instills his figure with a kind of humorous Peeping Tom quality that plays peek-a-boo between artist and viewer. One should consider the absurdity of the artist as egoistic super-sexual self in comparison to the portrait box *Linnaeus*, where Dion presents the well-clothed naturalist who devised a sexual classification schema. Morris’s nakedness could hardly be called sexy; and his matter-of-fact stance is far from the “ideal” pose of a classical nude. It has been the fodder of some scholars who have sought to classify the artist’s body itself. The art historian Catherine Grenier calls the photographed self Morris presents in his *I-Box* “the idiotic body,” which leads one to characterize the figure as debased and absurd.¹³³ Morris has undermined the duration of the gaze with the absurdity of his nakedness. To look at Morris’s piece is to regard not only Morris, but the starkness of a human body without appurtenances. If Morris’s self represents a “bodily topography,” a base materiality, then Dion’s *Linnaeus* stands in for a “social topography,” a bodily self that seeks to operate with the formality of social costumes. This societal circumscription of the self through dress is not unlike the taxonomical structuring devices that the naturalist uses to categorize and civilize flora and fauna.¹³⁴ The images of artist and naturalist, then, are as ciphered in the text as the flora and fauna of Linnaeus’s own binomial system.

¹³³ Catherine Grenier, “Robert Morris and Melancholy: The Dark Side of the Work,” in *Robert Morris* (Paris: Centre Georges Pompidou, 1995), 312.

¹³⁴ Laura Kipnis, “(Male) Desire and (Female) Disgust: Reading *Hustler*,” in Raiford Guins and Omayra Zaragoza Cruz, Eds. *Popular Culture: A Reader* (London: Sage Publications, 2005), 227.

In some ways Morris bestows the power to decide what to gaze at to the viewer, by allowing her to open or close the I-door in order to reveal or conceal the image of the artist who also made the box. And yet the museum or gallery space controls this gaze, by deciding whether or not to display the door open or closed, a decision that locks the sculpture in place for the viewing. In this sense, the *I-Box* parodies the white box of the museum which itself displays and conceals, providing only limited points of view and certain subjective positions; should the door be left open, the viewer may only escape from the vision of the grinning artist-as-I by turning his back from the piece and walking away from it. In this way, Morris, deliberately or not, subverts the viewer's power to close the door and observe the rectangular box. His door commands a certain viewpoint that asserts the power to direct the gaze of the observer toward not only the artist's work, but the image of the naked artist himself. Morris, in conjunction with the museum that chooses to display the box with the door open, fulfills the curiosity of the viewer to know what is on the inside. The *I-Box* continues a long tradition of display that continues well into the twentieth century with Jasper Johns's targets with plaster casts of body parts housed in little boxes. Johns's targets can be found most frequently with at least some, if not all, of their doors ajar. Morris, like Johns, places nakedness on display, challenging our sensibilities about sexuality, the display of the self, and other conventions of decorum.

Throughout his long career, Morris has been associated with a range of art movements from Minimalism and Conceptualism to Earth Art. He has remained in tune with the shifting sensibilities of the art world over a considerable period and stayed engaged with the investigation and creation of new modes of visual diction. One could

argue that his *I-Box*, with its Duchampian word games at play, encourages a Conceptualist classification of the piece. But the timing of the box's creation, and its form with its door closed, also anticipates the soon-to-become familiar boxes and cubes of Minimalism. It is true that the minimalist cube did not emerge in the art world until the mid-1960s; But in his dissertation "The Genealogy of Minimalism: Carl Andre, Dan Flavin, Donald Judd, Sol LeWitt and Robert Morris" (1995), the art historian James Meyer has traced the early years of Minimalism to the period between 1959 and 1962, something he reasserts in his subsequent book *Minimalism*.¹³⁵ Although we cannot call the *I-Box* a true minimalist cube in the vein of Sol LeWitt or Donald Judd, Mark Dion surely considered the role of the cube in modern art in general and the implications of the form and its historical and theoretical associations in his own work. As Dion himself put it:

The modernist cube... is an example of the denial of the biological contract. It is the environment without nature. In the same way that our culture does not acknowledge shit, distances itself from the production of food or denies the processes of aging, these animals remind us that we too are animals.¹³⁶

It would be fair to say that Morris's *I-Box*, in some ways, anticipates the minimalist cube in its increasingly spare geometrical form. Dion's *Linnaeus* plays upon the critique of subjectivity that Morris's piece presents, as well as the ways in which the minimalist cube marks a kind of stripping down of art to its essential, even specimen-like self. Framed in a minimalist box, albeit one with a door, Morris's work triangulates artist, viewer and art object, at once dispersing subjects and objects, but also drawing them in,

¹³⁵ James Meyer, "The Genealogy of Minimalism: Carl Andre, Dan Flavin, Donald Judd, Sol LeWitt and Robert Morris" (Ph.D. dissertation, The Johns Hopkins University, 1995), 39-51; See also James Meyer, *Minimalism* (London: Phaidon, 2000); and James Meyer, *Minimalism: Art and Polemics in the Sixties* (New Haven: Yale University Press, 2001).

¹³⁶ Corrin, Kwon and Bryson, 120.

making their identity dependant upon one another's respective roles in the process of creating, observing and identifying.

Art historians have considered the subject-object relationships that Morris's *I-Box* evokes in a variety of ways. W.J.T. Mitchell described a less fixed sense of the "I" within a "labyrinthine circuit" of the questions "What is an image? What is a word? What is an object?"¹³⁷ Maurice Berger has observed that the *I-Box* is a hinged door which, when closed, refers to an anonymous Modernist self and, when open, reveals a Postmodernist "language of self-identity and potentially of empowerment: 'I.'"¹³⁸ Expanding on these ideas, we can read this self as that contained in the box, fully accounted for and delineated, while the box with the door opened reveals the Pandora of multifarious Postmodernism, the self deconstructed, rendered multiplicitous. More elusively, but as compellingly, Berger notes that the "*I-Box* is contingent on outside factors."¹³⁹ But just what are these outside factors? I have suggested that they include the specific site of the museum and the broader culture of the art world. Berger suggests that these outside factors included the cultural milieu in which the subject's position found itself increasingly floating between various identifiers. The art historian Marcia Tucker suggested that the *I-Box* deals with the "ways in which we understand the process of being."¹⁴⁰ By acknowledging being as a process, rather than a fixed state, Morris's portrait box begins to break up the self even in the midst of its contingent triangulation with subjects and objects, and interior and exterior selves and spaces. As Berger aptly

¹³⁷ W.J.T. Mitchell, "Wall Labels: Word, Image, and Object in the Work of Robert Morris," in *Robert Morris: The Mind/Body Problem* (New York: The Solomon R. Guggenheim Museum, 1994), 72.

¹³⁸ Maurice Berger, "Wayward Landscapes," in *Robert Morris: The Mind/Body Problem* (New York: The Solomon R. Guggenheim Museum, 1994), 30.

¹³⁹ Berger, *Labyrinths*, 37.

¹⁴⁰ Marcia Tucker, *Robert Morris* (New York: Whitney Museum of American Art, 1970), 13.

argues, the “I” of Morris’s *I-Box* can “question the rules and standards that determine the particular and repressive order of our lives.”¹⁴¹ The sculptural box houses the self as a specimen within an ordered framework, circumscribing its limits and privileging the self as a unique being. But it also marks this self as a representation of one among many individuals that continue their own process of becoming.

Morris’s *I-Box* introduces a realm of transferable subject being into an artistic canon that had only recently emerged. This subjective being in which the self could occupy a plurality of identities and register no fixity of place, would help pave the way for an even greater freeing of the “I,” in which the self as being, as specimen, relates not only to the immediate surroundings of, say, an art object and the environment in which it is viewed. Instead this new self, the self as no longer in a static state of being but becoming, transfers an “I” amidst various loci, evolving as it were, in fluid and often conterminous states of “I.” The shift of Morris’s subject from being to becoming in his *I-Box* conveyed a slippage of self, but his de-centered subject also merely shifted the “I” to a new center, the de-centered center.

Reading Dion’s naturalist-in-a-box against Morris’s artist-in-a-box highlights the complexity running through each piece. Both artists ask the viewer to look not only at the categorical imperatives of making art, but also at the very pigeon-holing of *everything* into *something*. Morris’s box provides the text that accompanies the image, the punning “I” and the humorously egoistic artist himself. Dion, in turn, pays homage to the father of modern taxonomy, while boxing him in with a species of wood that Linnaeus himself likely named. Morris’s box and Dion’s box essentially exhibit the artist and the naturalist *as* specimen. Dion’s image of Linnaeus metonymically asserts the ego of the naturalist

¹⁴¹ Berger, *Labyrinths*, 43.

and the scientist in the same way that Morris's self-portrait conveys the trappings of the artist's ego, containing the naturalist with his own specimen case. As the originator of a uniform informatics that sought to quantify and qualify the natural world, Linnaeus has much in common with the modern day scientist. The naturalist in a box serves as a metaphor for the scientist in a box, particularly if we keep in mind Dion's tendency to find continuities between the past and the present. We can even extend the space of the box to stand in for the respective spaces of the naturalist and the scientist, the study and the laboratory.

Finally, we can view both boxes as books, texts that open and shut upon the will of the viewer, or in the case of the art museum, the exhibition curator. The image of Linnaeus, a writer of books about the naming of things often explained how "to read nature as any other Book," recalls the longstanding dialectics of word and image.¹⁴² How do words and images correspond to one another in the natural world, as Linnaeus's word for the "twin flower," *Linnea borealis*, corresponds (or not) to the image of the small woodland plant? And even if there is a correspondence, which of course is the assumption (at least conceptually) of all taxonomical systems, then what is a viewer to do who does not have the knowledge or visual cues required to connect image with its identity? And what can we say about Dion's *Linnaeus* box, which displays an image without words, a specimen without a name?

The contemporary scientist James Lovelock uses a flowering yellow Oxlip plant to illustrate human's lack of connection with and knowledge of the natural world, an example I also think illustrates the general expanse between the sign and referent. Given the image of the yellow flower most people identify it as a flowering herb rather than

¹⁴² Koerner, 23.

with the specificity of its common name Oxlip, let alone its scientific name *Primula elatior*.¹⁴³ Without a book to provide the woodland plant with a descriptor, rather like the signage describing a work of art in a museum, the onlooker is left with only a general impression of the nature of the object. While the botanical guidebook that displays species becomes its own faulty metonym for the variation of individuals, as acknowledged by Michel Foucault, it also proves a useful working metaphor in the field of plant-human relations, not unlike name badges at a cocktail party. “The great metaphor of the book that one opens, that one pores over and reads in order to know nature, is merely the reverse and visible side of another transference, and a much deeper one, which forces language to reside in the world, among the plants, the herbs, the stones, and the animals,” he says.¹⁴⁴ For Foucault, plants, animals and the names that designate them mutually inflect one another. For instance, if an artist or naturalist knows the standard morphological characteristics of the *Primula elatior* (a.k.a. the Oxlip) in advance of depicting it through primary observation, then his representation of the flower will almost assuredly contain his visual preconceptions of it.

Kwon asserts the ability of Dion’s work to “provoke the sense of the marvelous or generate curiosity.” In her interview with him, she draws out the ways in which the artist achieves this through the production of “truth.” As the artist says, “One thing is to tell the truth, which is by far more astounding than any fiction. (I cringe as the word ‘truth’ passes my lips, but I always mean it with a lower case ‘t,’” he adds).”¹⁴⁵ Truth, as Dion articulates it, becomes that which we see in his Linnaeus box, and that which we see in

¹⁴³ James Lovelock, *The Revenge of Gaia: Earth’s Climate Crisis and the Fate of Humanity* (New York: Basic Books, 2006), 8.

¹⁴⁴ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 35.

¹⁴⁵ Corrin, Kwon and Bryson, *Mark Dion*, 18.

Morris's *I-Box*. It is not the assertion of an objective, singularly knowable self, but a self always in the process of becoming. As Corrin has observed:

Where wonderment might have been a function of the fixed, universal classification systems of Carl Linnaeus, our late-twentieth-century wonder comes from a view of knowledge as a rhizome without a centre, a sideways dispersal of interconnections and multiplicities, in a constant state of motion. There is much material for wonderment in this sprawling, mutating web, its convolutions and reversals, its seepage and saturation, its interruptions and interceptions.¹⁴⁶

Linnaeus, and the alliances he has constructed between things and words as well, slip away from the loose semiotic ties that bind them. The naturalist project, as transformed by Dion, leaves little to language. Linnaeus himself stands only with his sample leaf and himself as a specimen, not even with the “I” with which Morris’s *I-Box* nominates the artist and the viewer. This lack of words or names explains the somewhat vacant gaze in Linnaeus’s eye—he is the naturalist with no guidebook, no system for ordering the world and left wearing only the vestiges of his profession. It is the space between that is of most interest to me—the space between the artist and the “I,” the naturalist and “Linnaeus,” and between the words and images. These paintings and sculptures operate as stage sets, little black boxes of wonder that stand in distinction to the white modernist cubes Dion accused of denying the “biological contract” of life. Here Dion’s *Linnaeus* marks a space of the disruption of the taxonomical systems of science and art and in which the self closes the door on the “I” and walks away.

¹⁴⁶ Lisa Corrin, “The Greenhouse Effect,” in Ralph Rugoff, Lisa G. Corrin, Rachel Berwick, *The Greenhouse Effect*, 49.

III. A Glimpse of Universe

Like Mark Dion, Robert Smithson (1938-73) knew how to visually articulate a walking away from the self. In the final paragraph of her book on Smithson, the art historian Jennifer L. Roberts describes a famous film sequence for the artist's earthwork *Spiral Jetty*, Rozel Point, Great Salt Lake, Utah (April 1970), the piece which remains his signature and tour de force.¹⁴⁷ In the sequence Smithson stumbles along the rocks of the *Jetty*, circling in towards its center. "He stands at the edge...hesitating over the water as if waiting to be taken up into some recursive spiral himself and to enter some final transcendent crystallization of time and matter. But then...he turns, in a gesture both tragic and funny, to walk slowly back out of the spiral toward the shore."¹⁴⁸ While Roberts uses this image to complete the recuperation of history in Smithson's spiral, her observation of the moment *before* the artist's return to the shore has become more important for my own project. This moment, for me, marks a point of deliberate observation outside the constraints of time, of a slowing down of the body to consider its ebb and flow of a triangulation with subjects, objects and idea, but also a distancing from the self—a stilled movement of the self both toward and away from the spiral's vortex. While this will probably strike some readers as a bit too ethereal and mystical, consider Roberts's own surprise at the transcendentalism of Smithson's work, and particularly his

¹⁴⁷ Jennifer L. Roberts, *Mirror-Travels: Robert Smithson and History* (New Haven: Yale University Press, 2004); Other valuable sources on Smithson, his oeuvre and Earthworks include: Eugenie Tsai, Cornelia Butler, and Rob Graziani, *Robert Smithson and the American Landscape* (Cambridge: Cambridge University Press, 2004); *Robert Smithson*, with an essay by Thomas Crow (Los Angeles: The Museum of Contemporary Art, 2004); Ann Reynolds, *Robert Smithson: Learning from New Jersey and Elsewhere* (Cambridge, MA: The MIT Press, 2003); Suzaan Boettger, *Earthworks: Art and Landscape of the Sixties* (Berkeley: University of California Press, 2002); *Robert Smithson: Mapping Dislocations*, with an essay by Ann Reynolds (New York: James Cohan Gallery, 2001); *Robert Smithson: The Collected Writings*, edited by Jack Flam (Berkeley: University of California Press, 1996); Gary Shapiro, *Earthwards: Robert Smithson and Art after Babel* (Berkeley: University of California Press, 1995); and Eugenie Tsai, *Robert Smithson Unearthed: Drawings, Collages, Writings* (New York: Columbia University Press, 1991). See also the official Robert Smithson site at www.robertsmithson.com.

¹⁴⁸ Roberts, 139.

writings. Roberts offers us the oxymoronic phrase “transcendental materialism” to account for this rich and unexpected presence in Smithson’s work.¹⁴⁹ Roberts’s intriguing phrase accounts for both the artist’s embrace of “radical particularism and historical embeddedness,” and also his “gestures toward a timeless or historical aesthetics.”¹⁵⁰ It seems that Smithson intentionally sought out “atemporal, ahistorical condition[s].”¹⁵¹ I have found this model to be immensely helpful in attempting to understand the ways in which the artists in this dissertation have viewed the present moment through a lens of centuries long past, and the way these contemporary visions so often present the material evidence of an excavated past in a way that at times contains the impulse of a Smithson-like transcendental materialism. I can understand why some might find my inclusion of Smithson’s spiral in a chapter on plants counterintuitive. But I would argue that it is precisely Roberts’s view of Smithson’s work, and the artist’s own negotiations of history and space, which give context to the self that walks away from Linnaeus’s taxonomical systems and the “I” that enclosed the modernist self in a box. Smithson’s spiral offers up a life in resurgence, always on the verge of becoming something else, circling in and out. The effect is not unlike watching a Clematis plant outside my house, a flowering vine that simultaneously winds upon itself ever more tightly in the process of growing and shoots out tendrils into new trajectories of space.

What must certainly be rated *the* emblematic monument of the Earthworks movement, *Spiral Jetty* spurs considerations of history, entropy and contemporary relationships with the land. But as we consider this site-specific work as engaged with forces of energy and landscape, we should also consider the ways that the piece attends

¹⁴⁹ Roberts, 8.

¹⁵⁰ Roberts, 8-9.

¹⁵¹ Roberts, 8-9.

not only to the history of history, and in turn the history and evolution of the earth, but also to the broader theme of natural history. The artist himself has acknowledged the powerful influence that the subject of natural history had on him and his work, and very likely on his worldview, as well:

I think the strongest impact on me was the Museum of Natural History. My father took me there when I was around seven. I remember he took me first to the Metropolitan which I found kind of dull. I was very interested in natural history...it was just the whole spectacle. The whole thing—the dinosaurs made a tremendous impression on me. I think this initial impact is still in my psyche. We used to go to the Museum of Natural History all the time...For me it was much more interesting [than the Metropolitan]. Then from that point on I just got very interested in natural history. At one point I thought of becoming either a field naturalist or a zoologist.¹⁵²

For those not familiar with Smithson's visual preoccupations with natural history, consider the large number of works which refer to its themes so overtly: *Evolution of the Turtle* (1962), *Evolution of Amphibians* (1962), *Algae* (c 1961-63), *Untitled (Big Fish)* (c. 1961-63), *Venus with Reptiles* (1963), *Hall of Late Dinosaurs, tracking Shot. Spiral Jetty Movie* (1970), *Movie Treatment for 'Tropical Cargo' (Section) Panama Passage – Canal Zone* (1970), and *After: Athanasius Kircher 1665 Mundus Subterraneus* (1971). And then there are Smithson's numerous maps, stacked or folded, found and imagined, excised, cut and rearranged: *Untitled [folded map of Beaufort Islet]* (n.d.), *Untitled (Antarctica)* (1967), *Entropic Pole* (1967), *Untitled (Map on Mirror—Passaic, New Jersey)* (1967), *Broken Map* (1967), and *The Hypothetical Continent of Lemuria* (1969). These works represent only a partial list Smithson's naturalist-infused works. Some of these works, exemplified by *Algae* and *Venus with Reptiles*, have more to do with natural science than

¹⁵² Paul Cummings, interview with Robert Smithson (New York City: Smithsonian Archives of American Art, July 14 and 19, 1972). Smithson here likely refers to the American Museum of Natural History in New York City, on the west side of Central Park opposite the Metropolitan Museum of Art. This museum is commonly confused with the National Museum of Natural History, Washington, D.C., most likely due to their similar names, not their locations.

natural history, but I think it's clear from Smithson's statement that these pieces, even with their titles, were flavored with the specific materiality of natural history museums. I think it would not be difficult to make the argument that Smithson was himself a kind of artist-naturalist, drawing out time, eliding cultural history and natural history, dispensing the geological and the archaeological, along with the industrial.¹⁵³

I sometimes find myself checking captions in books when I see a reproduction of an image of Mark Dion at work. In many cases I have to remind myself that the image shows a contemporary living artist, rather than a record of the late Robert Smithson at work. Both artists liked to work outdoors, on projects of grand scale and theme, as often as not with shovels in their hands, among dirt, rocks and mirrors, and frequently motivated by the exploratory impulses of natural history. In an interview with the art historian Miwon Kwon, Dion acknowledges his debt to the earlier artist. "Smithson is of particular interest because he forged a convergence between geology, the science of time, and critical art discourse. There is a side to Smithson that is a bit too Jungian for me, but his practice made art very expansive," he said.¹⁵⁴ In addition to assuming the tasks of the archaeologist, entomologist, botanist, naturalist, ichthyologist, Dion also plays out the role of meta-artist. More closely than any other living artist today, Dion's practice recalls

¹⁵³ I think it would also be fair to argue that Smithson's non-sites, what I like to think of as his "rocks in a box," are themselves like fossils. And if so, can we not think of them as not only a metonym of *Spiral Jetty*, but as the fossils of the Earthwork sculpture *as* specimen? The non-sites, displayed in museums, take on the feel of natural history museum dioramas, the part that suggests the whole of the *Spiral Jetty*.

¹⁵⁴ Corrin, Kwon and Bryson, *Mark Dion*, 19; see also Coles, 38. Coles points out Dion's early connection to Smithson's work, by way of his studies at the Whitney Program, and through his reading of "Owens' work on Smithson and Benjamin, the site and the ruin." See also "Neukom Vivarium," *Art:21 Art in the Twenty-First Century IV* (PBS, 2007). In the PBS interview, Dion notes his connection with "earthworks and people like Robert Smithson," as well as his connection with "the Hudson River School," which provides "an unbroken chain" to the school of abstract painters" through Smithson. "Our relationship to the landscape is a strong element in the history of American art because it is remarkably distinct from the European perspective of landscape."

that of Smithson, engendering an artist playing an artist, playing a naturalist, playing Smithson. While there are many distinctions that one can draw between the projects of Smithson and Dion, beginning, most obviously, with their chronological distance from one another, so many other things appear the same. Dion's practice has often been read within the space of institutional critique, but his works, like those of Smithson, elicit grand subjects—natural history, environment and evolution, to name just a few. And as was the case with Smithson, Dion is unwilling to pass judgment, always challenging the viewer by saturating his subject position with a multiplicity of identities. With Dion, as with Smithson, one can hardly separate the artist from his work, the material artifacts from their meanings, and one could even say, the work of art from its morphology.

In her essay “Robert Smithson: Plotting a Line from Passaic, New Jersey, to Amarillo, Texas,” the art historian Eugenie Tsai includes a photograph of the artist standing in his childhood home (c. 1960) (**Fig. 1.3**). Smithson, tall and lanky but formidable, leans against a display shelf, looking intently at an early painting. The room in which he stands contains a personal museum he created in his youth, with “reptiles, fossils and artifacts” on display. “In Clifton my father set up—built I guess what you could call a kind of suburban basement museum for me to display all my fossils and shells, I was involved with collecting insects and...field naturalist things...rocks and whatever,” Smithson said.¹⁵⁵ The walls are covered with drawings, paintings, sketches; the shelves with things found and things made. A shoebox sits on another shelf, protecting a prized artifact, suggesting perhaps the sort of homemade dioramas made by elementary school children. One of Smithson's childhood friends, Alan Brilliant,

¹⁵⁵ Paul Cummings, interview with Robert Smithson (New York City: Smithsonian Archives of American Art, July 14 and 19, 1972).

remarked upon the intensity with which Smithson approached everything. “Bob had no interest in what other people said about art unless it led to some primary source that he would then investigate (in his botanist way) *himself*,” said Brilliant.¹⁵⁶ Smithson, here characterized as a scientific specialist of plants, possessed the kind of curiosity and ambition that drove the early naturalists to seek out and gather new information and material artifacts of nature, processing his discoveries through art and putting his wares, like a naturalist, on display. In the space of his childhood room, then, Smithson marks an early formal space recalling *Wunderkammern*, spaces in which art, nature, and machine coexist.

The poster for the *Spiral Jetty* exhibition at the Dwan Gallery in 1970 consists of Smithson’s film treatment for the work, and perhaps his cinematic treatment of the world (Fig. 1.4):

When I was, I guess, about seven I did very large paper constructions of dinosaurs which in a funny way I suppose relate right up to the present in terms of the film I made on *The Spiral Jetty*. I used the prehistoric motif running through that. So in a funny way I guess there is not that much different between what I am now and my childhood.¹⁵⁷

Smithson provides us with an abundance of sketches and visual and textual references in the poster: “Explosion on sun, dust, road, Hall of Late Dinosaurs, postcard of dinosaur in swamp quick, car sound, sounds of truck, sound of water, Samuel Beckett, *Geological Evolution on North America*, dinosaur bones in American Museum of Natural History, extinction prevails.”¹⁵⁸ Like his childhood museum, the poster for the *Spiral Jetty* exhibit

¹⁵⁶ Eugenie Tsai, “Robert Smithson: Plotting a Line from Passaic, New Jersey, to Amarillo, Texas,” in *Robert Smithson* (Los Angeles: The Museum of Contemporary Art, 2004), 12.

¹⁵⁷ Paul Cummings, interview with Robert Smithson (New York City: Smithsonian Archives of American Art, July 14 and 19, 1972).

¹⁵⁸ Text taken from a poster Smithson made as a movie treatment for the *Spiral Jetty* film, but that also advertised an exhibition held at the Dwan Gallery, October 31-November 25, 1970.

becomes its own two-dimensional cabinet of curiosity, which unfolded into three dimensions within the space of the gallery, where photographs and the movie together provided a telegraph of information between the gallery goer and the spiral rocks and crystals themselves. In the imagery of the poster, however, we see a kind of flattening of wonders, of the sketches which only faintly suggest and produce the wonder the film and the piece themselves fully convey. Representations of rocks and minerals mingle with an image of a dinosaur exhibit and plenty of references to time. Smithson's film sequence sketches are imbued with movement not only through the artist's own squiggling lines, but with numerous spirals oriented in alternating clockwise and counterclockwise fashions, not to mention the meandering texts and arrows that direct our gaze and tie the entire image together.

Spiral Jetty, then, functions as a nexus of visual informatics, a place where art becomes land, geology, and a beginning for an inquiry into contemporary artists' involvement with tropes of natural history. The algal and bacterial-infested waters and their geological aura make the work a fossil unto itself, its own *Wunderkammer*. The water action, rising and falling, presents, hides, and represents the jetty as artifact, as a trace impression of itself repeatedly, as it rises to cover the geologic massing and recedes again. The gestures of vast landscapes recall something extraterrestrial, the sublimity of earth as experienced from space by little men in white suits, which is not farfetched, given Smithson's own science fiction readings, from *The Time Stream* (1931) by John Taine (Eric Temple Bell) to *Earthworks* (1963) by Brian W. Aldiss.¹⁵⁹ Smithson, with

¹⁵⁹ Robert Smithson, "The Monuments of the Passaic: Has Passaic replaced Rome as the Eternal City?," (1967) in *Land and Environmental Art*, edited by Jeffrey Kastner with survey by Brian Wallis (London: Phaidon, 1998), 229; Robert Smithson, Dwan Gallery poster (1970).

this primordial work, acknowledges the remote past, but simultaneously extends his temporal reach into some kind of cosmic future.

Contemporary scientists have also expressed their perceptions of the earth as seen through the vast cosmos of outer space. The evolutionary biologist Lynn Margulis and writer Dorion Sagan convey the sentiments of Eugene A. Cernan, the last astronaut to walk on the moon in December 1972, who described how the earth appeared from the vantage point of a spaceship. Cernan was struck by watching the sun rise and set every ninety minutes due to the speed of travel. “You begin to see how little we understand of time,” he remarked, adding, “You ask yourself, where am I in space and time?”¹⁶⁰ Cernan’s assessment of the view of Earth offers new insight into the simultaneity, if not the collapse of binaries: telescopic and microscopic, macro-history and micro-history, space and time. On Earth, situated in the space of human temporality, we are probably too close to notice how the two views persist in dialogue.

Spiral Jetty’s horizontal and vertical amassing of rock extends perpendicularly from the shoreline into the red water that bathes it. The spiral does not assume the shape of a classical circle nor a logical, minimalist square. Like a circle, it has no beginning or end, but it is still able to register both the finite and the infinite. It is as if the rocks piled one atop another with the aid of a backhoe and dump truck became sucked into a mysterious whirlpool to the left of the otherwise tidy length of jetty. With regularity, the rocks advance toward a central vortex in two sweeping and graceful turns. The gesture of the form is rather monstrous, except when seen from the air. The spiral constitutes a

¹⁶⁰ Lynn Margulis and Dorion Sagan, *What is Life?* (Berkeley: University of California Press, 2000), 10.

cosmic swirl that recalls the telescopic images recorded by space probes traveling long distances.

The particular kind of algae that turns the waters surrounding the now crystalline-encrusted rock formation red recalls the surfaces of Mars.¹⁶¹ But, in fact, *Spiral Jetty* occupies the site of a former industrial wasteland. This awareness of man's place within the Jetty's historical mark is further illuminated by writer Rebecca Solnit, who has argued that landscape art from this period relied on "established human scale, not only literally but cosmologically: what place people occupy in the order of things."¹⁶² The role of landscape in establishing the human order of things remains integral to the place that the work of Smithson plays in taxonomies of art and the self that extend preoccupations of contemporary artists with natural history well beyond the motifs of curiosity cabinets and natural history museums.

Whether one chooses to call it a sculpture, architecture or something outside the boundaries of art historical classification schemes, Smithson's geo-centric *grand project* stands as a vast synthetic force. It is geology and geography: land, rocks and water extending into the Great Salt Lake at Rozel Point, Utah. And as Roberts has argued, Smithson's *Jetty* has always been intimately tied to history. She points out that the festival at Promontory Point that celebrated the joining of the Union and Pacific Railroads took place not far from the site of the *Spiral*. The *Jetty* also has much in common with the diverse scopes of natural history—historical, but thematic, specific, yet vast. Within this vastness lies a space of temporal conjunction in which specific historical

¹⁶¹ The Mariner 4 spacecraft took the first photographs of Mars in 1964, but these were in black and white. NASA captured the first color photographs of the red planet in 2007 with its Mars Exploration Rover Mission.

¹⁶² Rebecca Solnit, *As Eve Said to the Serpent: On Landscape, Gender, and Art* (Athens, GA: The University of Georgia Press, 2001), 81.

moments elide with timeless and, as Roberts argues, transcendental meta-narratives.

Smithson himself describes his piece with the lyrical and open language of that which cannot be contained:

As I looked at the site [*Spiral Jetty*], it reverberated out to the horizons only to suggest an immobile cyclone while flickering light made the entire landscape appear to quake. A dormant earthquake spread into the fluttering stillness, into a spinning sensation without movement. The site was a rotary that enclosed itself in immense roundness. From that gyrating space emerged the possibility of *Spiral Jetty*. No ideas, no concepts, no systems, no structures, no abstractions could hold themselves together in the actuality of that evidence. My dialectics of site and nonsite whirled into an indeterminate state, where solid and liquid lost themselves in each other. It was as if the mainland oscillated with waves and pulsations, and the lake remained rock still. The shore of the lake became the edge of the sun, a boiling curve, an explosion rising into a fiery prominence. Matter collapsing into the lake mirrored in the shape of a spiral. No sense wondering about classifications and categories, there were none.¹⁶³

The tropes of history, time and space repeatedly collide with the materiality of rocks, minerals and crystals in the Jetty. Repetition is one of the oldest patterns of life. We see it in the replication of cellular structures, in reproduction, and in other life processes.

Entropy, the Second Law of Thermodynamics, remained essential to Smithson's *Spiral* project, as well as his entire body of work. He organized rocks in orderly patterns, anticipating that the water would at once cover and then uncover the formation; the spiral finding itself in increasing states of disorder, disarray, and chaos. That interplay has generally been presented by scholars as a process ending in total disorder, when the grains of the sandbox can no longer be separated into light and dark. In this sense, Smithson's piece plays out an entropic end-game. One could also see this inevitable disorder as the direction in which the natural (often non-human) world constantly moves. But this disorder is, as Margulis, and Sagan have argued, as indicative of human life as it

¹⁶³ Robert Smithson, "The Spiral Jetty," in Jeffrey Kastner and Brian Wallis, *Land and Environmental Art*, 215-16.

is of all other life.¹⁶⁴ As Foucault said, “Just as a zoophyte stands on an ambiguous frontier between animals and plants, so the fossils, as well as the metals, reside in that uncertain frontier region where one does not know whether one ought to speak of life or not.”¹⁶⁵ Like Foucault’s fossils, Smithson’s *Spiral Jetty* becomes a geological zoophyte, a marker of life’s dissolution that functions at the same time as proof of its survival and continuation.

Smithson touches on these themes himself in the text of his Dwan Gallery exhibition poster. Citing A.R. Verma and P. Krishna’s *Polymorphism and Polytypism in Crystals* (1966), Smithson describes the crystals building up on his rocks as imbued with “growth” and the ability to “wind” and “rotate,” actions consistent with life. The action of winding or rotating also calls to mind the hands of a clock, marking the passage of time and the dispersal of energy through the ticks of its hands. Roberts observes this winding, noting Smithson’s description of one of his sculptures as “‘a clock that doesn’t keep time, but loses it.’”¹⁶⁶ But she does not extend this notion to the role clocks played in Renaissance rooms of wonder, a metaphor appropriate for Smithson’s work. Mechanical devices, from clocks to automatons, formed a counterpart in many *Kunstkammern* to organisms whose preserved bodies once coursed with the blood of life. In his book *The*

¹⁶⁴ See Edwin Schrödinger, *What is Life?* (1944), <http://home.att.net/~p.caimi/schrodinger.html>. Austrian physicist and philosopher Erwin Schrödinger—to whose essay “What is Life” (1940) Margulis and Sagan at least in part responded with their book *What is Life* (1995)—explains that historically, “a piece of matter” was “said to be alive” “when it went on ‘doing something,’ moving, exchanging material with its environment.” The organism remained distinctly alive by avoiding the static state of an entropic equilibrium, constantly metabolizing (Schrödinger says this has included “eating, drinking, breathing and, in the case of plants, assimilating”). He argues that the living organism is marked by its ability to delay the chaos, the entropy that ultimately results in “the decay into thermodynamical equilibrium (death).” The ability of the living organism to “obviate” (or at least postpone) death, is in itself a measure of order and control; entropy and order remain indirectly related in the sustenance of life. Schrödinger considered these energy properties characteristics of life, rather than sum totals of its essence. As he has said, “the structure of living matter...cannot be reduced to the ordinary laws of physics.” And he is hesitant to essentialize cellular components such as “chromosome fibres” as being “‘cogs of the organic machine’” (26, 27, 30).

¹⁶⁵ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 161.

¹⁶⁶ Roberts, 9.

Lure of Antiquity and the Cult of the Machine (1995), the art historian Horst Bredekamp describes the implications of eliding the living and the non-living, in this case in relation to some famously “spiraling” sculptures:

Like on the stage of a theater, the *Kunstammer* demonstrated all the various stations in the transition from an inert natural material to an animated body. Since the sense of an upward spiraling special rotation depicted in mannerist figures was meant to convey an internal movement to the surroundings and the view through the principle of “*figura serpentinata*,” it is not surprising that in the Prague *Kunstammer* of Rudolph II, Giambologna’s “Rape of the Sabine Woman” and two minor copies of the Laocoön were placed next to a set of antlers, an artistic work of nature seeming to reach out as if alive; nor that a figure of Mercury was placed close to an automaton.¹⁶⁷

Smithson, like Bredekamp, recognized the function of the spiral as an articulation of the spaces of growth and life. In his Dwan Gallery poster, next to texts about crystalline growths and algal blooms, Smithson makes the sun a site of repetition. In the first cel (a two-dimensional container in and of itself) he depicts an “explosion” on the sun. In the fifth sequence, the sun burns outside the windows in the “Hall of Late Dinosaurs” as the interior rooms remain “dim and obscure.” In an aerial view in Part II of the film treatment of the Spiral, Smithson depicts a sun “flashing” on the edge of his Jetty. Later he notes that the helicopter should pull back in order to reveal the “sun blazing on the water.” Smithson uses the sun as a clock, providing order to his rocks and crystals and marking temporal progression throughout the film and the poster with the artist’s directions. But Smithson’s inability to control the sun remains, like many of the elements in a *Kunstammer*, limited. His directorial moments remain at the whims of cloud patterns, weather events, time of day, and season. His director’s marks maintain the same illusion

¹⁶⁷ Horst Bredekamp, *The Lure of Antiquity and the Cult of the Machine*, translated from German by Allison Brown (Princeton: Markus Wiener Publishers, 1995 [1993]), 48.

of control, of getting the sun to move, that Mercury lends to the automaton in the Prague *Kunstammer*.

The more compelling effect of the *Spiral* (the poster and its exhibition) and the *Kunstammer* becomes, instead, their interconnection. Those who organized *Kunstammern* sought, as Bredekamp argues, “To understand the earth in its horizontal, spatial entirety...the *Kunstammer* combined the three vertical stages of development—from *naturalia* to *artificialia* to *scientifica*—with a horizontal plane that represented efforts to research the entire globe...the *Kunstammer* were at one and the same time like time-lapse photography *and* microcosms of the world.”¹⁶⁸ It was a quest for knowledge that at once total and at the same time acknowledges the relationship between parts. The sun, the rocks, and the crystals repeat across the page of Smithsonian’s film treatment of *Spiral Jetty* (also the Dwan Gallery poster), drawing the constellation of the exhibition together, from its site in Rozel Point to the film to the photographs and drawings made in preparation for the *Spiral* in the Great Salt Lake. The Dwan Gallery poster records the site of Smithsonian’s *Spiral* as dispersed, spread across a page, across the *Jetty* and beyond the Lake via textual and visual bites of information. And yet while their dispersal suggests a disconnection, a coming undone, Smithsonian notes the continuity of not only the parts of his *Spiral* through its repetition as drawing, as film, as site, but also the interconnections with spaces outside itself. Smithsonian quotes *The Time Stream* in image sequence 10 of his poster:

Gazing intently at the gigantic sun we at last deciphered the riddle of its unfamiliar aspect. It was not a single flaming star, but millions upon millions of them, all clustering thickly, together like bees in a swarm, Their packed density made up the deceptive appearances of a solid

¹⁶⁸ Bredekamp, 36.

impenetrable flame. It was in fact, a vast spiral nebula of innumerable
suns.¹⁶⁹

The sun, for Smithson, marks the place wherein the cosmic is registered, in much the same way that Cernan saw the sun rise and set every ninety minutes. It is in this cosmological sense that the *Spiral Jetty* best registers the sensibilities of the naturalist.¹⁷⁰ Through a folding in and folding out of historical time and place, geologic and cosmic space, it brings the breaking down of the taxonomies of self that we read through Dion and Morris to a site not easily categorized by temporal conventions. In the ineffability of Smithson's spiral we can extend the "I" without an ego, the Linnaeus without binomials into the spaces of enchantment, curiosity and wonder. It is the space where the vertical and horizontal intersect, where the material and the immaterial meet, and where with careful looking one can catch a glimpse of "Universe."

¹⁶⁹ Robert Smithson, Dwan Gallery poster (1970), quotation from William A.R. Thomson, *Blacks Medical Dictionary*. Underlined by Smithson and designated as part of cel 12 in the poster.

¹⁷⁰ Paul Cummings, "Interview with Robert Smithson for the Archives of American Art/Smithsonian Institution," (14 and 19 July 1972) in *Robert Smithson: Collected Writings*, edited by Jack Flam (Berkeley: University of California Press, 1996): 286-87. Smithson has himself discussed his reckoning with a cosmology, or world view. In his high school years he registered this through a questioning of religion through Freud and H.G. Wells. He acknowledges his fascination, as a young adult in Rome, with Gnosticism, Manicheism "and the dualistic heresies of the East." He characterized this interest as "a kind of cosmology...some kind of world view." Then he found himself "working [his] way out from underneath the heaps of European history to find [his] own origins." This isn't to say that this kind of cosmology is directly at play in the spiral, or if it is that it is the only kind. But Smithson has historically taken the big picture view, so to speak, collapsing the teachings of ancient Gnostics with his contemporary period, accumulating historical memories of ancient cultures and those of "fairly recent civilizations," to synthesize his own world view, one that would emerge in his art time and again.

IV. Parsing Visionary Verbs of Universe

For many naturalists, including Linnaeus, the Universe remained fluid inasmuch as flora and fauna are transported from one location to another in the exchange of knowledge and of visual and monetary currency. Fluidity was a function of man's movement, while the Universe was understood as a fixed system ready for man's taking. But the contemporary artist-naturalists examined in this dissertation remain more open to the notion of "the universe" as a verb, reflecting the precepts of post-Darwinian evolutionary theories that enable us to consider ourselves as part of a dynamic system and not merely as living beings floating on a dead rock through space. The American visionary, theorist, and inventor R. Buckminster Fuller (1895-1983) first coined the word "Universe" as a verb in *I Seem to be a Verb* (1970), a book in which he even extended the active Universe to his own I-in-becoming, calling himself a verb.¹⁷¹ Taken together with the works of Lovelock and Margulis on Gaia theory, Fuller's theory of universe illustrates man's relationship to the whole as one that is not static, but interactive and dynamic. This concept of limitless Universe, networked through a series of verbs, ebbs and flows, of materiality and consciousness, runs throughout many of the works of art in this dissertation, and particularly so through the paintings of Fred Tomaselli.¹⁷²

¹⁷¹ R. Buckminster Fuller, with Jerome Agel and Quentin Fiore, *I Seem to be a Verb* (New York: Bantam Books, c.1970); also at http://bfi.org/ds_news_v7_n10; see also Fuller, with Anwar Dil, *Humans in Universe* (New York: Mouton, c. 1983), where his conceptualization of Universe as a verb rather than a noun continues. See also the official site of the Buckminster Fuller Institute at www.bfi.org.

¹⁷² Fred Tomaselli has even specifically registered the work of Fuller in his paintings. In a work reproduced in *Trans* the artist plots Utopian communities on a topographical map, including Buckminster Fuller's Dome. See *Trans>arts, cultures, media* 1-2, No. 3-4 (1997): 131. I should also note that Dion infuses his own work with the environment in action. In an interview, "Neukom Vivarium," for the PBS program *Art 21*, the artist explains that for him nature is a process, not a static fixed set of objects.

Tomaselli left Los Angeles in 1985, the city of his birth, and settled into the Williamsburg neighborhood of Brooklyn.¹⁷³ He had studied art at California State University, Fullerton, bringing the sensibility of West Coast freedom east. Early in his career, Tomaselli made conceptual works, often tied into the transport of the mind and body. His *Black and Blue* (1989), for instance, engendered a kind of Robert Morris box gone cosmological, in which the viewer could stick her head in and get “the experience of a low-budget planetarium—it was a case of personalized intergalactic travel.”¹⁷⁴ Since that time, however, Tomaselli has become most renowned for his maximalist paintings that combine a montage of materials from the world of natural history and pharmacology (and psychedelia), fields that notably overlap in their attention to classification and their attention to the interaction of plants and fungi with animals. Visually rich, Tomaselli’s polychromed (collage) paintings, situated on a black ground, excavate sites of hybridity and density, referencing a multitude of materials, methods and positions—botanicals, pharmaceuticals and paint; painting, collage and montage and sculpture; utopia and dystopia, materiality and experience, knowledge and its slippages.¹⁷⁵

Though usually acknowledging these themes in operation in Tomaselli’s work, the scholarship often attends too singularly to the artist’s use of psychedelics and other mind and body altering drugs in his paintings.¹⁷⁶ While these themes are surely

¹⁷³ Fred Tomaselli is currently represented by the James Cohan Gallery, New York.

¹⁷⁴ Alisa Tager, “Good Karma and the Works of Fred Tomaselli,” in David Greene and Alisa Tager, *Fred Tomaselli* (Santa Monica, CA: Christopher Grimes Gallery and Smart Art Press, 1995), 7.

¹⁷⁵ This richness might also be read as density. See Dan Nadel, “Trenton Doyle Hancock & Fred Tomaselli with Dan Nadel,” *The Brooklyn Rail* (May 2006). As Tomaselli himself has noted in this conversation, “I don’t think a painting can have too much information...if I could put the whole world in my work I would. I want the work to be as dense and complex as possible, that way it can yield a multiplicity of meanings depending on the viewer’s personal history.”

¹⁷⁶ Few critics have offered a negative response to Tomaselli’s project. But those who have done so include: Jeffrey Kastner, “Art in Review: Fred Tomaselli at James Cohan Gallery,” *The New York Times* (3 Nov. 2006). A series of “less convincing portraits” in the exhibition offer says Kastner, “lurid color

significant for any understanding of the complex personal and cultural dynamics at play in the artist's oeuvre, very few scholars have so far recognized (to any great extent) the role of natural history in the success of his project. The curators David Greene, Alisa Tager, Amy Cappellazo, and Eugenie Tsai, and the art critics Ingrid Periz and Gregory Volk are among the more prominent scholars who have attended to the role of drugs in the artist's work.¹⁷⁷ Arguably the best source for the "drug connection," not only in Tomaselli's oeuvre, but in the work of other like-minded artists is the recent exhibition, is the catalogue by Paul Schimmel with Gloria Sutton for the exhibition *Ecstasy: In and About Altered States* (2005), held at The Museum of Contemporary Art Los Angeles.¹⁷⁸

schemes and fashion magazine source materials [that] lend them the unfortunate air of a mutant Duran Duran video shoot," Holland Carter, "Art in Review: Fred Tomaselli," *The New York Times* (19 Jan. 2001). "Mr. Tomaselli is clearly trying to stretch himself in this new work, with lively if uneven results. By spelling out ideas that were once only implied, he has sacrificed a measure of visual elegance and conceptual cool, and he had thrown the potentially gimmicky nature of his pharmaceutical collage medium into relief," says Holland. Though he relents saying that Tomaselli has "tapped into a funky, folkish aspect of his art that he has played down until now, and that could well open a fresh direction."

¹⁷⁷ David Greene and Alisa Tager, *Fred Tomaselli*; Ingrid Periz, "The Kandy-Kolored Psychoactive-Flaked, Acrylic and Resin, Streamlined Painting," *World Art* (Feb. 1996): 58-63; Gregory Volk, "Transportive Visions," *Art in America* (July 1999): 78-80; Eugenie Tsai, "Fred Tomaselli: Gravity's Rainbow" (brochure) (New York: Whitney Museum of American Art at Philip Morris, 2000); Gregory Volk, *Fred Tomaselli* (New York: James Cohan Gallery, 2000); Sarah Valdez, "Report from Ridgefield: Outlaws in Art Land," *Art in America* (Nov. 2001): 76-78; Amy Cappellazo, *Fred Tomaselli: Ten Year Survey* (Lake Worth, FL: The Palm Beach Institute of Contemporary Art, 2001); and Marente Bloemheuvel and Jaap Guldmond, *Twisted: Urban and Visionary Landscapes in Contemporary Painting* (Eindhoven: Stedelijk Van Abbemuseum; Rotterdam: NAI, 2000), 9-10, and Gregory Volk's essay in this catalogue, "Fred Tomaselli: Transportive Visions," n.p. See also William Harris, "He Dropped Out of Drugs, and Put Them in His Art," *The New York Times* (19 Dec. 1999).

¹⁷⁸ Paul Schimmel and Gloria Sutton, *Ecstasy: In and About Altered States* (Los Angeles and Cambridge: The Museum of Contemporary Art Los Angeles and The MIT Press, 2005). For reviews of this show see Janet Margolis, "Is it Real or is it Ecstasy?," 1 *Art & Living* 2006; Eleanor Heartney, "Ecstasy Now," *Art in America* 94 (March 2006): 46-49+; and Erik Davis, "Ecstasy: In and About Altered States," (review) *Artforum* (Jan. 2006): 215-16. Davis also makes a rather important observation about the way that someone like Tomaselli made it big in the mainstream art world, while another Brooklyn artist making visionary works, Alex Grey, has not. Both artists often depict "similarly transparent bodies" in their work. Grey, says Davis, is "one of the most dominant painters in the largely marginalized world of contemporary psychedelic art. Though Grey's art graces rave fliers and New Age calendars, he is no naïf—the declarative intensity of his strongest paintings depends in part on his sly appropriation of textbook medical imagery, whose hyperreal rhetoric paradoxically lends an air of actuality to his visionary bodies. But Grey is too much of a mystic literalist for his work to ever make it to the walls of MoCA; transcendence, even if it is just a trick of immanence, is still taboo. Whereas Grey's transformed figures confidently ascend into rainbow mind-lattices, Tomaselli's organism plunges into the fractured rag-and-bone shop of the head, delivering the more assimilable message that ecstasy is rarely far from the abject."

Some of these critics have mentioned the role of natural history within the artists work, but not as a focal point of their studies, and not with a consideration of the specific entwinement of natural history and drugs.¹⁷⁹ It is this interconnection that I hope to

¹⁷⁹ Here I should elucidate that I am talking about “natural history,” not “nature” per se, which most observers acknowledge as an abiding interest in Tomaselli’s work. For references to natural history in Tomaselli’s work see: Lauren O’Neill, “Critics’ Picks: Fred Tomaselli,” *Artforum* (Oct. 2006); Ingrid Periz, “The Kandy-Kolored Psychoactive-Flaked, Acrylic and Resin, Streamlined Painting,” 60. Periz notes that Tomaselli, in the summer of 1995, “collected bugs and went botanizing;” Gregory Volk, “Transportive Visions,” 80. Here he briefly discuss Tomaselli’s field guide works, in which he cuts out birds or magazines in the shapes of birds and affixes them to white sheets to mimic ornithological guides. It is, Volk argues, “a kind of representation with roots in the Audubon era [that] mutates into a late-20th-century hybrid;” Eugenie Tsai, “Gravity’s Rainbow” (brochure). Tsai notes that Tomaselli organized his materials “on cardboard flats in drawers, meticulously organized by shape, color, and size, genus and species...the pills were sorted into piles, again by shape;” Martin Herbert, “How Much Paint Does it Take to Make a Painting?,” *Modern Painters* Vol. 17, No. 3 (Autumn 2004): 84-85. Herbert says, “Tomaselli represents bodies, as microcosms within macrocosms, organic kingdoms.” He also references “this psychedelic fossil field.” Herbert also references the artist as “peering at marvels,” and investigation into “our possibilities for wonder;” Fiona Bradley, “Monsters of Paradise,” (brochure) (Edinburgh, Scotland: The Fruitmarket Gallery, 2004). Bradley actually uses “natural history” in conjunction with Tomaselli’s work, and notes he is a classifier, a “natural historian.” “His studio is meticulously organized with sheets of butterflies, flowers, leaves, hands, ears and noses cut out and stuck ready for use...The artist sources the best suppliers of certain plants, grows many of his own, and harvests and presses the leaves as part of his working practice. Almost as much time is spent organizing, classifying and preserving his material as making pictures with it.” In conjunction with the exhibition, too, The Fruitmarket Gallery organized a “Botanist’s Talk,” with Dr. Ian Darwin Edwards, Director of Public Programmes, Royal Botanic Garden, Edinburgh. He discussed “the cultural and physiological effects of psychoactive plants as featured in Fred Tomaselli’s work;” In her introduction to the catalogue *Fred Tomaselli: Monsters of Paradise* (Edinburgh: The Fruitmarket Gallery, 2004), 8, Bradley speaks of Tomaselli as “a cataloguer and classifier.” She also mentions his painting *Field Guides* (2003). In his essay, “Beyond a Shadow of a Doubt,” 15, also in the catalogue, John Yau refers to Tomaselli as a “wide-eyed cataloger.” He discusses the painting *Field Guides* (2003), which I discuss in chapter three of this dissertation, but the theme of natural history is largely missing. Finally Jonathan Lethem’s catalogue essay, “The Collector,” 73, provides a fictional, but likely biographical account, of Tomaselli’s history with collecting. “Now he was a bird-watcher, with binoculars and a field guide,” he says. This view is also provided in Carol Kino, “What’s Your Pleasure?,” *Art and Auction* (Feb. 2007). Framing the artist within the contemporary world of collecting curiosities, Kino indicates Tomaselli has long been drawn to and amassed hand-tied fly fishing flies. Ronnie Shushan highlights the inspiration of Tomaselli’s own garden, something that also emerges in a piece by Dorothy Spears. See: Ronnie Shushan, “Opening: A New Way of Seeing,” *Spirituality & Health* (Nov.-Dec. 2007); and Dorothy Spears, “Where Art Imitates Gardening (And Vice Versa),” *The New York Times* (8 Oct. 2006): AR 29. Spears explains that Tomaselli used the “pressed leaves from his garden” in some of his works, plants that include “irises, columbine, orange poppies, lavender, arugula, red currants, plums and two kinds of strawberries. See also Moira Jeffrey, “The Natural Thing to Do,” *The Herald* 30 July 2004). Jeffrey calls Tomaselli a “naturalist” and “the contemporary version of an eccentric Victorian naturalist and avid collector.” She mentions “swapping birdwatching stories with him,” and his tendency to “collect maniacally.” See also Susan Emmerling, “Artist’s Little Helper,” *Salon.com* (29 Oct. 1999). Emmerling says: “Now after a decade and a half of life in the wilds of Brooklyn, Tomaselli is something of an urban naturalist. He kayaks on the East River and grows figs in his backyard. It’s not exactly Grizzly Adams, but then again, the wilderness experience of the average American is the national park system—something he dismisses as just another theme park where everyone tromps around in polar fleece, Gore-Tex and carbon fiber—with all the Native Americans and hostile wildlife taken out. He’s no idiot, he does it too, but he

explore more fully in Tomaselli's paintings, particularly the way in which the visionary possibilities presented in the artist's oeuvre are as bound up in natural history as psychedelics.¹⁸⁰

doesn't kid himself that this is anything but a gourmet experience of nature with all its discomforts eradicated." The *Monsters of Paradise* catalogue, in addition, also includes a number of overtly titled ornithological images: *Fungi and Flowers* (2002), *Field Guides* (2003), *Greater Pewee, Olive Sided Flycatcher, Eastern Wood Pewee, Western Wood Pewee* (2004), *Passerines White Eyes* (2003), *Order Passeriformes Families Chloropseidae, Irenidae, Laniidae, Pityriasisidae* (2004), *Passerines Finches* (2003), *Passerines, Old World Warblers* (2003), as well as nice reproductions of his archival sheets and studio materials in context.; Gregory Volk's *Fred Tomaselli*, 8, 18-19, 39 includes his painting *Natural Selection* (2000) and his field guide collage, *Passerines, Old World Warblers* (2000); Amy Capellazzo, *Fred Tomaselli: Ten Year Surveys* includes reproductions of *Natural Selection*, as well as *Field Guide* (1996) and another field guide collage, *Land's End I* (1997). Cappellazzo's catalogue essay "Future Perfect," acknowledges Tomaselli's use of "field guides" and the hierarchies of "legal, scientific, and aesthetic classification." She also articulates "the taxonomic precision of chemical and biological classification" in Tomaselli's paintings. Rick Moody, in his essay "Canon," also in this catalogue, refers to Tomaselli indirectly in a story that includes selling "curios that belong to other people [to keep a drug habit going];" *High & Inside* (New York, Marlborough Chelsea, 2003), also features of reproduction of *Natural Selection*. That his work references "the propagation of species" is mentioned in Micaela Giovannotti and Joyce B. Korotkin, *Neo Baroque!* (Milan: Charta, 2005), 13. This catalogue also includes a reproduction of his painting *Organism* (2005); Gloria Sutton observes his paintings' "taxonomy of experience" in Paul Schimmel and Gloria Sutton, *Ecstasy: In and About Altered States*, 128; Two press releases (2003 and 2006) from the James Cohan Gallery, New York refer to Tomaselli's "display of cut-outs from...ornithological guide books;" Tom Briedenbach discusses *Field Guides* (2003) in "Fred Tomaselli at James Cohan Gallery," (review) *Artforum* (Sept. 2003): 227; Dan Cameron, "Through a Window, Darkly," 67 *Parkett* (2003). Cameron discusses Tomaselli's paintings as recalling "fossils pressed into rocks or specimens frozen into glaciers.;" Siri Hustvedt, "Magic Realism," *Another Magazine* (Autumn/Winter 2007). Here Tomaselli speaks about his paper collages "that from across the room, look like Audubon prints or field guides.;" Robert Ayers, "The AI Interview: Fred Tomaselli," *ArtInfo* (25 Oct. 2006). Ayers refers to Tomaselli's use of field guides. Tomaselli also describes his collection of cut outs as embodying a "cabinet of wonders." He also refers to part of his connection as "animal, vegetable, mineral," an obvious reference to Linnaeus; Carol Schwarzman, "Fred Tomaselli," *The New Art Examiner* (April 2001). Schwarzman mentions Tomaselli's use of "a birding book.;" Hilarie M. Sheets, "Prescription for Beauty," *ArtNews* (Nov. 1999). Sheets refers to the artist's use of "butterflies or spiders cut from field guides."

¹⁸⁰ For other sources on Tomaselli see: Lilian Tone and Anne Umland. *Projects 63: Karin Davie, Udomsak Krisanamis, Bruce Pearson, Fred Tomaselli*. New York: Museum of Modern Art: 1998, a brochure written for a group show held at The Museum of Modern Art, New York in 1998, in the artist files at the Hirshhorn Museum and Sculpture Garden, Washington, D.C.; Saskia Bos, "Second Berlin Biennale: No Fruit Salad Method," *Giornale dell'arte* (April 2001): 18; Axel Lapp, "Berlin Biennale," *Art Monthly* (June 2001): 10; Mark Gisbourne, "The Second Berlin Biennial: Here the City is the Star," *The Art Newspaper* (June 2001): 34; "Berlin: Second Biennale," *Art Press* (July-Aug. 2001): 76; Jonathan Goodman, review of *Sowon Kwon: Two or Three Corridors* (Whitney). *Art Asia Pacific* No. 31 (2001): 94; Claire Doherty, "Liverpool Biennial," *Art Monthly* (Nov. 2002): 39; "Happiness: A Survival Guide for Art + Life," review for an exhibition at the Mori Art Museum, Tokyo (Winter 2003): 126-27; Stephen Westfall, "Zucker's Color Constructions," *Art in America* (May 2004): 130-33; Barbara Pollack, "Art Above the City" (review of the Mori Art Museum exhibition, *Art in America* (May 2004): 99-101; Eleanor Heartney, "The Well-Tempered Biennial," (Whitney) *Art in America* (June/July 2004): 70-76; Franklin Sirmans, "Happiness: A Survival Guide for Art & Life at Mori Art Museum (review), *Art Asia Pacific* (No. 39 (2004): 77; "Karen Wright's Gallery," (review) *Modern Painters* 17, no. 2 (Summer 2004): 134-35; and Joe Hill, "New York: 2004 Biennial Exhibition (Whitney), *Contemporary* (2004): 62; Sarah Douglas, "A

Tomaselli's project concerns itself with the slippages of conceptual categories, taxonomical spaces culturally constructed for the insertion of data into tables of knowledge. This extends from the space of the naturalist's cabinet to the specific systems of critique art theoreticians have posited. And it is this methodological stance, that of the non-ideological, non-position, non-stance, that marked Tomaselli's arrival in New York as the artist working outside the box, a cliché certainly, but one no less meaningful for Tomaselli or for several of the artists in this study. While Brooklyn has long since established its place in the contemporary art world, this was not the case twenty years ago when Tomaselli arrived on the East Coast. His choice to forego Manhattan set him apart from its East Village art scene almost immediately. The critic Gregory Volk has articulated the unique space of Brooklyn during this period—even as late as 1992, when he started writing for the Williamsburg weekly, *Greenline*—and it is a point worth articulating at length, in its demonstration of the expanded field of space, process and criticism in which the artist continues to make his paintings:

The most influential art criticism in Manhattan had become ultra-theoretical. French poststructuralism, translated into English a decade or more earlier, had been rerouted in the direction of visual art, and there it often sounded, in poet Randall Jarrell's words, 'like something written on a typewriter, by a typewriter.' Manhattan was first hijacked by money and then by theory...In Brooklyn, there was little money and plenty of skepticism on the part of very intelligent artists. But the works I encountered were not at all beholden to, or illustrative of this or that by Foucault, Derrida or Baudrillard. In Brooklyn, artists are encouraged to pursue unexpected tangents and to abide in the process, as opposed to angling for the next gig. Much more than in Manhattan, hierarchies are suspended, between older and younger artists, renowned and emerging artists, and artists and art professionals. When stratifications are cleared away, when people aren't decked out in the costume of the hot artist, the

New High," *Art + Auction* (Jan. 2007); Joyce B. Korotkin, "Fred Tomaselli at James Cohan Gallery," *Tema Celeste* (Jan./Feb 2007); Sarah Valdez, "Fred Tomaselli," *PaperMag* (3 Nov. 2006); R.C. Baker, "Best in Show: Black on Blonde," *The Village Voice* (27 Oct. 2006); David Colman, "Fred Tomaselli," *Elle Décor* (May 2005); Neville Wakefield, "Fred Tomaselli: He Brings Ideas to Life," *Interview* (Jan. 2001).

important critic, the hip dealer, everything feels a lot more free and unencumbered.¹⁸¹

Tomaselli's project, as it has been documented and interpreted by numerous critics, curators and art historians, embraces a plurality—really a density—of aesthetic and cultural concerns, none of which are easily explained or answerable. His paintings lay waste to hierarchical systems of knowledge, from the categories art historians (myself included) and critics use to construct and interpret (often “high”) art, to the ideological and cultural systems that structure our daily activity. He allows a space in which our minds are free to wander unencumbered by what the bearers of cultural patrimony believe to be proper knowledge, theoretical positioning and forms of art. His paintings, as we will come to see with *Ripple Trees* (1994), and *Hummingbird* (2004) (in chapter three), mine the airwaves of music radio with as much earnestness as they acknowledge aesthetic moments and scientific epistemes long passed.¹⁸²

In *Ripple Trees* (1994), Tomaselli presents us with a landscape scene, a scrim of trees illuminated by the soft evening glow of a setting sun (**Fig. 1.5**).¹⁸³ He sets the deep celestial blue of the sky against a fading purple that, in turn, rests upon a smoldering orange. The colors meet with a landscape, silhouetted in black that descends gradually from the branches of a deciduous tree at left to a full leafy one at right, both of which

¹⁸¹ Gregory Volk, “Big Brash Borough,” *Art in America* (Sept. 2004): 93. See Amy Cappellazzo, *Fred Tomaselli: Ten Year Survey* (Lake Worth, FL: The Palm Beach Contemporary Art, 2001), n.p., where the curator Amy Cappellazzo makes a similar point, saying: “Tomaselli’s personal sensibility, as well as his Southern California training, inured him to the solipsism of the East Village scene. Rather than sign on to a manifesto on ideology for art making, Tomaselli sought an aesthetic strategy that was based on hybridity and reconciliation of diverse points of view. Pop, Romanticism, Abstraction, Outsider Art, Folk Art, Western Classical and Conceptualism all figure in his work. He rejected both the angsty histrionics of the neo-expressionists and the aloof hyper-rationality of appropriation art.”

¹⁸² Wilco, *The Wilco Book* (New York: Picture Box, 2004). This art book illuminates my discussion of Tomaselli’s painting *Hummingbird* in chapter two.

¹⁸³ *Ripple Trees* is reproduced, but not specifically discussed in Amy Cappellazzo, *Fred Tomaselli: Ten Year Survey*; and *Twisted: Urban and Visionary Landscapes in Contemporary Painting* (Eindhoven: Stedelijk Van Abbemuseum; Rotterdam: NAI, 2000).

frame a smaller evergreen in the near distance. Within this unpopulated, dreamlike space, little white pills form a pattern of overlapping concentric circles, rippling out as if many pebbles had been thrown in a pond simultaneously and cast waters evenly outward. Tomaselli accents the epicenters of these circles with colorful tablets and capsules. The painting operates as a twist on Vincent Van Gogh's *Starry Night* (1889), in which the saturation of the circles' centers punctuate the painting, dissipating at their edges and leading one to the next colorful orb. This allusion references the traditions of post-Impressionist painting, particularly with the pointillist qualities of Tomaselli's little white pills.¹⁸⁴ But in contrast to the thick impasto of Van Gogh's pieces, Tomaselli's fits more easily into the space of contemporary pop culture; with its smooth surface, *Ripple* comes closer to the dormitory room posters of *Starry Night*, than it does the original canvas. Keeping with this theme "ripple" also denotes the cheap wines often drunk by college students (e.g. Mad Dog and Boone's Farm). Though his work acknowledges the visual clichés of inexpensive art reproductions and popular entertainment culture, it does draw more deeply from the expressive tone of Van Gogh's oeuvre, tempered by the "rich detail and luminous surface" of Dutch still life paintings.¹⁸⁵ Tomaselli's landscape offers a measure of earnest wonder, as if we were ourselves sitting in the forest with a telescope, waiting for a shooting star or another celestial occurrence.

¹⁸⁴ Other critics have said Tomaselli's work suggest the work of Italian Mannerist painter Giuseppe Arcimboldo. See Paul Lester, "Monsters of Paradise by Fred Tomaselli," *Boldtype* Issue 21: Art (July 2005); Carol Kino, "Fred Tomaselli at James Cohan," *Art in America* 91 (Dec. 2003): 104-05; "ART galleries – Chelsea: Fred Tomaselli," *New Yorker* (26 May 2003); and Jeffrey Kastner, "Art in Review: Fred Tomaselli at James Cohan Gallery," *The New York Times* (3 Nov. 2006); The critic Andrea K. Scott indicates source material in "the systematic compositions of Sol LeWitt and the jewel-toned intricacies of Indian miniatures," as well as the drip paintings of Jackson Pollock. See Andrea K. Scott, "Fred Tomaselli: 'Gravity's Rainbow,'" *TimeOut New York* (Dec. 1999).

¹⁸⁵ Edward Epstein, "Swarm: Philadelphia" (review) *Art Papers* (July/August 2006): 48-49.

But the artist will not let this nod to popular clichés go easily. Returning to the real of pop culture, *Ripple* could serve as a cover for any number of Grateful Dead albums, assisted perhaps, with the addition of a few dancing bears.¹⁸⁶ And indeed the painting's title evokes the group's song "Ripple," released in 1970 on the *American Beauty* album:

If my words did glow with the gold of sunshine
And my tunes were played on the harp unstrung,
Would you hear my voice come thru the music,
Would you hold it near as it were your own?

It's a hand-me-down, the thoughts are broken,
Perhaps they're better left unsung.
I don't know, don't really care
Let there be songs to fill the air.

Ripple in still water,
When there is no pebble tossed,
Nor wind to blow.

Reach out your hand if your cup be empty,
If your cup is full may it be again,
Let it be known there is a fountain,
That was not made by the hands of men.

There is a road, no simple highway,
Between the dawn and the dark of night,
And if you go no one may follow,
That path is for your steps alone.

¹⁸⁶ Gregory Volk, "Transportive Visions," 80. Volk references the Grateful Dead in relation to Tomaselli's work: "Mickey Hart, one of the drummers for the Grateful Dead, once described that famously questing West Coast band as being 'in the transportation business.' Now Tomaselli, with his punk-rock and speed-metal roots, is a far cry from a Deadhead. Still, there is a pretty good fit between Hart's phrase and the approach of Tomaselli, who's also 'in the transportation business': making works that do things to your mind, that take you places, that simultaneously hold out and question the promise of alternative realities and elevated consciousness. His new paintings are among his most 'transportive' yet." I would argue, however, that the sensibilities of the Dead and Deadheads might well appear different than Punk and mosh pits, but in many ways both cultures embrace idealistic sensibilities of transcendence, and are more alike than different. And clearly Tomaselli's historical collapse of these sensibilities and his obvious reference to the Dead song confirm this. This quotation also appears in Volk's essay "Fred Tomaselli: Transportive Visions," in *Twisted: Urban and Visionary Landscapes in Contemporary Painting*.

Ripple in still water,
When there is no pebble tossed,
Nor wind to blow.

But if you fall you fall alone,
If you should stand then who's to guide you?
If I knew the way I would take you home.

La dee da da da, la da da da da, da da da, da da, da da da da da
La da da da, la da da, da da, la da da da, la da, da da.¹⁸⁷

By the mid-1980s, many in the broader music-consuming public probably considered the Dead to be a relic of the countercultural movement of the 1960s. Then, in 1987 the band's song "Touch of Grey" became a pop sensation, providing new beats for those in their original fan base weary of current stars like Madonna, the plethora of heavy metal groups, and emerging rap. Don Henley summarized the group's position well in one verse of his song "The Boys of Summer" (1984):

Out on the road today
I saw a dead head sticker on a Cadillac
A voice inside my head said don't look back
You can never look back

Henley's observation suggests a band that has sold out, becoming rich on concert sales and feeding the capitalist system. (Arguably Henley used the Dead in the 1980s as a symbol for many bands, including his own, that had "sold out"). It also touches on the tenuous place of adults trying to find a place in the corporate machinations of American youth culture, leaving their hippie ideals behind for the material goods easy to accumulate with the help of Ronald Reagan's trickle-down economic plan.

But these sentiments may not have resonated so much with Tomaselli, who points out that he "came of age in the 1970s," and had been "too young to have engaged in the

¹⁸⁷ Grateful Dead, *American Beauty* (Warner Brothers, 1970).

utopian dialectic of the 1960s.”¹⁸⁸ Tom Wolfe described the seventies as the “Me Decade,” and perhaps this view at least in part speaks to Tomaselli’s own empty view of the decade, which was for him rife with psychotropics consumed “without ideology.”¹⁸⁹ To further complicate any reading of the dreamlike, visionary, psychedelic works for which he has become known, paintings like *Ripple Trees* (1994), have been produced since the early 1990s.

While Tomaselli came of age in the 1970s his work can be read equally well by those who came of age in later decades. And as it turns out, Henley’s song did not necessarily signal a death knell for the Grateful Dead. While hippies increasingly joined the ranks of yuppies, many of their children caught on to “Touch of Grey” and began to do just what Henley could not—look back. By 1994 when Tomaselli painted *Ripple*—just a year before Jerry Garcia (1942-95), the lead singer of the Grateful Dead, died of a heart attack—legions of adults and people young and old would have recognized the song not only as an idyllic ode to the 1960s Left, but also as a musicological marker of folk music and jam bands. Less cliché than “Touch of Grey,” the song “Ripple” remains one of the most poetic folk songs of the band’s history.

In “Ripple,” an individual searches for a road “between the dawn and the dusk of night,” a path without a guide. The music scholar David Dodd attributes a distinctly eastern sacrament to the Dead’s lyrics in this song. Lyricist Robert Hunter arranged the chorus, Dodd notes, as a haiku, a seventeen-syllable meditative poem. “It is not worthwhile to believe that reason can be imposed on thinking, or that anything reasonable can come from thinking, since communication of thought will always be flawed. It is

¹⁸⁸ *Fred Tomaselli: Monsters of Paradise* Intro. Fiona Bradley (Edinburgh: The Fruitmarket Gallery, 2004), 43.

¹⁸⁹ *Fred Tomaselli: Monsters of Paradise*, 43.

possible that Hunter's thoughts were born from the experience of altered states, and the frustration that goes with any attempt to describe experience in an altered state,” says Dodd.¹⁹⁰ The ripple represents a fissure in rational thinking, a ripple in Cartesian operations of the body and mind. One can only imagine that for Tomaselli, painting equally enunciates a ripple effect that remains only partially secured under a seal of resin. Instead, as his title suggests, his images are as fleeting as their label: here a ripple, there a tree, both here and there, neither here nor there, swiftly entering and exiting the human mind as if in a state of transcendental meditation.

My vision of a synchronic collapse of the 1960, 70s and 90s obviously poses certain methodological dilemmas. How do we read a counterculture-infused painting made in the 90s by an artist who most closely associates his formative years with the 1970s? Instead of rock and roll, psychedelics, social protest and free love, which of course waned with the AIDS epidemic, the decade in which Tomaselli actually painted *Ripple* was associated with the technological and corporate advancements of the internet and the dot-com industry of Silicon Valley, but was also associated in music with the resurgence of dead-head-like jam bands like Phish, a quartet that would witness a proliferation of psychotropics among its fan base, a kind substitution of Phish head for Dead head. In this context, what are we to make of Tomaselli's art? Is it little more than a vestige, a reminiscence of a younger, more subversive time of free drug consumption, “escapism,” as Tomaselli says, from “the miasma through which we find ourselves slogging today?”¹⁹¹ I think part of the answer lays in a piece that Tomaselli painted just a year later, *Untitled (Rug)* (1995) (**Fig. 1.6**).

¹⁹⁰ <http://arts.ucsc.edu/gdead/agdl/ripple.html>.

¹⁹¹ *Fred Tomaselli: Monsters of Paradise*, 43.

In addition to sampling the rich history of American music, Tomaselli's oeuvre also examines the drug cultures with which it has found itself enmeshed. The little white celestial spheres of Tomaselli's *Ripple* easily morph into the little white pills that speed up ravers and recall the music's role in altered states of consciousness.¹⁹² While *Ripple* parses that part of Universe in which people and plants connect in the space of an ideal cosmic landscape, *Untitled (Rug)* provides a repetition of linear forms uniformly dispersed, columns of botanicals and pills side by side. This material ordering, diametrically opposed to the circles and trees in *Ripple*, speaks to two strategies with which Tomaselli explores our human desires for control of nature and the self as "I." First, the resin that seals Tomaselli's paintings articulates a space of suppression, frustration and fear—a space orchestrated by the litany of drugs monitored and scheduled by the Drug Enforcement Administration (DEA) since the outlawing of LSD on October 6, 1966.¹⁹³ This first point leads to the second, which is the ordering of nature through taxonomical systems used by naturalists. It is important to articulate both of these points because it is through this means that government agencies, like the DEA, schedules the substances that are legal or illegal to put in our bodies. Linnaeus's binomial system of classification, in this context, gives way not to understanding, but to an assertion of state power.

In *Untitled (Rug)* Tomaselli creates evenly spaced columns of hemp leaves and muted green *Datura*, a leafy green, delirium-producing plant that can be smoked or

¹⁹² I think it is also important to acknowledge the role of pills in the larger cultural milieu and in Tomaselli's own life. As the artist himself has said, "In 1989...My friends were dying of AIDS and taking masses of pills...drugs had morphed from agents of enlightenment and pleasure, to tools of survival." See Chris Martin, "Fred Tomaselli in Conversation with Chris Martin," *The Brooklyn Rail* (Dec. 2003).

¹⁹³ Of course America has had a long history of drug prohibition, including the Marijuana Tax Act, which made marijuana illegal on August 2, 1937.

brewed as a tea. He intersperses these forms with neat lines of yellow, blue, green, orange and red pills and ephedrine, as if mimicking the linear regularity of industrial and transportation age symbols as assembly lines and airport runways. The painting's black background thrusts the straight patterns into the foreground, an effect seen in many of Tomaselli's works. *Rug* presents psychotropics as having an order not usually associated with them, despite the possibility that columns like these recall a neat line of cocaine on glass, ready for snorting. Curator Eugenie Tsai has remarked that Tomaselli engages in an intense process of identification and classification in the process of making his pill-box paintings. His materials, she says, would be "laid out on cardboard flats in drawers, meticulously organized by shape, color, and size, genus and species...the pills...round, oblong, and lozenge."¹⁹⁴ The order that Tomaselli asserts in his *Rug* pharmacopoeia links his work to the naturalist project of ordering plants, animals and fungi with the less empirical act of altering consciousness through psychotropic encounters.

Despite the orderliness Tomaselli asserts in *Rug*, the painting subversively calls on us to question the categorization of mind- and body-altering substances: the licit (over-the-counter, behind-the-counter, prescription-only) and illicit (Schedule I, Schedule II, Schedule III, Schedule IV, Schedule V). Datura leaves fixed next to Tylenol capsules next to a pharmacist's own curiosity cabinet, prod us to question the haphazard way that governments attempt to order and regulate the human consumption of these substances. *Rug* operates as a ruse in Tomaselli's subversion of our preconceptions and suppositions about "drugs" through an obsessive ordering of them according to their binomial or their

¹⁹⁴ Eugenie Tsai, *Fred Tomaselli: Gravity's Rainbow* (New York: Whitney Museum of American Art at Philip Morris, 2000), 2.

generic or brand name.¹⁹⁵ It temporarily reinforces our notion of order over the plant world, not to mention the DEA's ordering of plants (or rather their alkaloids), via their binomial or their generic or brand names. Keeping in mind Tomaselli's subversive edge, we can reread "*Untitled (Rug)*" as "*Untitle dRug*," a phrase that calls to mind the contested American debate over pharmaceutical companies' control over their distribution. Tomaselli's painting cleverly exposes our notions of pharmacological order, wittily sweeping under the rug a culture of embedded drug use, both legal and illegal, that one rarely finds reconciled in our culture. His project uses plants to critique taxonomical systems for the often zealous way that they claim to classify the natural world. These works contribute to the recognition that what we see remains not fully knowable. Things are not always as they appear. And there are many parts of our universe—and brains—that simply cannot be accessed through conventional channels of language exchange and observation. There is not always a *right* place for everything.

In *Untitled (Rug)*, each pill and tablet, situated next to leaves and petals, becomes a specimen, taxonomically ordered. In this spirit, curators Alisa Tager and David A. Greene bring the notion of species to their analysis of Tomaselli's oeuvre. Tager argues that his paintings "come near to extinction in this ongoing age of twelve-step programs and moral rectitude."¹⁹⁶ Tager's reading gives us the sense of the artist's works as nostalgic and romantic interludes in the post-Counterculture era, or becoming, perhaps, obsolete, even fossils themselves. But her analysis also assesses the rarity of his paintings

¹⁹⁵ Chris Martin, "Fred Tomaselli in Conversation with Chris Martin." Tomaselli often eschews ideological positions, he also acknowledges his involvement in repressed, overlooked, or over-conditioned elements of our culture. Regarding his use of psychedelics, Tomaselli said to Martin: "It is one of the great repressed discourses in contemporary culture—this massive effect of psychedelic drugs on consciousness and its tremendous effect on American culture. But it's not talked about all that much."

¹⁹⁶ Alisa Tager, "Good Karma and the Works of Fred Tomaselli," in *Fred Tomaselli* (Santa Monica, CA: Smart Art Press for the Christopher Grimes Gallery, 1995), 10.

and the drugs they contain in the decades since Nancy Reagan's "Just Say No" anti-drug campaign. The alkaloidal potential of each pill becomes extinct through restrictive legislation and, in the process, the plants themselves become if not extinct, at the very least off-limits. For his part, Greene argues that drugs have "personalities of their own, but only when activated by the personalities of their consumers. Sometimes it's impossible to separate the drug from the user—not because the drug is so strong, but because the fit is so perfect."¹⁹⁷ From this perspective the pills themselves have as much consciousness and personality as the user. But Greene takes this a step further and suggests that as a result of this process of consumption, new species emerge, pill-person cyborgs, so to speak. This would not be an outlandish interpretation for an artist who has thought long about what it means to live in chemically and cybernetically-infused "Universe." Says Tomaselli: "So far, the best virtual reality I've found has been in a tab of LSD. That's virtual reality."¹⁹⁸ Tomaselli found himself a decade behind the countercultural movement in relation to its music and its adjuncts, but perhaps not as totally as he would have us believe. The paintings that follow *Untitled (Rug)* suggest the rich dynamic of humans and plants, art and alkaloids in operation in his work, but also in his sense of the cosmos as a space vibrating with life and higher powers.

Tomaselli's flora and pharmacological wares, as we see in *Untitled* (1999), pulsate with kaleidoscopic patterns, periodically receding into black vortices and emerging just as quickly into concentric rings of red, pink and orange tear-drop leaf shapes bordered by violet and spring green (**Fig. 1.7**). As with many of the artist's works,

¹⁹⁷ David A. Greene, "Field Trip: On the Art of Fred Tomaselli," in *Fred Tomaselli* (Santa Monica, CA: Smart Art Press for the Christopher Grimes Gallery, 1995), 27.

¹⁹⁸ Ingrid Periz, "The Kandy-Kolored Psychoactive-Flaked, Acrylic and Resin, Streamlined Painting," in *World Art* (Feb. 1996): 59.

this piece depicts and actually contains little white pills and Datura. The variously-sized white pills guide the viewer's eye as it advances into and recedes from an otherworldly black space, providing the observer with a rhythmic unity even in the movements from one white pill to the next. As with Alice, who became smaller and then larger upon eating the cake, so to does Tomaselli's viewer seem to shrink and grow, in this case through alternating microscopic and telescopic visions. Whereas *Untitled (Rug)* provides a sense of the fixed and clearly articulated ground, this later painting transcends the space of the picture plane with its dazzling black holes; but we are always mindful of the present with white dapples and pills framing the peripheries of imagined spaces.

With *Untitled (Rug)* we are offered a simple and subdued meditative rug on which to rest our mind's eye. But the 1999 painting also provides a dynamic vision that takes us beyond the prayer and the yantra, through a window of nature into another place and time.¹⁹⁹ As the poet and critic John Yau put it:

He knows that a state of heightened self-awareness, and of being intimately connected to the natural world, is something all of us desire. It is as fundamental to our make-up as DNA. Whether as a citizen of a country, a member of a religious faith, or as an individual adrift in this confusing postmodern world, we all want to know how the story turns out.²⁰⁰

Set within Tomaselli's complex compositions, each pill, leaf and species finds itself dispersed. With this dispersal, however, comes a new order, where a leaf becomes a pill becomes a color becomes a pill becomes a leaf again. It is as if, as with Smithson's *Spiral Jetty*, the dispersal of energy, the dissipation, has found a new momentum, accreting with

¹⁹⁹ Gregory Volk, "Transportive Visions," *Art in America* 87 (July 1999): 79; Marente Bloemheuvel, et. al., *Urban and Visionary Landscapes in Contemporary Painting* (Eindhoven: NAI Publishers/Stedelijk Van Abbemuseum, Eindhoven, 2001).

²⁰⁰ *Fred Tomaselli: Monsters of Paradise*, 19.

other beings to unleash a whole new energy field. Tomaselli's paintings provide a running commentary on the dynamic existence of universe as an ever-expanding and ever-imploding continuum, always changing despite our best efforts to create fixity through structures of order. We exist, from this perspective, in a state where the determination of our position is as fleeting as the sensation of our movements. The sibylline paintings of Fred Tomaselli, from *Ripple* to *Untitled* (1999), as well as his later maximalist paintings, as we will see in Chapter Two, parse visionary verbs of universe and invoke our own meditative transformations from origin to extinction through a kind of post-taxonomical dream.

V. Poppies!

I see poppies. Poppies everywhere, extending as far as the eye can see, calling to mind the laudanum-induced writings of Samuel Taylor Coleridge (1772-1834), Dante Gabriel Rossetti's painting *Beata Beatrix* (c. 1864-70), and the sleepy fields that subdued Dorothy and her friends in the Wizard of Oz.²⁰¹ These poppies occupy a unified space—the field—and yet their individuality asserts itself. The tall and graceful flowers, tipped in the most seductive scarlet red bend, pli  , and arabesque in an effort to confer and move in their otherwise fixed position in the soil. Here two blooms lean in as if relaying a secret, there another moves away, distancing itself from a poppy that has already dropped its four petals. The stylized pods left behind bear little resemblance to the elegant poppy

²⁰¹ Samuel Taylor Coleridge, "Kubla Kahn or a Vision in a Dream. A Fragment," reprinted in Benjamin DeMott, *Close Imagining: An Introduction to Literature* (New York: St. Martin's Press, 1988), 599-99; L. Frank Baum, "The Deadly Poppy Field" (chapter) in *The Wonderful Wizard of Oz* (New York: Barnes and Noble Classics, 2005 [1900]), 75-81; and also the film, *The Wizard of Oz* (MGM, 1939).

petals littering the ground. It is as if we have licked our way to the center of a tootsie pop and forgotten what to do with the sweet treat inside.

Like Alice, I feel as though I have eaten the cake, writing and rewriting what I see in front of me and in my mind while observing Roxy Paine's *Crop (Poppy Field)* (1997-98), a sculpture that represents by way of resin and paint not simply an ornamental poppy field, but one of opium poppies (**Fig. 1.8**).²⁰² With Paine's poppies, sap oozes from vertically-scored pods, revealing secrets ripe for harvest, and protecting others in pods, safe from the scrape of a collecting knife. The crop of scarlet red blooms "bedazzles and transforms," stimulating our olfactory senses, impressing our visions with hues of red, and tempting us with the alkaloidal properties therein.²⁰³

Critics have been less inclined to connect Paine's work with the subject of natural history as they have been with Tomaselli's work (and less overt when they do).²⁰⁴ Though, some have certainly alluded to this idea of wonderment of his attention to species specificity in his work. His oeuvre, however, emerged in the mid-1990s from the Brooklyn scene, being largely categorized into two areas: "machines that make art, and

²⁰² Roxy Paine, like Tomaselli, is also represented by the James Cohan Gallery, New York.

²⁰³ Joseph D. Ketner, "Roxy Paine: Dreams and Mathematics," 37.

²⁰⁴ Gregory Volk, "Roxy Paine at James Cohan Gallery," *Art in America* (May 2006): 180. Volk observes that Paine's "exacting nature/technology hybrids" produce "outright wonderment;" Jan Garden Castro, "Collisions: A Conversation with Roxy Paine," *Sculpture* (May 2006): 40-43. Castro observes Paine's interest in the "language of systems," which he sees in subjects like "science" and "botany." Castro and Paine discuss his interest in "plant morphology" and "the language of the species." Castro also notes Paine's interest in subjects related to natural history such as "geology." Paine also alludes to his interest in evolution and deep time. See also João Ribas, "The AI Interview: Roxy Paine," *ArtInfo* (Jan. 2006), where Paine remarks on his interest in "geological time, which scoffs at our little human age of domination of the planet." João also observes Paine's fascination with "dioramas and natural science as a kid.;" Eleanor Heartney, "Roxy Paine and the Changing Nature of Nature," *Madison Square Park Catalogue*. Heartney discusses Paine's weeds and fungi as being sometimes placed in "vitrines like museum dioramas or displays of scientific specimens." In a conversation with Heartney in February 2007, Paine described his weeds and fungi as embodying "the portrait of a species and the variations possible within that species."

art that looks very much like nature.”²⁰⁵ As his sculpture, painting and drawing machines have already received a lot of critical attention I have omitted them from this study.²⁰⁶ The poppies, of course, fall into this latter category of “art that looks very much like nature,” as do his fungi pieces that will be discussed in chapter three.²⁰⁷ Two especially comprehensive scholarly treatments of Paine’s work include the catalogues *Bluff* (2002) and *Roxy Paine: Second Nature* (2003).²⁰⁸ These sources, along with most other criticism on Paine’s oeuvre, lauds the artist’s work for rigorously investigating nature-culture relationships, questioning artistic autonomy in the art-making process, and extending our ideas about the control and classification of nature from the realm of art to the wider phenomenological and material world. The critic Elizabeth Hess called a grouping of Paine’s early work, “Underdeveloped, yet utterly compelling. Paine knows how to pull us in. He just has to figure out what he wants to tell us...Paine has great ideas, but

²⁰⁵ Emily Hall, “Roxy Paine,” *Artforum* 44 (April 2006): 245. The critic Anna Hammond observes, “the artist comments ironically on art-making either by imitating nature exactly or by making the creative process as mechanized as possible.” See Anna Hammond, “Roxy Paine at James Cohan,” 89 *Art in America* (Oct. 2001): 156.

²⁰⁶ For sources solely on Paine’s art machines see: Faye Hirsch, “Abstract Generations,” 93 *Art in America* (Oct. 2005): 127-28; Eleanor Heartney, “Report from London: Fracturing the Imperial Mind,” 89 *Art in America* (July 2001): 53; Eleanor Heartney, “Roxy Paine,” 83 *Art in America* (Nov. 1995): 110; Janet A. Kaplan, “Give & Take Conversations,” *Art Journal* 61 (Summer 2002): 77-79; Lisa G. Corrin, “A Speculative Introduction to a Speculative Exhibition: Give & Take,” in *Give and Take: 1 Exhibition 2 Sites* (20 Jan.-1 Apr. 2001): 28-29.

²⁰⁷ I have also chosen not to investigate his trees here, which have also gained enormous attention. For sources that only deal with Paine’s trees see: Lawrence Rinder, “Whither the Whitney Biennial?,” *Art in America* (June 2002): 53; Carol Vogel, “Inside Art: MADISON SQUARE ART,” *The New York Times* (1 Dec. 2006); David Cohen, “How Green is My Sculpture?” *The New York Sun* (10 May 2007): 23; Hilarie M. Sheets, “Trunk Show,” *TimeOut New York* (May 17-23): 63; Benjamin Genocchio, “MAD. SQ. ART 2007: Roxy Paine,” *The New York Times* (18 May 2007); Howard Halle, “Centerfold: Growing Season,” *Interior Design* (June 2007): 140-41; “Goings on About Town: Roxy Paine,” *The New Yorker* (27 Aug. 2007); “Madison Square Park: Roxy Paine,” *Sculpture* (Oct. 2007): 16; “2007 in Review: Public Art,” *Art in America* (Annual 2008-09).

²⁰⁸ Gregory Volk, Marti Mayo, and Roxy Paine, *Roxy Paine: Second Nature*, with contributions by Joseph D. Ketner and edited by Lynn M. Herbert (Contemporary Arts Museum: Houston, TX, 2003) and Michael Crewdson, Tim Griffin, Margaret Mittelbach and Roxy Paine, *Bluff*, with an interview with Allan McCollum (New York: Public Art Fund, 2002).

sometimes he doesn't go far enough."²⁰⁹ Yet by the time he creates *Crop*, just two years after Hess's assertion, Paine has brought greater clarity to his work: we can only help but wonder about the dedication, obsessions and compulsions that drive an artist to go beyond "far enough" and keep going. His recreation of poppy fields mesmerizes us if only in the realization that these flowers were not created by a machine, but by the painstaking dexterity of the artist and his assistant.²¹⁰ As for what it is that Paine seeks to tell us, it is perhaps his unwillingness to concede a single point that keeps his work going, his plants infesting new fields of our earth, eyes and minds.²¹¹

Returning from the wanderings of my mental terrains I realize that only a small plot has set my mind into rapid and multidirectional motion. This is, I remind myself, not a crop at all, but a representation of one, and one more like a gardener's flower bed than an agricultural plot.²¹² In the stark white walls of the gallery and the wooden planked floor *Crop* emerges only as a frame within my visionary film reel. The bouquets I smell escape me, leaving fecundity to my own organic processes, rather than the artful blooms that stand before me. The inviting red poppies, composed of lacquer, epoxy, oil paint, and pigment, rise from a five foot by six foot patch of "soil," in various stages of development, from blooming flowers to closed opium pods. The neat rectilinear soil base

²⁰⁹ Elizabeth Hess, "Cross Hatching," *The Village Voice* (16 May 1995): 86

²¹⁰ Joseph D. Ketner, "Introduction," in *Second Nature*, 9.

²¹¹ This point is reinforced in Jonathan T.D. Neil, "Do Androids Dream of Making Art?," *ArtReview* (Aug. 2006): 53. "The problem, or rather, the particular power, of Paine's machines, indeed of Paine's art as a whole, is that it does not fall so easily. If anything, his work systematically dismantles the possibility of assuming an intentional stance, not by denying that intentions, thoughts or desires stand behind the work, as was the strategy of artists from Jasper Johns to Donald Judd and after, but by substituting function for operation—i.e. design—for intention, and then substituting concrete physical processes for design, and then the physical for the intention, and on and on." And Paine himself has noted, "Resolution is not so interesting." See Castro, "Collisions: A Conversation with Roxy Paine," 43.

²¹² Volk, "Roxy Paine: Dreams and Mathematics," in *Second Nature*, 32-33. In Paine's work, Volk notes, "an inquisitive, research-oriented rationalism gets mixed with startling imaginative flights...Paine's cropped 'crop' on its small plot of fake dirt, his portable, drug-addled Eden, also reminds one of nothing so much as a garden plot in the suburbs or, even worse, a planter filled with nice geraniums."

suggests those plant rolls that have gained popularity among flower lovers seeking low-maintenance gardening.

From the scarlet red petals to the rich brown soil, this entire plot of poppies thrives not on photosynthesis, but plastics, the transformative material proffered to Benjamin Braddock in *The Graduate* (1967). The allusion to the famous moment in the film when a friend of Braddock's parents suggests "plastics" as the material of the future would not be lost on Paine. He notes that his works references "the history of plastic in the twentieth century."²¹³ He describes it as "a material of fakes" that "carries the stigma of being developed to replace more valuable materials."²¹⁴ Paine's critical eye, however, does not prevent him from seeing the potential benefits of this so-called "fake" material. An artist who does not consider himself a painter—however much his pieces rely on the act of painting to bring them to fruition—Paine relies on plastic's virtually limitless range of colors for his sculptures.²¹⁵ And in addition to its variety of hues, plastics can be poured and hardened into an infinite variety of shapes, ensuring morphological varieties of shape, as well as color. And yet despite his use of transformative materials, Paine becomes an organic machine, replicating one flower after another from the same species.

For some people poppies remain symbolic of Veterans Days, when people often pin poppies to their jackets to memorialize those who have died in war. The Canadian Lieutenant Colonel John McCrae conveyed the significance of poppies and remembrance in his poem, "In Flanders Field" (1915):

²¹³ Lynn M. Herbert, "Interview with Roxy Paine," in Joseph D. Ketner, Lynn M. Hebert and Gregory Volk, *Roxy Paine: Second Nature*, 22.

²¹⁴ Janet A. Kaplan, et. al., "Give & Take Conversations," *Art Journal* 61, No. 2 (Summer 2002): 78.

²¹⁵ Critics like Steven Henry Madoff, however, call Paine's *Crop* "as much painting as sculpture." See Steven Henry Madoff, "Nature vs. Machines? There's No Need to Choose," *The New York Times* (9 June 2002): 33-34.

In Flanders fields the poppies blow,
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved, and were loved, and now we lie
In Flanders fields.

Take up our quarrel with the foe:
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.²¹⁶

In McCrae's poem the poppies cushion the ground upon which the dead soldiers lie, suggesting a space untouched beauty. But the dead also call to arms the brave soldiers who have yet to finish the battle and defeat the enemy. For if the latter do not continue the fight, the poem warns, the dead will hardly enjoy the sleeping peace of death the poppies may bestow. But this mythology can only go so far in drawing any consonance between the poppies in Flanders Field and those in Paine's field. We may find it significant that many of those paying tribute to veterans wore plastic poppies, not unlike those that Paine himself has made. But perhaps more significantly, each of these fashionable poppies, whether on the occasion of Armistice Day or an art opening, imagine a similar space of display and seduction, as well as memory, courage and hope.

For his sculpture, Paine could have chosen a poppy of any color, shape or characteristic, but in addition to choosing a red one, he chose one with the potential to alter the mind. Paine's poppies are of a particular species, *Papaver somniferum*. The scarlet blooms conjure up the fields of opium poppies, productive of the seeds we eat on

²¹⁶ John McCrae, *In Flanders Fields and Other Poems* (Charleston, SC: BiblioBazaar, 2008): 13.

poppy-seed muffins and bagels and the kind over which we fight drug wars from their production sites in Central and Southeast Asia and Latin America to their consumption sites in Western Europe and the United States.²¹⁷ They are hybrid botanicals, at once ornamental and edible, culinary and inebriating. While legal to grow, opium poppies produce the milky white latex that when scraped from their pods as a sticky resin can be formed into balls of opium, which can be chemically converted into morphine and heroin. Paine's *Crop* occupies a unique position from which to view the fixity of species within taxonomical order, not to mention the ways in which the DEA, which, as one critic has put it, has run on the "logic of 'moral panic'" since its establishment under the Nixon administration in 1973, has used botanical taxonomy to create an order of scheduling body and mind-altering substances.²¹⁸

Paine's poppies prod us to consider the taxonomy of drugs—their legality and their scheduling status—because of their uniquely contradictory position, as established by the DEA, as neither wholly legal nor illegal. Their classification in large part depends on their use as ornamentals or as psychoactive agents. Buying and growing poppies to admire their delicate petals and delight in their vibrant hues is deemed acceptable because direct observation with the eyes is legally agreed upon to be a rational, and in this case an appropriately domestic act of ordering the earth in the space of one's yard. To partake of

²¹⁷ For the role of the CIA in the War on Drugs see John Marks, *The Search for the "Manchurian Candidate:" The CIA and Mind Control* (New York: Times Books, 1979); Robert L. Borosage and John Marks, eds. *The CIA File* (New York: Grossman Publishers, 1976); and Victor Marchetti and John D. Marks, *The CIA and the Cult of Intelligence*, Introduction by Melvin L. Wulf (New York: Alfred A. Knopf, 1974).

²¹⁸ Sarah Thornton, "The Media Development of 'Subcultures' (or the Sensational Story of 'Acid House')," in *Popular Culture: A Reader*, Raiford Guins and Omayra Zaragoza Cruz, eds. (London: Sage Publications, 2005), 389. Although Thornton does not specifically refer here to the DEA, she does use the phrase as a way to illuminate the way in which various media have legitimated drug use by condemning the musical subcultures associated with it. Moral panic becomes an orchestrated hype, ultimately, within and without such mind-altering milieu. The DEA is not the beginning of the drug wars, but in the last part of the twentieth century, it is certainly a significant institutionalized and bureaucratized force in the history of American drug prohibition.

the alkaloids present in poppies would be to engage with what many would call our irrational and pathological consciousness, because the plants have the power to disrupt our control over rational perception. The ambiguous status of poppies as both legal and illegal, then, provides Paine with an ideal subject with which to explore human anxieties over engaging in psychotropic visions.²¹⁹ And yet Paine refuses to accept a cynical presence in his works. “The irony that enters my works comes from dealing with the inherent complexity of things,” he said.²²⁰ For Paine the subject matter is always loaded and lush, despite their presentation as cool, clear and rational.

Gregory Volk has called Paine’s work “science fictive and bizarre, hinting at homemade rockets and the rattling Tin Man from the Wizard of Oz.”²²¹ Paine’s art-making machines, huge Cor-Ten steel trees and his trompe l’oeil fungi and flowers mark the spaces of our technological, mycological and botanical futures. And yet one look at his hybrid fields will leave us recognizing the clone, the cyborg and other synthesized selves. We do not need to wait for our evolutionary futures; in the face of Paine’s poppies we know that we are already there. Volk’s association of the artist’s work with science fiction and the fantastical world of Oz, suggests an oeuvre of both fact and fiction, at least partially true in as much as we choose to believe and participate in it and embrace its transformative possibilities. Visiting his studio in Red Hook, Brooklyn in 2002, Volk

²¹⁹ On the history of *Papaver Somniferum* see David T. Courtwright, *Dark Paradise: A History of Opiate Addiction in America* (Cambridge: Harvard University Press, 2001); Timothy Brook and Bob Tadashi Wakabayashi, eds. *Opium Regimes: China, Britain, and Japan, 1839-1952* (Berkeley: University of California Press, 2000); Martin Booth, *Opium: A History* (New York: St. Martin’s Press, 1996); Mark David Merlin, *On the Trail of the Ancient Opium Poppy* (London and Toronto: Associated University Press, 1984). On the classification of poppies see Christopher Grey-Wilson, *Poppies: A Guide to the Poppy Family in the Wild and in Cultivation* (Portland, OR: Timber Press, 2000); M.A. Veselovskaya, *The Poppy: Its Classification and Importance as an Oleiferous Crop* (Washington, D.C.: Agricultural Research Service, United States Department of Agriculture, and the National Science Foundation, 1976), 1-18.

²²⁰ Lynn M. Herbert, “Interview with Roxy Paine,” 25.

²²¹ Gregory Volk, “Roxy Paine: Dreams and Mathematics,” 37; See also Jerry Saltz, “Beyond Serra,” *New York* (18 June 2007). “Seurat’s *La Grande Jatte* meets the Tin Man meets *The Matrix*,” describes Saltz of Paine’s stainless steel tree *Conjoined* (2007).

marveled at the ways in which Paine's material transformed itself from one thing to another, from one style of making art, into something else entirely:

On one side of the studio were the raw materials, namely piles of stainless steel pipes and tubing. This is industrial stuff, but it's also the stuff of classic Minimalism, although Paine, once again an inveterate questioner and scrambler of categories and hierarchies, was doing a most un-Minimalist thing, by transforming this steel into a very convincing representation of nature. In the middle of the studio, there was the sprawling, half-finished tree, replete with thick trunk, branches, twigs, and hundreds of welded joints—a breathtaking work, even in its half-completed state.²²²

With Paine's work, even in the process of working, the very properties of things become increasingly unclear. The facts of the materiality unravel, unfold, morph from one thing into another. Traditional categories of art and the classification of styles, movements and theoretical positions become unwarranted, and even absurd.

Confronted with Paine's *Crop*, I find myself plunging though the great expanse of space which Dorothy and her friends confront, and fall asleep in, on their way to the Emerald City. In Oz the poppies are everywhere, not merely at the foot of the Emerald City, where a spell is cast by the Wicked Witch of the West and lifted by the good witch Glinda. The blooms appear even at the beginning, in black and white, as wallpaper in Dorothy's bedroom, the space of her earthly sleep and dreams. And the scarlet flowers continue with us in the staccato beats of Dorothy's ruby red slippers along the yellow brick road. As for the Tin Man in Paine's art, the flowers themselves become the machine without heart, the metal without mettle, the transformative capacity of the plants thwarted by an inability to reach the destination point, to partake of the alkaloid's sedative effects. The sap becomes its own resin seal, the container of its own potency and protector of its currency.

²²² Gregory Volk, "Roxy Paine: Dreams and Mathematics," 37.

And yet whenever we look at Paine's work, we have to remember that it does indeed operate as a work of art, not as a flower in the garden or an opium poppy in Afghanistan. Plastic does not preserve potency here.²²³ Plastic yields more plastic. Paine's work since the making of *Crop* has tended toward his own molding of forms from the memory of observing forms in nature. But in *Crop*, Paine cast his poppies from life:

I wanted to have this perfect plot of land—as if it were cut from a field in Burma and displaced to New York. That was the impetus for having it look realistic. I realized that this was a serious time investment, but I wanted to take it as far as I possibly could. I looked at first for some way to find poppies that I could cast, but I couldn't find any poppies of the right species. But I discovered you can buy the seeds. So I bought the seeds and grew them in Maine where they grew like banshees. They grew incredibly well, which was a bit surprising. Then I cast each part of the plant. The leaves—I cast twenty different leaves to get enough variation. Then I took the casts and manipulated them with heat or by cutting them differently. Then I cast the pods in all different phases of growth.²²⁴

The poppies in *Crop* become the death masks of those flowers that actually grew in fertile soil, were milked for their opium gum, and whose pods were then crushed for their seeds, so a new generation of poppies could grow. Paine's phylogenetic leap then, from photosynthetic poppy to plastic poppy effectively exercised a mixing up of science and art, the imaginative and the quantitative, the rational and the irrational. These spaces, often seen as opposing, become a single locus of experiment and experience in Paine's work.

Human desire undoubtedly drives this categorical mixing of materials and consciousness, but this is not an entirely irrational method of selection. As Paine himself

²²³ Tim Griffin, "At Breakneck Speed," in *Bluff*, 69. Griffin describes Paine's poppies in the view of Michaux's "intimate kind of alienation," perhaps the effect of translating a hallucination into materiality, a materiality that becomes empty of "smell and feel."

²²⁴ Lynn M. Herbert, "Interview with Roxy Paine," 16.

has observed, “If you’re trying to grow corn, and you have roses, the rose is a weed. It’s about desire, and our minds, and our constant need to catalogue and differentiate and put things into categories, subcategories, sub-subcategories—to file them away and not think about them.”²²⁵ Using as his models apples, tulips, marijuana and potatoes, Michael Pollan argues in his book *The Botany of Desire: A Plant’s-Eye View of the World* (2002), that plants select *us* in Darwinian selection, rather than the other way around (or at least as often as the other way around).²²⁶ Pollan devotes an entire chapter to the proliferation of cannabis, explaining how its recent evolution into more intoxicating forms follows our own need to partake of its intoxicating effects. The cycle of selection and potency go hand in hand, as humans who wish to partake of the plant increasingly experience a more powerful, yet smoother high, and the plant that produces the desired effect proliferates in even greater numbers.

Pollan’s thesis suggests that plants have consciousness, a point long supported in the scientific community by Margulis and Sagan, and codified in their influential book *What is Life?* (1995).²²⁷ That consciousness is a phenomenon of all life makes us wonder about the possible ways to expand our relationships with non-human beings beyond verbal exchange; psychotropics offer at least one potential way to communicate across that field. The late ethnobotanist Terence McKenna (1946-2000) concurred, calling the “classical Darwinian view of nature to be incomplete...nature, far from being an endless

²²⁵ Roxy Paine: *Bluff*, 17-18.

²²⁶ Michael Pollan, *The Botany of Desire: A Plant’s-Eye View of the World* (New York: Random House, 2001). Pollan’s views extend the earlier views of Peter Tompkins and Christopher Bird, *The Secret Life of Plants* (New York: Avon, 1973); and also such environmentalist writings as Rachel Carson, *Silent Spring* with essays by Edward O. Wilson and Linda Lear (Boston: Mariner Books, 2002 [1962]). Anthropologists have also supported such world-views. See Jeremy Narby, *Intelligence in Nature: An Inquiry into Knowledge* (New York: Penguin, 2005).

²²⁷ Lynn Margulis and Dorion Sagan, *What is Life?* (Berkeley: University of California Press, 2000).

warfare among species, is an endless dance of diplomacy.”²²⁸ Psychotropics mark a place where plants have the capacity, in conjunction with our own neurological receptors, to activate certain cerebral control centers, externally regulated by current DEA policy. The threat to the subject’s psychological state was very real in the Cold War era, which began to reduce the body to a technology through DNA analysis.²²⁹ Visual artists and writers, such as Aldous Huxley and William S. Burroughs, explored psychotropics simultaneously as reprieves from this kind of dogma and as segues into intelligences not yet articulated.²³⁰ If our bodies have become “soft machines,” then psychotropics provide a tool for allowing us to determine which cerebral switches we want on and which switches we want off.²³¹ We have the power to program our own “wetware” algorithms

²²⁸ Terence McKenna, *Food of the Gods: The Search for the Original Tree of Knowledge, A Radical History of Plants, Drugs and Human Evolution* (New York: Bantam Books, 1992), 41.

²²⁹ Richard M. Doyle, *On Beyond Living: Rhetorical Transformations of the Life Sciences* (Stanford, CA: Stanford University Press, 1997); Eileen Welsome, *The Plutonium Files: America's Secret Medical Experiments in the Cold War* (New York: Dial Press, 1999); Suzanne Anker and Dorothy Nelkin, *The Molecular Gaze: Art in the Genetic Age* (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press, 2004), 3-4. Anker and Nelkin discuss the collapse of “human and machine” boundaries. “By redefining the body and reducing it to an array of molecules and their sequences, geneticists are changing our understanding of human nature. The ‘living text’ in this paradigm becomes a system, composed of assemblies of molecular parts responding to recipes, instructions and codes. See also their whole chapter, “Reductionism: The Body as a ‘Code Script’ of Information,” pages 9-46; William R. La Fleur, Gernot Bohme, and Susumu Shimazono, *Dark Medicine: Rationalizing Unethical Medical Research, Bioethics and the Humanities* (Bloomington: Indiana University Press, 2007. See also James D. Watson, *The Double Helix: A Personal Account of the Discovery of the Structure of DNA* (New York: A Mentor Book, 1968).

²³⁰ Henri Michaux, *Miserable Miracle: Mescaline*, Introduction by Octavio Paz, Translated from the French by Louise Varèse and Anna Moschovakis (New York: New York Review of Books, 2002 [1956]); Aldous Huxley, *The Doors of Perception and Heaven and Hell* (New York: Harper Perennial Modern Classics, 2004 [1954 / 1956]); William S. Burroughs and Allen Ginsberg, *The Yage Letters Redux*, edited and with an Introduction by Oliver Harris (San Francisco: City Lights Books, 2006 [1963]; for a good reference on yage or ayahuasca see Alex Polari De Alverga, *Forest of Visions*, edited by Stephen Larsen and translated from the Portuguese by Rosana Workman (Rochester, VT: Park Street Press, 1999). Walter Benjamin, too, engaged in mind-altering compounds and writing of their effects. See Walter Benjamin, *On Hashish*, introduction by Marcus Boon and edited by Howard Eiland (Cambridge, MA: The Belknap Press of Harvard University Press, 2006 [1927-34]).

²³¹ William S. Burroughs, *The Soft Machine* (New York: Grove Press, 1961).

(i.e. 010101) with the help of plants, as Richard M. Doyle has argued, and ostensibly new areas of brain intelligence and awareness, as is done with computer hardware.²³²

It bears consideration that even the famous naturalist Charles Darwin suspected that plants communed at the level of psychotropics. In his *Insectivorous Plants* (1875), Darwin applied extract of belladonna, which he “procured from a druggist,” and Hyoscyamus to the leaves of Drosera, or Sundew, to determine if the delirium-producing alkaloids would inflect the leaves. As Darwin put it, the Drosera leaves were indeed, “excited.”²³³ The naturalist further expressed his amazement at these plant secretions and their analogous nature to the digestive fluids of animals, calling his discoveries “remarkable.”²³⁴ While Tomaselli’s paintings and Paine’s sculptures are not consumable psychotropics themselves, they can be read as virtual routes to aesthetic visions. While this is in part true, it becomes an almost too simplistic conclusion. Both artists engage the long history of connectivity between plants, animals, and fungi, and within their discourses on psychotropics lies a reassessment about the very nature of corporeality and consciousness. Paine’s *Crop* poppies, like Tomaselli’s fusion of alkaloids and acrylics, remind us that psychotropics are not mere vehicles to drug-induced visions; rather, they provide us with one locus for the sustainability of all organisms ecologically, socially, economically, and psychologically. These artists’ use of psychotropics as media and as subjects challenges our often arbitrary and highly politicized boundaries of knowledge acquisition, and as well as our conceptions of consciousness. They beg us to consider

²³² Richard Doyle, *Wetwares: Experiments in Postvital Living* (Minneapolis, MN: University of Minnesota Press, 2003).

²³³ Charles Darwin, *Insectivorous Plants* (New York: D. Appleton and Company, 1875), 42-3.

²³⁴ Charles Darwin, *The Autobiography of Charles Darwin*, 1617.

how we have thwarted our abilities to explore, with the collaboration of certain plants and fungi, all the diverse intelligences of our human brains.

Discussion of Paine's poppies also benefits from a video piece by contemporary Swiss artist Pipilotti Rist (b. 1962)—*Ever is Over All* (1997) (**Fig. 1.9**). Rist was one artist among many included in the exhibition *Ecstasy*, along with Fred Tomaselli and Roxy Paine. In her catalogue essay "Double Vision," the art critic and curator Chrissie Iles described Rist's work as "dematerialized," and concerned with "ethereal dream space" and "dreamlike sequences."²³⁵ Rist's work, though not directly referencing drug use, remains consistent with Tomaselli and Paine's efforts to investigate the spaces of altered states. Gloria Sutton explains that Rist's work draws on "emotions and dreams," collapsing the boundaries between these worlds and reality.²³⁶ Rist's videos form their own visual accumulations through the editing of an expansive "breadth of content."

Ever is Over All consists of projections onto two walls at 90 degree angles to each other, where Rist plays out the fantasies of her own delirium. On the screen at right we see fields of tall red flowers on long stems that recall Paine's own scarlet opium poppies. These are Kniphofias, also known as Red Hot Pokers, a name that brings to the fore all their sexual potency. But they are just as easily read as long-stemmed red poppies, especially on the screen of a blurry video; particularly in the case of Rist's dreamlike film

²³⁵ Chrissie Iles, "Double Vision," Paul Schimmel and Gloria Sutton, *Ecstasy: In and About Altered States*, 162.

²³⁶ Gloria Sutton, "Pipilotti Rist," in Paul Schimmel and Gloria Sutton, *Ecstasy: In and About Altered States*, 123. Sutton also makes an interesting point about the titles of Rist's works that speaks to the importance of word and image alignments central to classification that can be seen in the naturalist project of binomials. "Rist's practice of self-appropriation extends to the fact that sometimes different titles refer to the same work, or that more than one version of a same-titled work exists. These aspects of Rist's practice make it practically and conceptually impossible to demarcate any boundaries or limits to the artworks themselves. For a medium designed for perfect reproduction, Rist's work manages to remain fundamentally variable." Like Tomaselli and Paine, Rist subverts classificatory themes of art and aesthetics, a project which can be aligned naturalist and other projects concerned with the connections of words and images.

sequence, specificity becomes less consequential as both flowers bring a charge to the piece. In the video Rist—wearing a light blue dress and ruby red shoes in a fashion startling similar to Dorothy—skips down the street while swinging a long-stemmed red flower in her hand, so the allusion to the fabled poppies is there nonetheless. As Paine has said, “Sometimes the best way to say one thing is to mean another.”²³⁷ Rist’s flower is the poppy and the poppy is the red flower, as long as I allow it to be, as long as I allow myself to rearrange the taxonomical schema. The sounds of birds singing punctuate the audio track, and further imbue the slow-motion of the video sequence with a sedative effect. Laughing, skipping, flipping back her dark brown tresses, acknowledging passers-by, including a police officer, the artist-as-Dorothy-in-my-dream smashes her long-stemmed botanical into the windows of cars as she passes by. The flower, hardly photosynthetic, becomes the rigid Tin Man of Paine’s poppies: Rist, the one without the heart, swinging flowers like weapons, laughing at the euphoria of it all. The moment is at once hysterical, momentarily freeing, destructive, disconnected. The denouement of the mania presents itself as inevitable. There is an air of discordance in Rist’s video. Dorothy’s yellow brick road has become a broken sidewalk littered with the broken glass from car windows. The metal flower has become a mechanism of destruction, an instrument of defensiveness, an arrogant prop of the actor.

But Rist’s *Ever is Over All* plays out on two screens, the humorous Dorothy-swinging-poppy, as well as the field of red-tipped florals shot close-up. The convergence of the two screens marks out a space of collision more than disjunction. In the corner of the room, at the meeting of the screens, our dreams and our everyday become one, bifurcations of nature and culture, propriety and impropriety, quiet beauty and riotous

²³⁷ Lynn M. Herbert, “Interview with Roxy Paine,” 25.

destruction elide. We become the viewer, the actor, the artist, the botanist, the gardener. Tropical red flowers turn into opium poppies before our eyes, desire into destruction; Rist's slow-motion video sequence inspired and becomes our own languid imaginings. We are facing ourselves, facing the artist, facing the flower, the poppy—the very notion of ourselves as a species which operates in a rich environment. As Terence McKenna argued:

This process of facing ourselves as a species is a necessary precondition to the creation of a more humane social and natural order. It is important to remember that the adventure of facing who we are did not begin with Freud and Jung...the next step in the adventure of self-understanding can begin only when we take note of our innate and legitimate need for an environment rich in mental states...the hallucinogenic indoles, unstudied and legally suppressed, are here presented as agents of evolutionary change. They are biochemical agents whose ultimate impact is not on the direct experience of the individual but on the genetic constitution of the species.²³⁸

In Rist's video the street bleeds into the field, the field into the street, flowers into metal and metal into blades of grass. Whether negotiating the choreographed spiral of *Datura* leaves, harvesting opium poppies with our eyes or skipping in ruby slippers across a field of sidewalks and red buds, we have to acknowledge the ways in which the artists ask us to engage the complexity of our taxonomical position as a discrete species. Inevitably we are, in trying to become one thing, always becoming another.

²³⁸ Terence McKenna, *Food of the Gods: The Search for the Original Tree of Knowledge, A Radical History of Plants, Drugs and Human Evolution*, 256.

VI. *Natural Selection (2000) Redux*

We become other from an evolutionary standpoint through the genetic cross, a mixing up of traits that leads to further variation. Genetics still strives to come to terms with the implications of Darwin's evolutionary work in the space of modern science. Given that, we can only imagine how shocking Charles Darwin's views must have been in his own day. We, too, find ourselves struggling to acknowledge evolutionary views beyond Darwin's natural selection and beyond. Coming to terms with our evolutionary selves, of what it means to be an "I" or let go of the "I" in an evolutionary collective, challenges our sensibilities even a century and a half after Darwin (and three hundred after Linnaeus). The works of Dion, Smithson, Tomaselli and Paine bring the transformative capacity of natural history in contemporary American art into an era of Gaia, a cooperative evolutionary model distinct from the competitive Darwinian narrative of origins and extinctions associated with the evolutionary mechanism of natural selection.

Formulated first in 1965 by the scientist James Lovelock (b. 1919) and supported by the evolutionary biologist Lynn Margulis, the Gaia hypothesis sought to bring evolutionary theory into the modern era by disposing of "survival of the fittest" in favor of a symbiotic relationship between earth's life and inanimate crustal structures, and acknowledging the autopoietic, or self-regulating, nature of the planet.²³⁹ These more

²³⁹ James Lovelock, "A physical basis for life detection experiments," *Nature* 207 No. 7 (1965): 568–570. Connie Barlow, *From Gaia to Selfish Genes: Selected Writings in Life Sciences* (Cambridge, MA: MIT Press, 1991); James Lovelock, *The Ages of Gaia: A Biography of Our Living Planet* (New York: W.W. Norton, 1995); Lynn Margulis, *Microcosmos: Four Billion Years of Microbial Evolution* (Berkeley: University of California Press, 1997); Lynn Margulis, *Symbiotic Plant: A New Look at Evolution* (New York: Basic Books, 1999); Lynne E. Stark, *The Gaia Hypothesis and the Re-Animation of Nature* (Dissertation: University of California, Santa Barbara, 1999); James Lovelock, *Gaia: A New Look at Life on Earth* (Oxford: Oxford University Press, 2000); Heather Newbold, ed. *Life Stories: World-Renowned Scientists Reflect on Their Lives and on the Future of Life on Earth* (Berkeley: University of California

recent evolutionary theories, as articulated by Lovelock and Margulis, depart from the activities and practices of eighteenth and nineteenth-century naturalists. But it is the kind of broadly considered view of the earth that will lead us from important natural history observations made by the likes of Darwin through the narrowness of disciplinary specialization into an entwined worldview that emerges in the latter third of the twentieth century.

Darwin's theory of natural selection has often been framed as a cut-throat explanation of survival, in which only the strongest individuals succeed in the game of survival (and particularly so in its extension into the social sphere by Herbert Spencer in the nineteenth century). Whatever the scientific evidence for or against the Gaia hypothesis, it remains an essential model of collaboration and cooperation for all people, offering a guide to living on earth with greater respect, responsibility and reverence. While the self-regulating Gaia hypothesis acknowledges the numerous forces outside one's control, it also suggests that earth is not a mere ball of energy and resources for man's taking. We are in that sense the keeper of ourselves, our communities and the earth on which we thrive. This view provides us with a reconsideration of not only Darwin's

Press, 2000); Jon Turney, *Lovelock and Gaia: Signs of Life: Revolutions in Science* (New York: Columbia University Press, 2003); Stephen Henry Schneider, *Scientists Debate Gaia: The Next Century* (Cambridge, Mass: MIT Press, 2004); Stephen Harding and Lynn Margulis, *Animate Earth: Science, Intuition and Gaia* (White River Junction, VT: Chelsea Green Publishers, 2006); Lynn Margulis and Dorion Sagan. *Acquiring Genomes: A Theory of the Origins of Species* (New York: Basic Books, 2006); James Lovelock, *The Revenge of Gaia: Earth's Climate Crisis and the Fate of Humanity* (New York: Basic Books, 2006). See also Ernst Mayr, *What Evolution Is* (New York: Basic Books, 2001), 42, 279. Mayr notes that although "most evolutionists reject the Gaia hypothesis," that there is, in fact, "no fully satisfactory theory that has yet emerged," leaving the window open for Gaia hypothesis. He also notes that while most Darwinians do not accept the Gaia hypothesis, the leading proponents of Gaia hypothesis itself, including Lynn Margulis, "completely accept Darwinism." See also Vladimir I. Vernadsky, *The Biosphere*, Translated by D.B. Langmuir (New York: Copernicus, 1999 [1926]). The historian of science and philosopher Jacques Grinevald, who wrote the introduction to the 1999 release of Vernadsky's book (pp. 14-32), argues that the Soviet scientist's theories are precursors to Gaia theory. Lovelock was not aware of Vernadsky's theories in the formulation of his Gaia hypothesis, in large part because the full text was not available in English in full until 1999. Though by the mid-1980s Lovelock and Margulis began citing Vernadsky in their work.

key evolutionary theory, but also illuminates the paradigms upon which art works in the realm of contemporary natural history have drawn.

Fred Tomaselli's *Natural Selection* (2000) offers up a glimpse of Darwin's most famous theory, but also touches on post-Darwinian cooperative models, as well as Darwin's other theoretical contributions, namely modification and sexual selection (**Fig. 1.10**). A six-foot square acrylic painting on wood panel, *Natural Selection* represents interconnection through a collage of actual beech leaves, images of birds, and fabric patterns, sealed under a slick resin topcoat.²⁴⁰ The mature deciduous tree that occupies the center of the image houses an array of birds on a symbolic family and phylogenetic tree, figuratively mingling the melodies of songbirds with botanicals and the evidence of technological reproduction with cut-out images from books and magazines. Its branches bear no leaves, but the tree cannot really be considered leafless, since its trunk and tributaries are themselves composed of green leaves, painted over in a faded gold, similar to a flat color that Sherwin-Williams now calls "antiquity." The paint imparts to the tree a translucent effect through which the middle rib and connective veins of the leaves remain visible in their herring bone patterning. Tomaselli plants his tree in a ground of vibrating square, rectangular, and L-shaped swatches of color. With this in mind, the polychromed ground reads as a quilt, suggesting simultaneously the hand-made crafts of nineteenth-century crazy quilts, as well as those fashioned on a factory machine today that are constructed to look handmade.²⁴¹ But Tomaselli's paintings are often read in more ways than one, and this dialectical tension also pulls us into the digital realm. From a distance

²⁴⁰ Gregory Volk, *Fred Tomaselli* (New York: James Cohan Gallery, 1995), 8.

²⁴¹ Volk, *Fred Tomaselli*, 9. Volk references "quilted patterns and folk art tones...a kind of rural Americana...folk art and craft," in briefly discussing *Natural Selection* (2000). For a reference to Tomaselli's work in general to "American Shaker quilts," see: Susan Emmerling, "Artist's Little Helper," *Salon.com* (29 Oct. 1999).

the squares recall the rough block imagery of early low-resolution graphics, or the pixilation of color television images viewed up close.²⁴² The explosion of colored squares in *Natural Selection*, then, becomes a transmission of the information age. This reading is appropriate given the direction of the artist's future paintings, which resemble gyrating screen savers, trading the informatics of naturalist nomenclature for the patterned codes of computer programming. Numerous songbirds perch on the tips of the tree branches, from finches to parrots to cardinals to blue jays, robins, crows, woodpeckers and swallows, among others. Their forms almost dissolve against the chromatic background, each square in a dance of technological computations.

Tomaselli has not simply painted the quadrangles, but outfitted them with the collaged patterns of clothing and gear found in the outdoor apparel catalogs of Lands' End or L.L. Bean: Plaid swatches from oxfords, puffy orange polyester from a down vest, a red and blue winter jacket, a green sleeping bag, and a pink turtle neck. The birds are holdovers from earlier works, including *Lands End I* (1997), where the artist excised animals from magazine illustrations and catalogs, and placed them on white grounds that give the impression of ornithological guides. In *Natural Selection* some of the birds wear human apparel, many of them zipped up as if YKK has become the newest mutation in avian anatomy.²⁴³ Posed next to these fleeced fliers are some others cut directly from natural history guides or other books with birds, their diverse plumage a testament to their authenticity. Tomaselli has inserted a new species into the ornithological mix. Here,

²⁴² In "Artist's Little Helper," Emmerling refers to the "flat files filled with sheets of calibrated paper cutouts of birds, flowers, body parts, hemp and datura leaves—the tiny bits of things that make up the pixels, binary code and the DNA of his massive paintings."

²⁴³ YKK are the letters that one finds stamped on most zippers. YKK stands for YKK Corporation of America, which designs and manufactures primarily aluminum products, from zippers to architectural building materials.

one is not sure if the feathered or fleecy friend stands a better chance at survival, or if both persist in a world in which people require Vasque boots and Polartec fleece to walk their suburban sidewalks.

Tomaselli's *Natural Selection* can be viewed through a historical consideration of Darwin's evolutionary mechanism by the same name. Darwin's theory of Natural Selection was detailed in his most famous tome, *On the Origin of Species*, a book most notable for its thesis that species evolve through the mechanism of natural selection. The naturalist wrote to his friend and English botanist Joseph D. Hooker to tell him "how please[d] [he was] that the notion of Natural Selection has acted as a purgative on [Hooker's] bowels of immutability."²⁴⁴ His comment illuminates the degree to which Darwin's hypothesis of mutability served to rid future thinkers of a certain post-Linnaean world view. Rather than living in a static and changeless world where species sat distinct and discrete from others, naturalists now had to consider that the very existence of species provided evidence for continued change and multiple historical origins, as well as our own relations, as Darwin would eventually argue, to all primates. His theory marked a transformation of thinking on the grandest of scales.

We tend to think of natural selection as encompassing the competition for resources and the survival of the fittest, a scientific theory that Spenserians applied to the social sphere in the nineteenth century. Darwin, however, despite having laid out the theory in depth, became more concerned with other elements in his first large study. "Personally, of course, I care much about Natural Selection; but that seems to me utterly unimportant, compared to the question of Creation *or* Modification," he wrote to his

²⁴⁴ Charles Darwin, letter to J.D. Hooker (13 July 1858) *The Autobiography of Charles Darwin*, 1727.

friend, the botanist Asa Gray.²⁴⁵ Modification, or changes that result in new species over time, suggests the origination of species with different morphological or structural differences, a mechanism of design not at all linked with godly intelligence for Darwin, something he carefully states, and that makes his theory of mutability distinct from earlier naturalists like Jean-Baptiste Lamarck (1744-1829).²⁴⁶

Natural selection, Darwin discovered, operated as the mechanism by which species evolved. Many people have come to associate Darwin's theories as being consistent with the concept of the "survival of the fittest." However much this might (or might not) be true, it does not tell the whole story. Variation was at least as interesting to Darwin as natural selection. For him, species' variations contributed significantly to their adaptive success in their environments. Whatever characteristics species evolved, these mutations place them in greater harmony with their surroundings, which were in turn also in a constant, although not necessarily consistent, rate of flux. Variety provided, not only the spice in Darwin's theories, but was seen as a fundamental requirement for survival.

In Tomaselli's tree-bird painting, named after Darwin's evolutionary mechanism, the perching birds should be seen to not so much *compete*, but to *thrive* amidst a mutually

²⁴⁵ Charles Darwin, letter to Asa Gray (1863), *The Autobiography of Charles Darwin*, 1769.

²⁴⁶ Charles Darwin, *The Autobiography of Charles Darwin*, 1776. Lamarck and Darwin both believed in evolution, but Lamarck did not fully appreciate the mechanism by which evolution occurred. He thought that species changed from one generation to the next via environmental pressures. The classic example used to illustrate his views is the neck of the giraffe. Lamarck argued that these animals' necks grew longer over time as a result of the environmental pressures to reach food sources at higher and higher distances from the ground. He did not formulate, as did Darwin, that evolution occurred by the mechanism of natural selection, not by environmental pressures and behavioral changes. Natural selection, conversely, explains the passing of more desirable traits from one generation to the next via reproduction. See J.B. Lamarck, *Zoological Philosophy: An Exposition with Regard to the Natural History of Animals* (Chicago: University of Chicago Press, 1984 [1809]); Secondary accounts of Lamarck's work appear in: Richard W. Burkhardt, Jr. *The Spirit of System: Lamarck and Evolutionary Biology* (Cambridge, MA: Harvard University Press, 1995 [1977]); Pietro Corsi, *The Age of Lamarck: Evolutionary Theories in France* (Berkeley: University of California Press, 1988); L.J. Jordanova, *Lamarck* (Oxford: Oxford University Press, 1984); Madeleine Barthélemy-Madaule, *Lamarck the Mythical Precursor: A Study of the Relations between Science and Iconology*, translated by M.H. Shank (Cambridge: The Massachusetts Institute of Technology, 1982).

sustainable, polychromed ground of variation. Instead of conveying ominous warnings of ruthless competition, Tomaselli engages the qualities of variation that result from the modification of species. In his book *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (1995) the philosopher Daniel C. Dennett explains that Darwin himself placed life within the frame of a tree, a visual metaphor we can extend to Tomaselli's painting:²⁴⁷

He started with the facts that everyone knows: all of today's living things are the offspring of parents, who are the offspring of grandparents, and so forth, so everything that is alive today is a branch of a genealogical family, which is itself a branch of a larger clan. He went on to argue that if you go back far enough, you find that all the branches of all the families eventually spring from common ancestral limbs, so that there is a single Tree of Life, all the limbs, branches, and twigs united by descent with modification. The fact that it has the branching organization of a tree is crucial to the explanation of the sort of process involved, for such a tree *could* be created by an automatic, recursive process: first build an *x*, then modify *x*'s descendents, then modify those modifications, then modify the modifications of the modifications... If Life is a Tree, it could all have arisen from an inexorable, automatic rebuilding process in which designs would accumulate over time.²⁴⁸

This view of the tree offers a new perspective on those which have historically offered views of generational progression, such as the Tree of Jesse or the Tree of Life, from the Middle Ages. Darwin's tree suggests less a familial tradition than a formula in repetition, a notion that was potentially appealing to those who could not quite extract Darwinian evolution from the hand of God. Visually speaking, the blocks of color ground, but also bestow upon the tree and the birds the potential for movement, recalling the low-resolution graphics of early computer programming. These computational squares of color suggest the letters and numbers of codes that turn codes into images, as well as,

²⁴⁷ Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995).

²⁴⁸ Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995), 61-62.

perhaps, the patterned structure of an algorithm, a mathematical formula that Dennett applies to Darwin's mechanism of natural selection.²⁴⁹ And this comparison is singularly appropriate for Tomaselli's work, which has moved since his early ornithological prints into dense compositions on black ground that evoke the swirling images of screen savers, among other things. Darwin's designs, then, are no more or less profound than the predictable patterns produced by a computer program. And yet, the sheer abundance of patterns, variations, and species for which Darwin's algorithmic mechanism accounts, suggests a certain sublimity, a fact Tomaselli picks up on in his work with his layered, but structured, aesthetic.

While *On the Origin of Species* is still given priority among the naturalist's works, scholars like Doyle have increasingly attended to Darwin's theory of sexual selection, as detailed in his later work *Descent of Man, and Selection in Relation to Sex* (1871).²⁵⁰ In this study, Darwin expands his mechanism of natural selection to account for the role of mating and the production of progeny in survival. He describes the ways in which animals select one another through a dance of sexual charms. Caterpillars, butterflies, and birds astounded Darwin with their colorful displays of segments, wings and feathers. Stumped in his search for the biological rationale behind these superfluous and often startling chromatic projections, Darwin surmised that the animals' hues could

²⁴⁹ Algorithms have also been referenced in Paine's work. See Eleanor Heartney, "Roxy Paine and the Changing Nature of Nature." His sculpture, Heartney argues, "Raises existential questions about our place in the natural order, about whether we exist inside or outside of nature, if we are becoming more like the machines which we have created and to what extent we can draw a firm line between the processes of nature, whose forms are determined by an invisible template imposed by genetic or geologic law, and those of technology, which operates in an apparently similar manner by mathematical algorithms." She also notes here that his works engage the "logic of structure" and "the relationship of underlying rules and surface variation." In João Ribas, "The AI Interview: Roxy Paine," the artist explains how organisms have their own language and rules, something we can see in the algorithmic model, and which he extends to his own breaking down of species into "their components" and building these components up again.

²⁵⁰ Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* Vols. 1 and 2, 1st edition (London: John Murray, 1871).

only be explained by their operation as survival strategies, a survival not based on the species' ability to compete for a source of food or shelter, but one that gives the animal the best chance to reproduce. Tomaselli enacts his own project of origins, charms and display, building paintings, as he says, "through thousands and thousands of little micro-moves...like an organism out of cells."²⁵¹ His creative process cues us in to an entire system of origins orchestrated through chemical, chromatic, chromosomal and computational maneuvers.

A century and a half after Darwin first transmitted his evolutionary ideas, many people continue to disagree over the finer points of his theories, sparking debates around Intelligent Design and Artificial Intelligence, to name two more prominent, recent themes. Scholars have enhanced the rich and continuing unrest over Darwin's "*Dangerous Idea*" at a time when the kinds of species observations his ideas enabled have been replaced by micro-scientific studies. In the early part of the twenty-first century, DNA has replaced morphology in a shift from taxonomical nomenclature to the mysteries of nucleic acid patterns, leaving identity in the hands of scientists, rather than a general public, as the great equalizer Linnaeus would have wished. The theoretical distance from the classical era of natural history to the present, which takes us through more modern discourses in the arts and sciences, proves a giant leap of macro-history. But I would argue that it is exactly this long collective inhalation and exhalation over time and space which can illuminate the ways in which engaging natural history as a discourse and as a practice can still assist in our coming to terms with new and more sustainable paradigms of living.

²⁵¹ James Rondeau. This is also reprinted in "Interview" in *The Heavenly Tree Grows Downward: Selected Works by Harry Smith, Philip Taaffe, Fred Tomaselli* (New York: James Cohan Gallery, 2002), 65.

In Tomaselli's *Natural Selection*, colors, shapes and textures do not suggest, by any means, an environment and epoch of competition, but rather, a natural universe where the viewer is enticed through a collection of birds perched on a tree, decked out in feathered or fleece plumage, into a world of all-embracing diversity. While the artist does not necessarily depict his birds in full display, his use of bright colors for their plumage highlights them amidst the gold tree branches. Only a couple of the birds open their beaks to speak, the rest posing in various directions, eyes out as if not exactly knowing where to go. Their nests have been traded for bivouacs and their water source for blue chambray shirts. And yet, the "antiquity"-colored tree, set against contrasting blues that dominate the ground, undergoes an alchemical reaction, trading its faded and denuded self for a vibrating golden glow. The variety of birds amassed in its canopy form part of a new family tree, where the bifurcations of fabric and feathers dissolve against the accumulation of polychromed informatic directives of a new age. The birds charm and attract each other by donning manufactured fleece, rather than by assuming any specific mating pose. Sexual selection here takes on the choreographed excitement of a department store sales event. Wearing the down outerwear vest displayed in the artist's cryptic ground, we ourselves become birds, donning our own polyester plumage. Our eyes flit about the painting's acrylics just as the birds scan their own horizons in search of writhing worms and warbling women. And like the birds who find a host in the tree of a faded goldenrod, and the tree grounded against the psychedelic accretion of disparate colors, our aesthetic home finds itself here within the white walls of the museum. The painting itself, then, charms, calling us from the limited world of inanimate Pantone color charts to the infiniteness of animated species (plants and animals) found outside

institutional walls and enabled through sexual selection. While we suspect the painting of harboring moral overtones about the state and fate of our union (both the capitalist union of the United States and the “natural” union of plants and animals), I would suggest that we take a less antagonistic view of Tomaselli’s work and consider his piece a display of universe that seeks to charm.

Chapter 2

Animalia (From Man to Zoophyte): Observing and Recording Fauna

If all art is conceptual, the issue is rather simple. For concepts, like pictures, cannot be true or false. They can only be more or less useful for the formation of descriptions. The words of a language, like pictorial formulas, pick out from the flux of events a few signposts which allow us to give direction to our fellow speakers in that game of 'Twenty Questions' in which we are engaged.²⁵²

--E.H. Gombrich

And what seduction is more violent than the one of changing species, to transfigure oneself into the animal, the vegetable, the mineral or even the inanimate? This movement makes us traitors to our own species, and exposes us to the rigid giddiness of all other species. This is the model of amorous seduction, which also pursues the strangeness of the other sex, and the possibility of being initiated into it as into a different animal or vegetable species.²⁵³

--Jean Baudrillard

I. Animal

Animal: An organism distinguished from other living things by structural and functional characteristics. (non photosynthetic, multicellular, generally mortal organisms that lack cell walls and eat their nutrients). Note: humans are the only animals that feel insulted when called an animal.²⁵⁴

II. The Mouse-Man and Other Morphological Musings

The eighteenth-century French naturalist Baron Georges Cuvier is best known today as a zoologist and comparative anatomist who believed in extinction of species

²⁵² Ernst Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation*. Princeton: Princeton University Press, 1969: 89.

²⁵³ Jean Baudrillard, *The Ecstasy of Communication*, edited by Sylvere Lotringer, translated by Bernard and Caroline Schutze (New York: Semiotext(e), 1988): 45-46.

²⁵⁴ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon gallery, 1997), 54.

through catastrophic events. He did not, however, support the theory of evolution as it has come to be conceptualized today through the work of Charles Darwin. Cuvier also moved away Linnaean taxonomy, a method of classification that focused on the external morphological characteristics of organisms, favoring instead the organization of animals according to their internal structures and respective functions.²⁵⁵

In her book *The Cuvier-Geoffroy Debate: French Biology in the Decades before Darwin*, the historian of science Toby A. Appel explores a series of debates between Cuvier and Etienne Geoffroy Saint-Hilaire (1772-1844), held at the Académie des Sciences in Paris from April to June 1830.²⁵⁶ Cuvier's teleological approach valued function over structure, and stood in contradistinction to the morphological approach of Geoffroy, which favored structure over function. In these early nineteenth-century debates, we can extrapolate to some degree the division between what was an older component of natural history—morphology—favored by Geoffroy and his followers, and the appearance of Cuvier's internal investigations of animal structures as resembling dissection in modern day biology. Their debate marked a transition between what was, for many, an old-fashioned way of conducting science and a new, more objective approach that analyzed the natural world through the functions of internal anatomical features. Appel points out that the significance of the Cuvier-Geoffroy debates lies not with who was right or wrong, but rather, in the space created between the two scientists

²⁵⁵ Baron Cuvier, *The Animal Kingdom, Arranged After its Organization; Forming a Natural History of Animals, and an Introduction to Comparative Anatomy*, with additions by W.B. Carpenter and J.O. Westwood (New York: Kraus Reprint, 1969 [London: Henry G. Bohn, 1863]).

²⁵⁶ Toby A. Appel, *The Cuvier-Geoffroy Debate: French Biology in the Decades Before Darwin* (Oxford: Oxford University Press, 1987); See also Martin J.S. Rudwick, *Georges Cuvier, Fossil Bones, and Geological Catastrophes: New Translations & Interpretations of the Primary Texts* (Chicago: The University of Chicago Press, 1997); Dorinda Outram, *Georges Cuvier: Vocation, Science and Authority in Post-Revolutionary France* (Manchester, England: Manchester University Press, 1984); and William Coleman, *Georges Cuvier, Zoologist: A Study in the History of Evolution Theory* (Cambridge: Harvard University Press, 1964).

opposing points of view, one mediated by pre-Darwinian philosophical anatomists.

Darwin himself relied on Cuvier's earlier work on fossils and Geoffroy's morphological comparisons to arrive at his theories of natural selection.²⁵⁷

Cuvier's program of extensive fossil analysis and dissection revealed the startling likelihood of species extinction, and suggested the close relationships between animals that were no longer living and those that still were. And yet Cuvier never made the leap from extinction to evolution, or, at the very least, chose to ignore the evidence that supported the concept. For him, catastrophic events periodically caused mass extinctions of animals that bore no future relatives. He simply never accepted the idea of the transmutation of species that was essential to Darwin's model of evolution via the mechanism of natural selection. For Cuvier, species remained fixed and one simply could not become another. So, while Cuvier has often been associated with the beginnings of modern biology, his ideas remained, in essence, wedded to the concept of the Great Chain of Being, with the most complex animals—vertebrates—at the forefront of his system of classification and lower animals, such as zoophytes (which he called *Animalia radiate*), at the bottom.²⁵⁸

A zoophyte is a rather peculiar animal, taxonomically located between plants or animals, in an often-defined hybrid state. The *Oxford English Dictionary* provides as an example of a zoophyte the “sensitive plant” or the “vegetable lamb.” More specifically, zoophytes can include sponges, sea-anemones and corals, among other species. In

²⁵⁷ For the art historian it might seem odd that Darwin, who lacked the draughtsman's ability to sketch what he observed, would lean toward the morphological comparisons of Geoffroy, and still be able to frame and promote such startlingly modern day biological principles as evolution and place them permanently on the scientific map.

²⁵⁸ Baron Georges Cuvier, *The Animal Kingdom, Arranged According to its Organization* (London: Henry G. Bohn, 1863), 21.

general, however, zoophytes have been thought to include “various animals of low organization.” Lamarck argued that the *Animali acrita*, a group that Cuvier organized at the very bottom of his scheme, “‘have been improperly called *Zoophytes*; as their nature is completely animal, and in no respect vegetable.”²⁵⁹ Zoophytes had long been conceived of as inanimate animals, the taxidermic others of the fully living, in a sense. With this in mind, I wonder if we cannot, at least imaginatively, consider a stuffed animal to be a kind of zoophyte, an inanimate simulacrum that provides a physical metaphor for the “living” animal, and yet, somehow finds itself animated, if only in the minds of children.

The subversive and witty humor of Dion’s *Linnaeus* box can be found again in a series of four stuffed animal “portrait-installations” in which the artist features the popular “animated” zoophyte Mickey Mouse as the esteemed naturalist Cuvier. In 1990 Dion completed *Extinction, Dinosaurs and Disney: The Desks of Mickey Cuvier*, an installation in four parts that depicts Cuvier as the stuffed animal version of Walt Disney’s Mickey Mouse. At the center of each tableau, the stuffed figure of the mouse-man spews forth the naturalist’s theories (in French) over electronic voice boxes that operate independently and as units of the complete work—*Taxonomy of Non-endangered Species, Deep Time/Disney Time, The Fixity of a Rodent Species*, and *M. Cuvier ‘Discovers’ Extinction*.²⁶⁰ Departing from long traditions of displaying notable men and

²⁵⁹ Baron Georges Cuvier, *The Animal Kingdom, Arranged According to its Organization*, f.n. 22.

²⁶⁰ Jackie McAllister, “The Desks of Mickey Cuvier,” in *Natural History and Other Fictions: An Exhibition by Mark Dion* (Ikon Gallery: Birmingham, 1997), 24. McAllister’s short essay focuses on Cuvier’s work, leaving only a few paragraphs to address Dion’s installation. McAllister hones in on the art work’s connection to Euro-Disneyland, in Walt Disney’s production of a cultural universe, while Cuvier interprets a natural one. My argument, in turn, expands upon these connections, but also ties more neatly together Cuvier’s philosophies and the natural history practices of his day with Dion’s contemporary portrait-installation. Dion briefly discusses his four-part Disney installation in Mark Dion, Richard Klein, and Bree Edwards. *Mark Dion: Drawings, Journals, Photographs, Souvenirs, and Trophies, 1990-2003*,

women with decorum, Dion sets the staid tropes of commemorative portraiture on its head. In his portrayal of Cuvier, the artist favored installation over painting, inserting humor through the artist's Mickey-Mouse doppelgänger.

In *Taxonomy of Non-endangered Species* (**Fig. 2.1**), a stuffed Mickey dressed in his trademark red shorts, yellow shirt, and yellow shoes, stands on the fifth step of a tall ladder, holding on with one white-gloved hand and waving at us with the other. On a double-tiered brown wood wall shelf behind the mouse-man, ten other stuffed animal characters find themselves preserved in liquid, including Gumby, Garfield, Big Bird, Goofy, a Smurf, Woody Woodpecker, Snoopy, Babar, and the Pink Panther. Standing on his eight-foot step ladder, "Mickey Cuvier" alludes to the anatomist Cuvier's view of the Great Chain of Being, an anthropocentric vision of the world in accordance with Christianity. Here Mickey waves from his own character pulpit, implying the ways in which science, Christianity and capitalism have so often erected their own arbitrary hierarchical systems to order our world. Dion notes that the piece was inspired by the opening of Euro-Disney and the subsequent public outcry over the theme park's "irreversible attack of consumerist American culture on European values."²⁶¹ The production forces of Walt Disney's multi-billion dollar worldwide empire will not allow "trademarked" characters like Mickey to be endangered, lest they lose their value (in dollars as well as iconic clarity). But the stuffing of these "species," in this case, hardly marks their individual or corporate demise, as is the case with traditional naturalist

edited by Richard Klein (Ridgefield, CT: The Aldrich Museum of Contemporary Art, 2003). He explains that the piece arose while he was in Paris, at the moment of the cultural hysteria produced with the opening of Euro-Disneyland. Dion's use of Mickey Mouse as the naturalist Cuvier paralleled in many ways Disney's attempts to rewrite stories through the embodiment of characters, and "according to their own system of values."

²⁶¹ *Mark Dion: Drawings, Journals, Photographs, Souvenirs, and Trophies 1990-2003*, edited by Richard Klein (Ridgefield, CT: Aldrich Museum of Contemporary Art, 2003), 7; McAllister, 24.

specimens; it rather promotes and extends their mythologies among those seeking solace in a furry friend. Mickey, however, delights in the drowning of his fellow characters in sealed jars filled with liquid, subduing any commercial competition that might arise and thwart the mouse-man's own reign as king of the animated character jungle.

In *Deep Time/Disney Time* (Fig. 2.2), Dion hides the stuffed Mickey's signature red costume beneath an aristocratic black suit and cap, so only his yellow shoes emerge from his outfit. The feather in his cap echoes the quill pen that Mickey Cuvier holds in his left hand, ostensibly recording his thoughts on field experiments. Sitting at a small dark brown wood writing desk and perched upon a wood dining chair with an upholstered seat, Mickey finds himself surrounded by books, a globe, a small portrait bust, candles, an hour glass, an arrow, a magnifying glass, stones that likely contain fossils and the numerous tools that enable a paleontologist to extract fossils from their larger rock faces. These signifiers of deep or geologic time, and that long trajectory of species preceding man's appearance, contrasts with the much shorter duration of Disney Time, as reflected in both the history of the corporation, and, more profoundly, by the fleeting nature of the Disney experience itself.²⁶² Disney and deep time stand in opposition; the Mickey Mouse mythologies and orchestrated histories of the theme park and the production company become fleeting and inconsequential in the face of the long history and evolution of the earth and its living species. And of course it goes without saying that Mickey Cuvier

²⁶² McAllister, 23. McAllister describes "deep time" as, "A concept so extraordinary to human history and experience that it remains extremely difficult to comprehend. (Although, Mark Twain provided a striking metaphor: 'if the Eiffel Tower were now representing the world's age, the skin of paint on the pinnacle-knob at the summit would represent man's share of that age.')." Helen Molesworth, "The Delirium of Alfred Russel Wallace," in *Natural History and Other Fictions: An Exhibition by Mark Dion* (Ikon Gallery: Birmingham, 1997), 31. Molesworth describes deep time as "the scientific understanding of the age and history of the earth." She goes on to observe that, "John McPhee has devised a powerful metaphor for describing deep time in his wonderful book *Basin and Range*. If the earth's history can be measured along outstretched arms of a person, then the time human beings have been on the planet could be erased by a nail file running along the nail of the extended middle finger."

illuminates science's own Mickey Mouse practices, bringing personal beliefs to the table in the assessment of scientific data, just as Cuvier himself may have allowed his Christian beliefs to limit the full expression of his evolutionary data.

In *The Fixity of a Rodent Species* (**Fig. 2.3**) and *M. Cuvier 'Discovers' Extinction* (**Fig. 2.4**), Mickey serves, in the first case, as the keeper of immutability, and in the final installation, as the progenitor of evolution. As the art historian and museum director Lisa Graziose Corrin has noted, "Cuvier's research supported what his faith would not allow."²⁶³ As a devout Christian, Cuvier clung to his faith's notion of the Great Chain of Being, even while his scientific evidence suggested an evolutionary model closer to that later articulated by Darwin. In *The Fixity of a Rodent Species*, Mickey Cuvier stands atop his metal teacher's desk surrounded by texts on "Les Jardiniers du Roy," the place where Cuvier himself held court in Paris, with a collection of animal skulls and skeletal models, shells and a zoophyte preserved in a formaldehyde-filled glass jar, beakers and funnels, and a periodical featuring an article on the "Disney Machine." Dion has also arranged a procession of toy dinosaurs in ascending and then descending height behind the stack of books. Their pathway is marked by the pages of specimens from a naturalist's text, stamping out the past with their own evolution from dinosaurs into Godzilla-resembling cyborgs.²⁶⁴

²⁶³ Lisa Graziose Corrin, "Mark Dion's Project: A Natural History of Wonder and a Wonderful History of Nature," in Corrin, Miwon Kwon, and Norman Bryson. *Mark Dion*. (London: Phaidon Press, 1997), 55. Corrin devotes two paragraphs of a much longer essay on Dion's work to the artist's Mickey Cuvier piece. Like McAllister, she notes that the show importantly went on exhibit in Paris at the time Euro-Disneyland opened. She reads the piece as being about the blind spots of science and alludes to the ways that history can so often become bound up with consumerist impulses. And while I certainly do not disagree with Corrin's theories, it would seem to me that these connections can be extended to other social and cultural arenas. The Phaidon survey in which Corrin's essay appears also includes a transcript of the recorded text Mickey "spoke" during the installation of Dion's work.

²⁶⁴ For an excellent history on the dinosaur in popular culture see W.J.T. Mitchell, *The Last Dinosaur Book: The Life and Times of a Cultural Icon* (Chicago: University of Chicago Press, 1998). See

The morphing of the dinosaurs reiterates the more overt evolution of Mickey from 1928 to 1955 as depicted on the chalkboard at right. In this sequence, Mickey looks similar in each incarnation, differentiated only by changes in apparel.²⁶⁵ In this way, Mickey embodies Cuvier's façade of continuity amidst the contradictory evidence of species no longer extant, such as the presence of toy dinosaurs in the installation. Mickey, like Cuvier's species, never fundamentally evolves into something else. Any differences between the earliest Mickey and the latest Mickey depicted on the chalkboard are superficial. Evolution, for Cuvier, meant that species died and never came back; his theory did not allow for continuities between the past and the present, between fossils and living species. Each animal species for Cuvier was of divine origin and made extinct only by catastrophic events. Mickey in this sense is a self-contained entity, both artistically and biologically. In this way, the very articulation of Mickey in chalk speaks to Cuvier's difficulty accepting a Darwinian-style evolution. But by changing Mickey's outfits throughout time Dion suggests subtle transformations, that one small difference in

pages 5, 265-66, where Mitchell specifically attends to Dion's installation of a child's bedroom—*When Dinosaurs Ruled the Earth: Toys 'R' U.S.* (1994), decorated top to bottom in "kitschy" dinosaur patterns, paraphernalia and motifs. Mitchell reads the bedroom as a time capsule that when opened in the future would reveal "the late twentieth century as the period when 'dinosaurs ruled the earth.'" Mitchell views the world of "dinosaur kitsch" as "synonymous with the global dominance of American culture." He also adds that: "The emergence of postmodernism since the 1960s has made it possible for dinosaurs to 'cross the park' from the museum of natural history to the museum of fine art, from the space of mass culture to the world of elite, cutting-edge art-making. Mark Dion's multimedia installation reconstructs the dinotopia that is now available to children in the United States (and in Japan and other "developed" countries around the world). In Dion's installation, the dinosaur is both figure and background, a multitude of objects and images in a space and the wallpapered environment in which those objects are placed. The title of the installation suggests that the time when dinosaurs ruled the earth is not just the paleontological past, but also the immediate present, when its global circulation has reached epidemic proportions. The parenthetical qualifier of the title, "Toys R U.S.," suggest that this global epidemic may be view retrospectively as well, as an already archaic state (like the tomb of King Tut, filled with the toys and effigies of his attendants), as if Dion were leaving a message in a time capsule for future generations to decipher."

²⁶⁵ It is of course true that cartoon characters with long life spans do in fact morph over time (e.g. Homer Simpson) or appear differently according to their portrayer (e.g. Winnie-the-Pooh according to A.A. Milne or Walt Disney). Dion here only distinguishes Mickey through the years through his clothing.

appearance offers up an evolution of sorts. Dion's own process of working, then, playfully engages and destabilizes Cuvier's notion of the "fixity of species."

In the final tableau, *M. Cuvier 'Discovers' Extinction*, Mickey sits behind a soup mug bearing his own image. The mouse-man dons his characteristic grin, a happy-go-lucky countenance that underlines a certain oblivious and lack of critical eye Cuvier demonstrated in the evaluation of his data. Dion helpfully provides Mickey Cuvier with a desk lamp to illuminate his texts, but Mickey looks less the serious scholar than an innocuous character surrounded by taxidermic birds and marsupials, engravings and watercolors of species framed on the wall behind him, the naturalist specimen posters rolled up on his right, and the porcelain white rhinoceros figurine at center. In a sense, this implicit critique of the old naturalist as oblivious to the data around him is not entirely fair. Cuvier advanced anatomical dissection, a subject with which modern medical school and physical anthropology coursework begins today. But the artist qualifies his set-up with the selected quotes in *M. Cuvier 'Discovers' Extinction*, suggesting the artist's acknowledgment that Cuvier's "discovery," however apparent the evidence presented itself in favor of mutability, found itself concealed beneath the veil of the scientist's traditional Christian beliefs. The nuances that permitted faith to coexist with evolution had not yet made themselves known to Cuvier, and any discoveries that pointed in this direction were ultimately rejected by the pious naturalist. And so in Dion's "Discovery" piece, Mickey Cuvier sits behind a desk with his quill and paper, plants, and specimens boxes only partly opened. Comfortably installed within the space of this suggestive bric-a-brac, Mickey appears with the same perma-grin he always wears, ignoring any significant changes to his world view that holds the potential of his own

demise, along with that of the *Homo sapiens* responsible for his creation in the first place. In the space beyond the humor of Dion's Disneyland lies a certain somber musing on the state our systems of knowledge, economy and our identities. Mickey Cuvier's ever-present smile begins to read as something rather melancholic, suggesting nostalgia for a "simpler" historical moment—devoid of rifts in science and religion, unencumbered by the commercialization of intellectual pursuits and free from defining beings according to the language and systems of taxonomy or the corporate Mickey Mouse constructions of characters.

The science of Cuvier contributed to the production of disciplinary specialization that has led, in many ways, to learning on departmental islands in which it can be difficult to move fluidly from one subject of study to another. And yet, Dion's fabrication of four different scenarios for his stuffed naturalist neatly addresses the wide ranging character of the real zoologist's work habits. For example, the geologist Charles Lyell recorded his astonishment at the sheer expanse of Cuvier's work space. Cuvier lived across from the natural history museum, in Paris, which he also directed. His home was connected to the museum of comparative anatomy in which he also worked. Within his residence Lyell founded an extensive library dispersed throughout several rooms by subject, including specialized collections on ornithology, ichthyology, osteology, and the law among other subjects.²⁶⁶ Cuvier's "eccentric daily habits," as Corrin has noted, "consisted of moving hourly between his seven libraries and workrooms, each of which was devoted to a

²⁶⁶ McAllister, 24. McAllister reprints a long quotation from a letter in which Lyell described Cuvier's residence and the museums in which he worked. The letter appears reprinted first, as McAllister notes, in Stephen Jay Gould, "The Stinkstones of Oeningen," *Hen's Teeth and Horse's Toes* (New York: Norton, 1983).

separate area of study ranging from ichthyology to law.”²⁶⁷ Corrin assesses Cuvier’s study habits of spatially dividing up his work into seven rooms as indeed eccentric, and even more so in light of the (however intended) parallels between the naturalist’s desire to understand in seven rooms a world that his Christian God created in seven days. He endeavored to study across boundaries in an effort to grasp interconnected forces of nature, and yet he admits the limits of his efforts, of “one person” to “verify the totality.” This fact alone, the recognition of the sheer mass of material that scientists in Cuvier’s day sought to catalogue, contributed to the breaking down of science into more manageable parts, or areas of study. Of his own challenges in science, Cuvier said:

Natural history is a science of facts, and the number of facts it embraces is so great that no one person can gather or verify the totality that make up even one of its branches. Therefore natural history cannot be studied fruitfully except by consulting all the authors who have dealt with it and by comparing the evidence brought by the authors and by nature. But to consult the authors fruitfully, to be able to determine the degree of confidence owed to each of them, even to distinguish between what they report from their own observations and what they have gleaned from the writing of their predecessors, it is necessary to know the circumstances that governed their work, the times they lived in, the condition in which they found the science, and the facilities procured for them either through their personal position or through the help of friends, patrons, or students. These details, placed in chronological order and according to the order in which they are connected, constitute the history of the science, the foundation needed for any work that wishes to show the whole subject—the basis without which it would be impossible to make comprehensible the discussion of what is called synonymy, or the concordance of the names of the species, which itself is indispensable for compiling without confusion and without error what is known of their properties.²⁶⁸

Cuvier’s comments on the umbrella discipline of natural history can be found at the beginning of his study on ichthyology (or the natural history of fish). While he accepts

²⁶⁷ Corrin, 55.

²⁶⁸ Georges Cuvier, *Historical Portrait of the Progress of Ichthyology, from its Origins to Our Own Time*, edited by Theodore W. Pietsch, translated by Abby J. Simpson (Baltimore and London: The Johns Hopkins University Press, 1995 [1828]), 3.

the need to cast a wide net, Cuvier also acknowledges the difficulty that faced any single person attempting to gather all the facts. And yet, as regards the mutability of species, Cuvier had indeed gathered more than enough data to suggest the “reality” of evolution, and either subdued his discoveries in science behind his religious faith, or was not able to see the forest through the trees, so to speak.

The historian of science Dorinda Outram reads the multiplicity of naturalist investigations in the age of Cuvier as a fitting representation of the state of scientific thought at a moment of great flux:

There were few or no research programmes or methodologies approved by all workers in any given field...the internal state of natural history was not such as to place very strong restraints on the strategies for intellectual power and reputation which were performed upon them. In this situation of fluidity, disciplines, instead of providing limitations upon argumentation, were in fact *created through* argumentation in the public arena, and through acts of intellectual strategy formed by individuals. The setting of scientific norms to which Cuvier devoted so much time and energy, especially in the case of geology and paleontology, was thus a controversial act crucial to the staking of intellectual claims, and, at the same time, an act which created disciplines by making demands for specific methodologies and research programmes. It is these features which make the life sciences in this period such rewarding examples of the interpenetration of structures of thought and public action.²⁶⁹

Outram observes that one of the drawbacks of this kind of thinking in the sciences was that research programs were often headed by individuals of large personality and influence, who were in turn sponsored by famous and wealthy patrons who sought their own individual renown through their sponsorship and the respective inventions and discoveries for which they paid.²⁷⁰ Science in Cuvier’s day, it could be argued, was based at least as much on the competition for influence and funds, as it was on cooperation,

²⁶⁹ Dorinda Outram, *Georges Cuvier: Vocation, Science and Authority in Post-Revolutionary France* (Manchester, England and Dover, New Hampshire: Manchester University Press, 1984), 4.

²⁷⁰ Outram, 6-7.

productive public debate and cooperative scholarship. This system (or lack thereof) stands in contradistinction to the interested patronage of commercial science conglomerates of today (e.g. Lucent Technologies) who extend or withdraw university research funds with an eye directed, above all, to their bottom lines. In other words, Cuvier would have maintained a degree of intellectual and creative control over his research endeavors, which allowed him to pursue what he saw as a personal quest for truth, as opposed to a time-sensitive profit margin.

Other scholars, like Heather Ewing, have described the field of science in 1830s Paris as collegial and cooperative, thanks in large part to the very great number of naturalists and scientists at work at the same time in the city.²⁷¹ With no agreed-upon systems for arriving at truths, or even consensus on the fundamental questions that needed to be answered, scholars were free to enter into their own personal and unique methodologies to solve the problems they deemed relevant. The result was the production of an abundance of compelling, paradigm-shifting, if often conflicting and contentious approaches among the most famous scholars, like Cuvier and those who opposed him.

Dion, from this perspective, uses the figure of Mickey Cuvier to embrace the figure of the “celebrity” naturalist. His mouse-scientist provides a means to capture the all-encompassing ego of Walt Disney, the man and his corporate empire. As the artist Jackie McAllister has observed, “Where Natural History interprets the Universe, Disney produces one of his own. The Disneyland concept is an exercise in total control, a microcosm that functions by a strict set of rules, a systematic imposition of will and

²⁷¹ See for instance, Heather Ewing, *The Lost World of James Smithson: Science, Revolution, and the Birth of the Smithsonian* (New York: Bloomsbury, 2007).

vision over the organic framework of society.”²⁷² Just as Outrum reads the underbelly of a scientific system driven by individual personalities, Dion likewise exposes the irrationality that can emerge from current economic systems, as well as the danger of scientists run amok, given over more to opinion and personal gain than evidence. The taxonomical systems of natural history and natural science—whether the morphology of Linnaeus, the comparative anatomy approach of Cuvier, to the present schemes of organization via DNA analysis or barcoding—impose their own structures of knowledge upon a set of data. These systems elicit control and produce facts that adhere to certain rules and truths, but just as readily as transmutation eluded Cuvier’s grasp, so too other truths and facts escape our current objective systems of classification and order. And of course, even with our best attempts to cull data in ways that will bring truths that play very real and important roles in our everyday lives, we are forced to acknowledge, in the face of Dion’s portrait-installations of Mickey Cuvier that, more often than not, that thing which we desire to see, identify and know lies somewhere in the in-between spaces of the zoophytes.

²⁷² McAllister, 25.

III. Representing Animals

In *The Power of Images* (1989), the art historian David Freedberg sought to uncover “the ways in which the god is in the image,” or “how [the image] becomes charged with presence.”²⁷³ Just months before the publication of Freedberg’s ten-year study of the “irrational” aspects of art-reception, as well as the related reluctance of traditional art history to engage with the sexual and erotic charge in the aestheticized art-object, the French philosopher and cultural theorist Jean Baudrillard attended, in a contrasting but sympathetic way, to the troubled nature of the art-object in *The Ecstasy of Communication* (1987).²⁷⁴ For Baudrillard, the “ubiquity of images” about which he wrote, suggested the sheer “excessiveness and degradation of the visible,” which results in images that “*have become our true sex object*, the object of our desire.”²⁷⁵ Freedberg and Baudrillard’s concern for the instability of images, given their ubiquity, may seem to have little to do with a study of animals. Their attention to viewer response and image consumption, however, can help us illuminate the ways in which artists (like scientists) have relied on a certain stability for art-objects. Despite their working in the distinct spaces of early modern and contemporary history and theory, both Freedberg and Baudrillard help us to reconsider the ways that stability and aura are bound up—including the role our imaginations, desires and fears play in reception—and the ways in which our own being relies on or defies this object/art-object/scientific specimen permanence.

In the first pages of his introduction, Freedberg characterizes viewer response as the primary preoccupation of his book. His discussion of the “magic” of images parallels

²⁷³ David Freedberg, *The Power of Images*. Chicago, IL: The University of Chicago, 1989: xxiii.

²⁷⁴ Jean Baudrillard, *The Ecstasy of Communication*. New York: Semiotext(e), 1988 [1987]: 36.

²⁷⁵ Baudrillard, 33, 35.

Baudrillard's grappling with their "aura."²⁷⁶ Many scholars have contended with the issue of "aura" since the publication of Walter Benjamin's landmark essay on "The Work of Art in the Age of Mechanical Reproduction" (1936). For Benjamin, "aura" infuses the art-object with a powerful charge when it is associated with "tradition," "ritual," authenticity, and "a unique existence."²⁷⁷ Broadening their scope beyond art and its objects, both Freedberg and Baudrillard consider the place of animals in their discussions. According to Freedberg, art historians have fostered a dubious split between the viewer's "aesthetic" responses to Western high art and "religious" or "magical" responses to "primitive" art, which includes the animal representations included in Paleolithic cave paintings.²⁷⁸ Baudrillard, for his part, criticizes modern art for only exerting "the magic of its disappearance," an effect he attributes to images "proliferating indefinitely," as opposed to living beings like animals, whose proliferation is limited to the span of their reproductive lives.²⁷⁹

This magical "disappearance," especially notable in modern art, and this endless proliferation that Baudrillard describes, is also at work in traditional as well as contemporary images of animals. His assertion recalls E.H. Gombrich's *Art and Illusion* (1960), which addresses the representational complexities of many animal images, as well as the distinction between the object as seen and the object as rendered. To make his point, Gombrich invokes the parlor game of "drawing consequences," which illustrates the transformations of a schematic "owl" hieroglyph into a cat in ten steps (**Fig. 2.5**). We

²⁷⁶ Freedberg xxii; Baudrillard 27, 34.

²⁷⁷ Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Media and Cultural Studies: Keywords*, edited by Meenakshi Gigi Durham and Douglas M. Kellner. Malden, MA: Blackwell Publishing, 2006 [Walter Benjamin, *Illuminations*. New York: Schocken Books, 1969]: 21-22.

²⁷⁸ Freedberg xxi-xxii.

²⁷⁹ Baudrillard 34, 36.

can view this visual process as parallel to its auditory equivalent in the more familiar game of “telephone” or “gossip,” in which an original sentence is transformed into a stream of unfaithful copies by a sequence of individuals who whisper the phrase to one another in supposed repetition, until the last person is reached. Invariably “Susie sailed swiftly into the setting sun,” turns into “Sue and Tom ate one another’s hot cross buns,” or some such distortion. Gombrich’s game of “drawing consequences” operates visually in a similar way to the aural transmissions of language in the telephone game. He points out that visual reconstructions of an object seen briefly or only schematically rely on the viewer’s ability to quickly and accurately describe and classify. The original drawing of the “owl” hieroglyph transforms into the image of a domestic feline, making the “owl” its fossil other. The reproduction or the mutated copy is as disconnected from the original, as Gombrich will argue later in his examples of the whale and the rhinoceros, as the “original” is from that which it sought to describe (if it sought to veristically designate anything at all).²⁸⁰

To illuminate the relationship between words and images (and the ways they can become twisted and confuse their own “original” readings), Gombrich uses the example of a locust presented in a German woodcut from 1556 (**Fig. 2.6**). The insect in this case probably appears to our eyes as a bestial hybrid, a cross between a feathered flyer, a menacing insect and a ghastly dragon. Gombrich explains these distortions by informing us that the German word for locust, *Heupferd*, in English means hay horse. His conclusion is that the very name of the animal inspired the artist to “adopt a schema of a horse for the rendering of the insect’s prance.”²⁸¹ The result is a kind of perversion of the

²⁸⁰ E.H. Gombrich, *Art and Illusion*. New York: Pantheon Books, 74-75.

²⁸¹ Gombrich, 79.

origin of species, in which the locust and the horse are descended from the same line, and thus maintain similar morphological characteristics. What I find compelling about this example is the curious way in which image and word have been bound together, the word contributing significant meaning to the final image of a locust. In the space between what is seen and what is articulated lies the imagination of the artist, or at the very least his preconceived notion of what a locust should look like.

And yet the locust-as-horse provides a signpost of becoming, of words and image shifting from one categorical nominal or being into something else. We understand the locust to be like a horse, although the far smaller insect variety of the horse, and one that flies, no less. While many art historians eschew analysis via analogy and metaphor as hopelessly uncritical, I would argue that the metaphor and the analog are no less illustrative than any other kind of reading via signs or indices.²⁸² “Understanding in the human mind works largely by means of metaphors and analogies—the incalculable relationships between bits of information,” argues eco-writer Rebecca Solnit.²⁸³ Perceiving these relationships, she argues that thinking is itself an aesthetic occupation, “not purely analytical.”²⁸⁴ The naming of the locust, and the process of representing it *like* a horse, becomes a linguistic transformation turned into a visual transformation (i.e. horse-like locust). In Greek, Solnit observes, *metaphor* means “to transport something from one place to another.” In this etymological derivation, metaphor operates as “a medium of imaginative travel...the transportation system of the mind, the way we make

²⁸² Here I am thinking, in light of this project, of the work of Rosalind Kraus on Cy Twombly, which I discuss in chapter three.

²⁸³ Rebecca Solnit, *As Eve Said to the Serpent: On Landscape, Gender, and Art*. Athens, GA: The University of Georgia Press, 2001: 119. This definition of metaphor, too, parallels notions of portability in the work of Tomaselli and Ford, which is discussed in later sections of this chapter. In this case, words and images move from one physical and/or conceptual place and space to another.

²⁸⁴ Solnit, 119.

connections between disparate things.”²⁸⁵ In this type of system, if it can be called a system at all, nothing is closed and nothing is assured. In these worlds of analogy, we can conceive of a highway of informatics from one object to another, the unnamed spaces between offering new sites of meaning.

The whale and the rhinoceros provide two further examples in Gombrich’s exploration of the space between that which is perceived and that which is portrayed, a theme that arises in naturalist works (and something that is especially well addressed by the artist Walton Ford, as we shall see at the end of this chapter). Using the examples of a late sixteenth-century German woodcut and an early seventeenth-century Italian engraving, Gombrich pulls the rug out from under the feet of the viewer who thought what he was viewing in these prints was, indeed, the scene of a beached whale (**Fig. 2.7**). Gombrich notes that the finned whale, “looks suspiciously as if it had ears, and whales with ears, I am assured on higher authority, do not exist.”²⁸⁶ Both prints were said to have been “drawn accurately from nature,” but Gombrich argues that later Italian artist must have copied the actual event from a previous print. “To draw an unfamiliar sight presents greater difficulties than is usually realized,” he said.²⁸⁷ This assertion brings us to Gombrich’s famous example of the representation of the rhinoceros (1515) in the early modern period, most notoriously by the German artist Albrecht Dürer and by naturalists like James Bruce up to the end of the eighteenth century (**Fig. 2.8**). Bruce described Dürer’s image as a “wonderfully ill-executed...monster,” but admitted that the veristic animal representations of such scientists as the Comte de Buffon suffered equally from

²⁸⁵ Solnit, 140.

²⁸⁶ Gombrich, 80.

²⁸⁷ Gombrich, 81.

“preconceived prejudices and inattention.”²⁸⁸ Gombrich also addresses the lack of proper attention to elephant morphology in the sixteenth and seventeenth centuries, as well as the odd placing of eyelashes on the bottom lids of horses from antiquity to the time of Dürer.

Keeping Gombrich’s examples in mind, we can call on Benjamin to understand the implications of distances between that which seems to be and that which is rendered. For the artists just mentioned, the animals that they attempted to render in two-dimensions may have seemed auratic themselves, or as the philosopher put it, “unapproachable.”²⁸⁹ Their misrepresentations of the locust, the whale, the rhinoceros, the elephant or the lion can be said to have marked “a distance however close it may be;” that is, the misrepresentation of the animal, particularly if one is learned enough to know what the actual organism looks like in the field, erases the nearness of the creature (or the illusion thereof).²⁹⁰

Baudrillard illuminates further the challenge of reading images as complete and truthful entities. In his discussion of erotic and pornographic imagery, he observed that the viewer never really looks at the nude human body, something which would depend on the image covering and uncovering itself, an “oscillation” made impossible due to the body’s “pure presence,” or directness of the undressed, naked self.²⁹¹ Baudrillard explains the way in which a single image hardly reveals itself to a viewer all at once, and “a rhythm of emergence and secrecy sets in.”²⁹² Baudrillard’s view of seeing as a series of dynamic visual oscillations allows us to reconsider looking itself as a kind of hybrid act

²⁸⁸ Gombrich, 82.

²⁸⁹ Benjamin, 35f.

²⁹⁰ Benjamin, 35f.

²⁹¹ Baudrillard, 32.

²⁹² Baudrillard, 33.

that negotiates sites between the animal itself and the concept of it, a kind of morphological *in media res* that situates itself between being and reception, representing and reproducing. For Bruce and for Gombrich, such animal renderings were evaluated for their degree of accuracy. For Baudrillard, however, the question of image reception is less a matter of verity than of visibility, in which the viewer never sees everything at once, but captures instead a series of visibilities that “render others [visibilities] invisible.”²⁹³ For Gombrich, errors in veristic representation illuminate viewer reception to representational accuracy, as well as the various strategies artists have taken to reproduce animals and other images from life. It does not really matter whether Dürer provides us with a mimetically accurate animal or not, but rather that viewers continued to recognize the rhinoceros as a rhinoceros, and that Dürer himself arrived at the image through his own (intentional or not) hybridization of other artists’ drawings on the rhinoceros, rather than drawing his “monster” from life. The schema of misrepresentation itself becomes more important than the accuracy and precision of details.²⁹⁴

In addition to the mediation of animal representations by images and language, Gombrich observed that the very talents and preferences of the artist or naturalist determine the style of his painting. An artist’s abilities and training could steer her toward the kind of image that she creates, to a naturalistic painting, for instance.²⁹⁵ Such naturalistic styles, however, do not arise without precedent from sheer observation of the world: their forms are learned through the artistic training process, through the artist’s encounters with other naturalistic renderings, often in the space of a studio, and even

²⁹³ Baudrillard, 33.

²⁹⁴ Gombrich, 87.

²⁹⁵ Gombrich, 86.

before an artist embarks on a “‘copy’ of reality.”²⁹⁶ Imitation in this sense is already mimetic, a copy of the copy. And, of course, there is no original rendering of nature, only simulacra, as Baudrillard would say, as all naturalistic images contain in them the artist’s, and more broadly society’s, concept of nature (a category itself conceptually constructed). “Concepts, like pictures...can only be more or less useful for the formation of descriptions,” adds Gombrich.²⁹⁷ And as copies, as Gombrich ultimately acknowledges in his piece, trueness and falseness present themselves as matters of degree.

In *Art and Illusion*, Gombrich ponders the “confusion of pictures, words, and statements,” a problem that had already been taken up in artistic terms by the surrealist René Magritte’s (1898-1967) famous “pipe” painting *The Treachery of Images* (1928-29) (**Fig. 2.9**). The plasticity of Magritte’s painted pipe denies verification of the cursive text “*Ceci n’est pas une pipe*,” reinforcing, instead, the colloquialisms “what you see is what you get,” “seeing is believing,” and “a picture is worth a thousand words.” That the image here seems to have more power does not detract from the view, shared by Gombrich, that the image is as much an illusion as the text, if not a more convincing one. When confronted with Magritte’s painted pipe, many view the text *and* the pipe as mere schema of communicative currency that refer not “to pre-existing things or concepts so much as [they] articulate the world of our experience.”²⁹⁸ The French philosopher Michel Foucault reiterates Gombrich’s sentiments about the pipe, seeking a time when the text itself will become its own calligram, an image unto itself, no more or less detectable,

²⁹⁶ Gombrich, 87.

²⁹⁷ Gombrich, 89.

²⁹⁸ Gombrich, 90.

revealing or covert than the plastic image of the pipe.²⁹⁹ Like Linnaeus in a box and Robert Morris in his *I-Box*, word and image play games of peek-a-boo with the viewer-reader. Images of animals often display what art historian Steve Baker has described as “a visual ambiguity which loses all sight of taxonomic propriety.”³⁰⁰ We are left not only to wonder whether we are seeing a horse or a locust, or seeing or reading (or smoking) a “pipe,” but what we ourselves are looking at in the mirror—whether the corpus that we see is as stable as the word *Homo sapiens* has been, thanks to Linnaeus and his followers, over the last two and a half centuries.

IV. Entomologising

Summer brings sweltering temperatures to the American Midwest, and especially the hot tar pavements of Chicago, a city that becomes its own tropical microcosm in these conditions. Community pools provide respite from the heat, local bars serve up cool libations, and shoppers dart in and out of air-conditioned shops on Michigan Avenue. By August most people have just begun to take in enough sun and warmth to steel their winter-weary bones, only to have return to shortly thereafter to the heated shelters that protect them from Chicago’s long and windy winters. But while *Homo sapiens* seeks out climactic consistency, other animals—like arthropods—thrive amidst the soaring mercur’`y and tropical humidity. Arthropods account for the largest animal phylum, a group that includes insects, spiders and crustaceans. They have segmented bodies and jointed, hollow appendages of antennae, wings, or legs. Charles Darwin grouped

²⁹⁹ Michel Foucault, “Non-Affirmative Painting,” in *This is Not a Pipe* (1968): <http://foucault.info/documents/foucault.thisIsNotaPipe.en.html>.

³⁰⁰ Steve Baker, “What Does Becoming-Animal Look Like?,” in *Representing Animals*, edited by Nigel Rothfels (Bloomington: Indiana University Press, 2002), 95.

arthropods among the “lower animals,” but they have remained popular within the sub-culture of bug and beetle aficionados. In his installation *Roundup: An Entomological Endeavor for the Smart Museum of Art* (July 2000) (**Fig. 2.10**), Mark Dion adopted these animals as a fitting subject. The University of Chicago’s David and Alfred Smart Museum of Art commissioned the artist to make this piece as way to explore the ecology of the museum.³⁰¹ The arthropods found in the Smart Museum assumed the center of an elaborate art-science study and installation, involving their collection, inspection, and classification.

Why did Dion take on the role of an entomologist, collecting, classifying, and preserving insects? Arthropods have typically fallen within the category of the creepy crawler, pests to be swatted and squashed out of fear or more simply in response to their “nuisance” factor. But Dion’s “entomological endeavor” operates as a means to interrogate longstanding paradigms of classification and categorization. In the eighteenth and nineteenth centuries it was very often a naturalist who occupied himself with the tasks of species identification, collection, classification, and preservation. In Dion’s case, however, these bugs have proved central to his exploration of cultural constructions of order and knowledge. While we so often associate collecting, classification and ordering with a scientific imperative, these fields of ordering knowledge also continue to thrive and, in some ways, define the practice of art history, as well as other fields of knowledge. The artist’s investigation effectively straddles the art-science divide, trading on style and morphology, artist and scientist, art and arthropod.

³⁰¹ Stephanie Smith, *Ecologies: Mark Dion, Peter Fend, Dan Peterman*. Chicago: David and Alfred Smart Museum of Art, 2001, 4. Dion’s project was one among three installations in the exhibition, *Ecologies: Mark Dion, Peter Fend, Dan Peterman*.

Dion's bug "roundup" is as much a work of science—perhaps as undertaken by one of the University of Chicago's Darwinian Science programs such as Organismal Biology & Anatomy—as a work of art. As the creative director, and a participant in this art-science survey, the artist donned tan field pants and a button-down shirt, leather boots and a canvas vest suitable for scientist and naturalist alike (**Fig. 2.11**). In this gear Dion and his volunteers³⁰² joined in a bug hunt throughout the building, from the loading dock to the director's office. When Dion completed this portion of the project, he changed into a dark lab coat and pants to analyze the culled arthropods in a gallery-laboratory space complete with a high-tech Stemi 2000-C Zeiss stereo microscope, a device capable of enlarging specimens not visible to the naked eye and photographing them in three dimensions (**Fig. 2.12**).³⁰³

This entire entomological endeavor “mingled research and performance” as the exhibition's curator Stephanie Smith noted.³⁰⁴ The clothes Dion wears in his piece—from those identifying him as a field researcher to those he changes into as a laboratory technician and analyst—provide a degree of legitimacy to the work of science as art. And yet these clothes also read as costumes, Dion's scientific garb bestowing the entire project with an element of absurd humor. One can only wonder if Dion's artist-scientist “performance” was a matter of fact or fiction, as the artist him deliberately blurred the lines between the two roles with his activities, clothes and props. Of course, categories of fact and fiction, true and false, have never been as rigidly constructed in our culture as we

³⁰² Candida Alvarez, Ramon Alvarez-Smikle, the American photographer Dawoud Bey, Patrick Engelking, Kris Ercums, the scholar, critic, theorist and editor of *Critical Inquiry* W.J.T. Mitchell, Axel Peterman, the artist Dan Peterman, Sander Peterman, Amy Rogaliner, the curator of the exhibition Stephanie Smith, and Hillary Weidemann.

³⁰³ Mark Dion, “Artist's Statement,” in Dion, Fend, and Peterman, 37.

³⁰⁴ Stephanie Smith, “Project Overview,” in Dion, Fend, and Peterman, 41.

might imagine them to be, and often register only in matter of degrees. The qualities that make one thing art and another thing, well, just a thing, and those that make a scientist an expert on nature and an artist an expert on culture, manifest themselves in Dion's entomological orchestration with considerable room for slippage. As unwitting participants and subjects in this process, the arthropods scuttled around their own visual iterations, from their original, "natural state" to their appearance under the microscope, later preserved in formaldehyde-filled bottles, and final transformation into representations of their formerly living selves in enlarged microscopic photographs (**Fig. 2.13**). These images depicted the black and white arthropods as veritable "bug portraits," each specimen glowing in translucent white against a black ground, the entire image set off by a white border.

Dion's entomological portraits, enlarged from microscopic images, constitute just one of many works in which the artist explores paradigms of art and science. Installations like his arthropods project provide layer upon layer of informatics, drawing from the history of natural history as much as our present perceptions, constructions of knowledge and the future of aesthetics, science, and technology. Dion's microscopic arthropod gazing, fixed and magnified through photographs, illuminates morphological similarities and differences, but continues to dwell within the realm of Linnaean taxonomy inasmuch as each species occupies a distinct sphere of representation, and is placed within a kind of table of identification. But Dion's arthropod art also takes us beyond the display of the collected, and transforms the specimens into artful portraits that entice our gaze. As Smith has noted:

These images approached portraiture, not in any traditional sense of likeness of psychological acuity, but by virtue of the individuality

imparted to each newly dead or long-desiccated insect through manipulations of pose or lighting. The choice to highlight the insects against dark, dust-flecked grounds also monumentalized them within almost stellar fields, a visual link between micro- and macrocosm.³⁰⁵

But Dion's bug portraits also highlight what most museum-goers have not paid to see.

Forcing the invisible upon the viewer, the artist codifies arthropods in photographs, bringing bodies of bugs to the forefront of a space usually occupied by works of art. We might also consider the ways that Dion's piece makes these insects visible. Creatures of this type are routinely destroyed by the herbicide Roundup, the source of Dion's title, which riffs on the product of the agricultural biotechnology corporation Monsanto.³⁰⁶ By naming his piece after this substance, Dion underlines humanity's destructive attempts to control and contain nature. In the bugs' cosmological close-ups, we also witness the body's postmortem state. The dust-flecked stars indicate bodies and universes in the process of decomposing, leg segments and space dust that suggest a falling away, a dispersal of a body into an un-body of cosmic mysteries.

Through the display of his arthropod portraits, Dion has highlighted the organisms that best demonstrate the diversity of the phyla. He places a curled fly next to a spider, a bee next to a centipede. Using specimen pins to splay the wings and uncurl deceased bodies, Dion attempts to articulate each arthropod's discrete anatomical features. His work provides the spectator with an enhanced window onto a bug world otherwise barely visible to us. The pieces heighten our experience with the arthropods, and provide us with a visual data set hardly conclusive of specific scientific evidence, but rather an artistic

³⁰⁵ Smith in Dion, Fend, and Peterman, 41-42.

³⁰⁶ Roundup is just one of the products made by Monsanto and marketed by Scotts. Scotts markets Roundup as an herbicide that "kills weeds to the root." Its primary bug product, Ortho, kills both bugs and weeds. While Roundup itself may not be an insecticide, its sale by a company that markets products that kill bugs and weeds to promote perfect lawns and gardens makes it an ideal herbicide to riff on for Dion's project. The chemicals in Roundup can also be found in the herbicide Rodeo, both names the suggest a corralling and controlling of things living.

material artifact of patterns and shapes on which we are left to meditate. But at the same time, the photographs, with their black and white format also erase our sense of difference. Before the age of DNA technologies, naturalists and scientists relied not only on the external structures, forms and patterns to identify animals, but also on their colors. Though it is not difficult to distinguish a bee from a wasp from a beetle in these black and white images, when robbed of color, the bugs have become traces or shadows of their former selves, abstract constellations against a black ground. While we might be able to discern a general identity within arthropods, it would be difficult to determine actual species with their chromatic mottling lost in shades of white and gray. In their representation as generic black and white individuals, these animals have lost the source of their power in numbers, their mobility stilled in individual photographic freeze frames.

We can also argue that the format of the bug photographs suggests not only portraits, but the artifacts of a crime scene, filaments captured on film as forms of evidence. The modernist grid of bugs recalls the arrangement of “fugitive” portraits in Andy Warhol’s *Thirteen Most Wanted Men* (1964) (**Fig. 2.14**). While Warhol’s piece, as the art historian Richard Meyer has observed, challenged social mores of sexual orientation and desire, Dion’s bug portraits question the classification of sexual orientation, as well as the identification of species themselves.³⁰⁷ Dion’s arthropods, like Warhol’s men, alternately gaze at each other and out at the viewer, facing off with one another in a way not experienced in everyday life. Though the bugs that we encounter in our homes most often find their fates in a crushing death, Dion’s magnified specimens

³⁰⁷ Richard Meyer, “Warhol’s Clones,” *Yale Journal of Criticism* 7, no. 1 (spring 1994): 79-109.

give monumental form, yet in an intimate setting, to the objects of our murderous compulsions.³⁰⁸

Warhol's *Most Wanted Men* provides a foil against which to read Dion's arthropod portraits, brining us into the realm of documentation with their respective images captured in black and white. Dion's work, in turn, uses the subversive potential and aesthetically bold techniques of Pop art displays, while also hinting at a more austere, minimalist past with his stripped-down color scheme, sequential portrait blocks and logical, rectilinear format, as if the portraits of men and bugs hold the potential to increase exponentially.³⁰⁹ In the case of Warhol, his characteristic streamlined design techniques, the regularity of the quadrilateral portraits and the asceticism of the black and white color scheme is replicated in Dion's own piece. By blowing up the bugs, Dion forces his arthropods to escape taxonomical boundaries; and in fact, he does not label a single species with text (**Fig. 2.15**). Thus, as the organisms momentarily leave the corporeality of their bodies, they display themselves as patterns of lines and shapes, and less clearly as examples of specific species than as specific objects.³¹⁰

Dion's arthropod specimens have become the museum's art specimens. Affixed to the wall with bug pins, but framed in white, the bugs recall simultaneously the entomologist's and the art critic's booty. While some of the bug portraits hang on white

³⁰⁸ Thought other artists of the 1960s were involved in chart making, Warhol's portrait chart of "criminals" makes a good comparison to the bugs in their similar use of photography and a black and white color scheme. The artist Carl Andre made periodical charts in the late 1960s, one of which was used for a exhibition advertisement in *Arts International* of the artist's work on display at the Dwan Gallery, April 26-May 21, 1969. But this chart displayed only letters, numbers and boxes, leaving out images and remaining more in line with traditional scientific displays of the periodical table of elements.

³⁰⁹ One might argue that Warhol's *Most Wanted Men* anticipates the asceticism of minimalism.

³¹⁰ I should say here that I am not intentionally referring to Donald Judd's classic article on minimalism, "Specific Objects," in which the artist and critic referred to works of the recent past that could be classified as neither painting nor sculpture. His boxes, made out of industrial material, became examples of "specific objects." See Donald Judd, "Specific Objects," 1964 *Arts Yearbook* 8 (1965): 94; Reprinted in Thomas Kellein, *Donald Judd: Early Works: 1955-1968*. New York: D.A.P., 2002.

walls as befits the modernist décor of art museums, others hang on a wall painted in blackboard paint.³¹¹ In the main exhibition space, Dion features two work tables and a storage cart replete with the tools suitable for an entomologist or serious naturalist: a microscope, Petri dishes, a can of compressed air, specimen jars and test tubes, rubbing alcohol, Ziploc storage bags, a butterfly net, pencils and pens, brushes and droppers, screwdrivers and tweezers, and a collection of books on mites, millipedes, beetles, moths and insects. A mannequin dressed in field gear—khaki pants and vest, button-down shirt and field boots, a white cap and Dion’s own trademark thick, black-rimmed 1950s-style glasses—guards the space with a butterfly net in hand and a canvas bag for holding specimen vials slung over his shoulder. Set on a white platform base, the installation becomes a citadel of science, defended by the mannequin “armed” with his field fatigues, butterfly “bayonet,” and arthropod “ammunition.” On the wall behind the temporary laboratory Dion situates the photographs of his arthropods, affixed to a white wall with specimen pins. Their neat display in rows, particularly given the context of the museum, rids them from any serious scientific consideration within Dion’s installation. Instead, they fit better within the strategies of repetition and seriality that we see, for instance, in Robert Morris’s modernist white cubes, and even more so in Warhol’s silkscreens. And yet repetition, copies, and serials are as much patterns of nature as “patterns of culture.” Here the canvas-outfitted mannequin operates simultaneously as a guardian of science as a curator of art. With his butterfly net in hand, one wonders if this art-science docent has set out not to catch insects, but rather to catch a different kind of specimen, the art aficionado.

³¹¹ Smith in Dion, Fend, and Peterman, 43.

A separate partition wall in the group show, painted to emulate a blackboard, displayed more of Dion's bug photographs (**Fig. 2.16**). These bug "portraits" were arranged in horizontal bands, periodically punctuated by notes in chalk that indicate the place in the museum where Dion and his team of collectors found each bug: on the second floor, the main office, hallway, and conference room, as well as the offices of the director, associate director, senior and Mellon curators, associate curator, educator, and registrar; on the first floor, the modern, Asian, old masters, contemporary and Bernstein galleries, along with a study room, the lobby, and the loading deck; and in the basement, the hallway, workshop, and art storage space. He collects in the "old masters" gallery and the ever-tucked away "art storage" space, humorously exposing areas of the museum that simultaneously offer up dead artists, dead art and dead bugs. Alternately, of course, the collection of a living arthropod specimen provides new life to art spaces too often condemned to the past.

The artist's grouping of arthropods together by their location of origin, further underlines the cohabitation of humans with these "lower animals." On a descending scale, Dion organized the bugs found in the Director's office and other administrative offices at the top, placing the meeting rooms and galleries in the middle, with the basement, loading dock and art storage relegated to the bottom of the display. Dion went to great lengths to illustrate the paradoxical nature of the director's office, a space most desirable to humans, thanks to its large size and wealth of windows providing light and fresh air, but that was also infested with the greatest number of arthropods. Dion's piece begs us to ask: Who is really in charge in this space? Between humans and the bugs, who

has maximum biological advantage? Dion acknowledges his subversion of our very notions of taxonomical hierarchy in the *Arthropods* piece:

There is something revealing in the awkwardness in our thinking about nature and particularly in our articulation of the difference that separates *Homo sapiens* from other living creatures. Our notion of nature as something separate, as something “out there” tethered to the idea of wilderness, remains one of the prevalent and pernicious urban prejudices. Nature seems not to be found in the everyday, unless magnified. By shifting our focus we can be reminded that we are inalienably part of an ecology...We are surrounded by innumerable unwelcome reminders of our status as animals, biological entities which must follow the rules of life—eat, eliminate waste, interact with other organisms, reproduce, die.³¹²

Bugs are particularly good subjects for illuminating inequities in our hierarchical systems of classification (as well as broader hierarchical cultural systems) because they can be located at or near the bottom of our zoological pyramid, in which humans rise to the top. The themes of classification and taxonomical hierarchies that Dion took up at the Smart Museum are concurrently explored by scientists today through DNA research. This research was first spurred on by massive undertakings like the Human Genome Project, begun as a federally funded project in 1989. DNA provides empirical proof of our difference from other animal species, but it also reminds us how very much a part we are of the animal kingdom, all united by the microscopic cell that notates life.³¹³ Dion’s project of “bug portraits” reminds us how very strange and different his bugs seem in relation to our own image in the mirror. But standing in historical relation to Warhol’s “criminals” (and conversely his celebrities) captured in art, we are reminded how very much the same human being and arthropod animals really are in the greater cosmological

³¹² Dion in Dion, Fend, and Peterman, 35.

³¹³ Take for instance the discovery that humans are, in terms of their genetic material, closely related to such animals as worms. See, for instance, Alexandru S. Denes, Gáspár Jékely, Patrick R.H. Steinmetz, Florian Raible, Heidi Snyman, Benjamin Prud'homme, David E.K. Ferrier, Guillaume Balavoine, Detlev Arendt, “Molecular Architecture of Annelid Nerve Cord Supports Common Origin of Nervous System Centralization in Bilateria,” *Cell* 129 No. 2 (20 April 2007): 277-288.

picture. Dion's arthropods project challenges us to rethink the bifurcations of nature and culture, as well as to dispel any notion that human rationality and consciousness somehow places us in a position above all other beings.

In contrast to the artistic character of the bug photographs tacked to the white wall in the main installation space, the photographs mounted on the chalkboard take on a far more scientific feel, resembling notes jotted by a professor during a classroom lecture on entomology or the private annotations of a scientist working out the meaning of her collected data. The combination of word and image also elicits the imagery of scientific tables and pedagogical tool charts, including the Periodic Table of Elements, where abbreviations represent materials with their atomic numbers. Dion's text, printed in chalk across the top of this blackboard-like table—"ARTHROPODS of the Smart Museum"—reinforces the notion that we have indeed been transported into a scientific lab. And yet his choice of "ARTHROPODS" as his animal subject wittily clues us into the subversion of art-science paradigms in the context of this performance and installation. In the very title of the piece, "ARTHROPODS" we find the word "ART," the only word capitalized on the chalkboard in the work, denoting science as a cathedral of nature and art as a cathedral of culture. Reading the text against the entire work, I cannot help but think that Dion has caught multiple subjects in his butterfly net—arthropods and museum-goers, the disciplines of science and art, words and images. In his performance, as the art historian Miwon Kwon has noted, "Dion is put on display, not as a theatrical actor in an artificial guise but as himself a specimen."³¹⁴ And in the process of photographing himself at work, alongside the photographs of his bug portraits, Dion has managed to capture

³¹⁴ Miwon Kwon, "Unnatural Tendencies: Scientific Guises of Mark Dion," in *Natural History and Other Fictions: An Exhibition by Mark Dion* (Ikon Gallery: Birmingham, 1997), 41; A longer version of this essay appeared in *Forum International* 4 (May-Aug. 1993): 104-07.

himself in a formaldehyde of film. But of course his net has holes, allowing slippages of representations and demonstrating our continued attempts but fleeting ability to solidify materiality, identity and knowledge at all.

V. Visualizing Animals

During the past two years, an interdisciplinary reading group on animals has been meeting at Penn State University. Just before organizing their first symposium on the subject in 2007, members discussed the group's name, "Visualizing Animals." We discussed what connotations the name suggested, and whether it offered any answers to the question about just who is visualizing whom? What does it mean for scholars to explore the visualization of animals? As scholars of images and texts we were not involved in the artistic enterprise of representing and producing images of animals.³¹⁵ If, however, "visualizing" acts as an adjective that describes the nature of the animals we study, what would be the characteristics of an animal that has visions, *envisions*—would it be that it reveals itself to us through some mechanism of our gaze with its image, or something more than that?

Vision involves something beyond mere retinal experience, a cerebral function in concert with the brain that produces an image and conception of an image beyond the registering of a form or color. And while art historians have made it their business to understand the cultural weight of visions, many scientists have been studying the actual origins of sight itself. These origins tell us not only about the evolutionary development of the eye, but also about the way the eye becomes an illustrative organ in the acceptance

³¹⁵ There are, in fact, artists in this group, but while they certainly bring their expertise in the studio to their discussions, their role in the reading group is that of a scholar. The group is a reading group, and, as such, not one that itself makes images of animals.

or rejection of natural selection. Darwin believed that the eye developed over time and that the organ of sight, like all other organs in the development of a new system or new organism, evolved. His detractors, on the other hand, argued that the eye, being as complicated an organ as it is and being so essential to the existence of human beings, simply could not have evolved slowly. It must have arrived fully formed, they argued. What would an eye only partially evolved look like, and what could possibly be its use?

The origins of the eye have recently been the work of the scientists David C. Plachetzki, Bernard M. Degnan and Todd H. Oakley, and their published view holds that the origin of the eye can be seen nearly 600 million years ago in the hydra, a marine organism.³¹⁶ They argue that the gene for the protein opsin, from the Greek “ops,” meaning “eye,” coalesced in hydra to give the organism the ability to see light and dark, which could have provided them with an evolutionary edge over less complex structures like sponges. Program director Jerry Cook noted that Oakley's work “shows how simple genetic changes can produce visual pigments that begin the pathway to the evolution of sight.”³¹⁷ Cook and Oakley's study highlights the importance of studying the origins of vision; these studies enliven long-standing discussions about Darwinian evolution, as well as the role of the eye and vision in illuminating this theory. Even in the dawn of a new millennium, a century and a half after Darwin's decisive works, many scientists have continued to engage the evolutionary story of the eye, giving vision preeminence in the realm of sensory perception studies. Cook and Oakley's work resonates today in underlining the continued impact of Darwinian evolutionary theory in the understanding

³¹⁶ David C. Plachetzki, Bernard M. Degnan and Todd H. Oakley, “The Origins of Novel Protein Interactions during Animal Opsin Evolution,” in *PLoS ONE* 10 (October 2007): e1054 doi:10.1371/journal.pone.0001054 at <http://www.plosone.org/home.action>.

³¹⁷ Robert S. Boyd, “Scientists Track Early Evolution of Sight,” in *McClatchy Washington Bureau*, <http://www.mcclatchydc.com/226/story/21106.html>.

of “origins,” particularly in the face of intelligent design’s recent challenges to Darwin’s evolutionary world view.

The philosopher Daniel C. Dennett argues in his book, *Darwin’s Dangerous Idea: Evolution and the Meaning of Life* (1995), that Darwin remained concerned with species, rather than with origins. Dennett makes a compelling case for the centrality of species as opposed to origins in his book, and his work provides an important contribution to the understanding of the naturalist’s evolutionary theses and his continued relevance.

Regardless of whether or not Darwin intended to focus on species rather than origins, however, he constantly faced questions of origins as a result of his two main texts, one in which “origins” appeared in the title—*On the Origin of Species* (1859) and *The Descent of Man in Relation to Sex* (1871). Critics and supporters (including Darwin himself), often used the example of the human eye to illustrate their inability to conceive of how certain complex organs arrived at their given physical form and function. For instance, how does the mechanism of evolution slowly produce an eye over time? What would a prototypical eye look like, and would it even remotely function as it does in humans now? And if it did evolve slowly, what would have been its use to earlier animals, if it were not to see? Early scientists and naturalists who preferred to maintain views of immutability frequently used the eye to illustrate the impossibility of this specialized organ developing over time, therein rejecting Darwin’s evolutionary views.

Upon reading the first publication of *Origin*, the Scottish geologist Charles Lyell (1797-1875) warned Darwin that his account of the eye’s origin posed problems for him within the scientific community and in the face of a wider public:

[Your discussion] gives the adversary an advantage, by putting forth so abruptly and crudely such a startling object as the formation of ‘the eye,’

not by means analogous to man's reason, or rather by some power immeasurably superior to human reason but by superinduced variation like those of which a cattle-breeder avails himself. Pages would be required thus to state an objection and remove it. It would be better, as you wish to persuade, to say nothing. Leave out several sentences, and in a future edition bring it out more fully.³¹⁸

Lyell suggests that this abrupt introduction to the arrival of complex biological organs, not through creation, but through variation would steer many readers, including important naturalists, away from Darwin's revolutionary theories. Like Lyell, Darwin's brother Erasmus (1808-1881) also told Charles how his evolutionary eye was received among at least some of his acquaintances. After explaining Darwin's story of the eye to a physician friend, Erasmus explains to Charles that the account:

Took away his [the physician's] breath—utterly impossible—structure—function, &c., &c., but when he had read it he hummed and hawed, and perhaps it was partly conceivable, and then he fell back on the bones of the ear, which were beyond all probability or conceivability.³¹⁹

Erasmus' physician friend reluctantly acquiesced at the possibility of the eye's evolution, but ultimately retorted with the complexity of the ear and the impossibility of this second organ's evolutionary origins.

Some of the most compelling of Darwin's letters are those exchanged with the American botanist Asa Gray (1810-1888), who wrote the book *Darwiniana* (1876), which provided support for the compatibility of Darwin's views and those of Christianity. Early in the public emergence of his ideas, Darwin often felt the need to provide a more nuanced explanation of his evolved eye to Gray. Writing in the spring of 1860 Darwin said, "I cannot persuade myself that a beneficent and omnipotent God would have

³¹⁸ Charles Lyell, letter to Charles Darwin (3 Oct. 1859), in *The Autobiography of Charles Darwin*, 1741.

³¹⁹ Erasmus Darwin, letter to Charles Darwin, (23 Nov. 1859), in *The Autobiography of Charles Darwin*, 1746.

designedly created the Ichneumonidae [a parasitic wasp or fly] with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice. Not believing this, I see no necessity in the belief that the eye was expressly designed.”³²⁰ Darwin attempts to reach Gray with moral logic when he argues that things exist on this earth that a good God could not have intended, like cats “playing” with mice before killing them. As such, other things like the eye, could have just as easily presented themselves without God as their origins. Yet while he stands firm on his evolutionary theory of the eye, he takes great pains to show Gray that his ideas “are not at all necessarily atheistical.”³²¹ In his letters to Gray, Darwin becomes the consummate compromiser, not willing to present his views as unabashed fact.

For me, Darwin’s story of the eye foreshadows other hypotheses the naturalist arrived at regarding the origin of species. The eye became, one might say, a metonymic device standing in for *Homo sapiens*. This line of thinking inflected Darwin’s most contested theory—that humans evolved from primates. The eye did not arrive in animals fully formed and functioning as we know it today, and neither did *Homo sapiens* arrive fully formed on the planet. Evolutionists have argued that all life descended from a similar origin, branching out in speciation from a trunk of prokaryotes, and then a large eukaryotic branch, leaving humans most closely related to chimpanzees.

Scientific disputes over the eye in the time of Darwin hinged on a question of design: Were humans designed by some creative force? If so, to what degree? And whatever our origins are, have humans always been humans, phenotypically and

³²⁰ Charles Darwin, letter to Asa Gray (22 May 1860), in *The Autobiography of Charles Darwin*, 1762.

³²¹ Charles Darwin, letter to Asa Gray (22 May 1860), in *The Autobiography of Charles Darwin*, 1762.

genotypically unchanged? Or can we possibly be descended from apes, or for that matter, from a primordial, inorganic mass of RNA? One suspects when reading Darwin's *Origin* that the author was well aware that we were indeed descended from "the lower animals." But he reserved his more radical views for his circle of supporters, and they were not made completely public until *Descent*, in which he collapses humans into the phyla of other species that compete for sexual success and survival. Is man a monkey? The idea was famously controversial to the Victorians and remains so to many people today.

Darwin's ideas challenged the fundamental beliefs of his scientific contemporaries, who were used to thinking about organisms as uniquely originated by God—an idea with which our society continues to grapple. Consider that even today, lawsuits are still being fought over the teaching of evolution, creationism and intelligent design in public schools.³²² What was at stake in Darwin's new theories was the very hierarchy of beings of which humans had for so long conceived, a *scala naturae* with humans near the top. And recent debates in the United States over the teaching of evolution and the emergence of creationism as Intelligent Design, along with the place of human beings in the schema of living organisms, have reengaged our thinking about what it means to see with an evolutionary eye. Darwin's discussions of the eye remain compelling, especially from an art historical and visual studies perspective, since the organ has operated as a metaphor for knowledge in western epistemology. Investigators have long favored observation as a key tool in scientific method, so it comes as little surprise that any critique and defense of species' immutability would revolve around one of their key tools—the eye.

³²² See U.S. District Court for the Middle District of Pennsylvania case *Tammy Kitzmiller, et al. v. Dover Area School District, et al.*, Case No. 04cv2688 (20 Dec. 2005).

And so we see that the eye becomes a sign that marks the boundaries between the fixity of species and transmutation in scientific theories of evolution. And the eye becomes the organ that allows us to read animal morphology and animal imagery; the eye illuminates the space of its own origins. To see animals, then, is to mark out a conceptual place of plural and often overlapping visualizations: where artists represent animals, where scientists conceptualize them, and where animals themselves envision their own corporeality, as well as that of others. Perhaps this explains why, in an exhibition recently on view at the Museum of Modern Art, New York—*Wunderkammer: A Century of Curiosities*—the subject of the eye occupies such a prominent place in the work of several artists in the show.³²³ In a series of prints and collages the artists Rodolfo Abularach (b. 1933), Johannes Theodor Baargeld (Alfred Emanuel Ferdinand Gruenwald) (1892-1927), Greenville Davey (b. 1961), and Odilon Redon (1840-1916), represent the organ of sight and the mind's partner in vision in surreal close-ups and dreamlike scenes that suggest the ineffability of the organ.³²⁴ These images also intimate the eye's centrality in the successful organization of and reception of cabinets of curiosities, and the wider world of human perception. This is the organ that allows us to visually check what we know through observation; the eye can prompt us to envision new possibilities for being outside of the limited material world that the eye and brain together

³²³ *Wunderkammer: A Century of Curiosities*, and exhibition organized by Sarah Suzuki at The Museum of Modern Art, New York, NY, July 30-November 10, 2008. The exhibition also includes works by six artists included in this dissertation: Mark Dion's *Scheme of the Field Investigation, 1986-2003* (2003); Jean Dubuffet's *Angry Cat* (November 1853); Walton Ford's *Bangalore* (2004); René Magritte's *BAUCIS LANDSCAPE (Paysage de Baucis)* (1966); Roxy Paine's *Fecund* (2001); and Fred Tomaselli's *Cyclopticon (for Parkett 67)* (2003) and *Passerines Finches* (2003).

³²⁴ The pieces in the show that take the eye as the subject include: Rodolfo Abularach's *Enigmatic Eye I (Ojo Enigmatico I)* (1969); Johannes Theodor Baargeld (Alfred Emanuel Ferdinand Gruenwald)'s *The Human Eye and a Fish, the Latter Petrified* (1920); Greenville Davey's *Eye* (1993), *Pair A from Eye* (1993) [28 1/8 x 33 1/16"], *Pair A from Eye* (1993) [28 1/4 x 33 1/16"], *Pair B from Eye* (1993) [28 1/4 x 33 1/16"], *Pair B from Eye* (1993) [28 1/8 x 33 1/16"]; and Odilon Redon's *L'Oeil comme un ballon bizarre se dirige vers l'infini (The Eye Like a Strange Balloon Mounts Toward Infinity)* (1882).

can sense. As with the eared-whale and the horse-locust described by Gombrich, and like Mark Dion's ART-hropods, with the aid of the eye, animal representations (like representation in general) become something other than themselves. We can begin to envision ourselves within the space of other animals, enacting a kind of hybrid morphology, where humans and non-human animals start to appear and become like one another. This hybrid visualization of animals tests our own desire to and fear of transgressing genetic boundaries, desires and fears that that we visualized through our own evolutionary pasts or futures, or in our imaginations.³²⁵

VI. Ocell-Eye

Stories of the human eye's origin functioned as an example in support of and in opposition to evolution via the mechanism of natural selection. But Darwin fixated on eyes in more ways than one. Over the course of his career, Darwin began to notice another kind of eye, one that would mark his attention to sexual selection. Darwin's work on sexual selection was completed and published about a decade after his publication of *The Origin of Species*. Fully explicated in *Descent of Man and Selection in Relation to Sex* (1871), his concept of sexual selection relies heavily on notions of charm and display, two things that require the perception of vision. In his work on this subject, Darwin asserts that man was hardly different than the "lower" animals, a point which he drove home most fully in *Descent*, especially in his discussion of humans-primate relations. The study of the eye in Darwin's *Origin* focused on how the structure and function of this

³²⁵ Hybridity has been a subject of the historian of science and consciousness Donna Haraway. See Donna Haraway, *The Haraway Reader* (New York: Routledge, 2004). Hybrids have also become central to the work of scientists working in the area of genetics and stem cell research. See, for instance, "Findings," *Harper's Magazine* (1 March 2004): 100, which discusses "human-pig chimeras" that result from the injection of human cells into pig embryos.

complex organ evolves over time. In *Descent*, he turned his attention to the eyes of “charm,” specifically those ocelli of peacocks and butterflies. The work of the French artist Jean Dubuffet (1901-85) offers a comparable, and yet more subtle approach to transpecies relations. While my dissertation focuses on contemporary American artists, Dubuffet’s work explores the boundaries of man and “the lower animals.” The French artist’s view of ocelli is worth pursuing as we move toward the study of ocelli in the artist Walton Ford’s own study of them in his watercolor of a peacock in *Eothen* (2001).

As the art historian Sarah K. Rich tells us in “Jean Dubuffet: The Butterfly Man,” Dubuffet’s butterfly collages offer a place where “man can become a butterfly, just as a butterfly can become a man.”³²⁶ In this study, Rich provides a new and critical evaluation of Dubuffet’s representations of butterflies (not to mention representation in general).³²⁷ Instead of drawing, painting or making prints of *Lepidoptera*, Dubuffet “massacred” actual butterflies, as Darwin and John James Audubon did with birds and mammals. Darwin’s *Descent* attends to the butterfly at length, arguing, in part, that butterflies and birds, particularly the males, display their brilliant colors as a way of attracting the female.³²⁸ This display often renders the animals vulnerable to predation, but also allows them to attract mates. In butterflies, the colors can vary according to the insect’s position at rest, when they fold their wings, exposing their brilliant colors; and yet these colors often camouflage them with surrounding plants or trees. In flight, the upper parts of the wings are the most visible, and these are the most “obscurely” colored, so as to call

³²⁶ Sarah K. Rich, “Jean Dubuffet: The Butterfly Man,” *October* 119 (Winter 2007): 58.

³²⁷ Rich, 46-74.

³²⁸ Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*. London: John Murray, Vol. 1, 1st edition, 1871: 395; also available at www.darwin-online.org.uk.

attention away from the flutter.³²⁹ Dubuffet, however, muddies the patterned hues for which these insects are known. He ripped up their bodies and collaged them into human portraits, rendering new patterns made by man, not by the arrangement of DNA. Rich points out that the bodies were “*squashed*,” rather than rendered “*flat*,” as would have been the style favored by the bird illustrator Audubon as a way to express each avian’s precise plumage.³³⁰ Instead, Dubuffet inverts the naturalist project of ordering, favoring instead “a new pictorial (anti)order of disintegration.”³³¹ And yet the disarray of the chromatic insects is more characteristic of their natural state. Darwin observed what he saw as a great irony of the butterfly, the pugnacity of these “weak and fragile creatures.”³³² The insects offer an array of color consumption, almost at the pace of a strobe light, when in flight. The large wing spans of many butterflies not only exhibit varied hues, but also provide them with a degree of protection between a predator and their more essential abdomens.³³³ Thanks to the delicacy of these wings and the ferocity of sexual competition, male butterflies, in particular, are routinely left “battered, faded or dingy.”³³⁴ “Fresh females” do not seem bothered by the dings and dents in otherwise brilliantly colored wings; they respond to the males just the same, arguably, like Darwin, “much struck by the apparently enormous preponderance of males.”³³⁵

Dubuffet’s butterflies, then, enact a repetition of the frenzied colorful destruction and creation of sexual selection that ensues repeatedly during a hearty butterfly’s life.

“The Butterfly Man,” can be seen both in the images of men composed by Dubuffet with

³²⁹ Darwin, *The Descent of Man*, Vol. 1, 392.

³³⁰ Rich, 50.

³³¹ Rich, 51.

³³² Darwin, *The Descent of Man*, Vol. 1: 386.

³³³ Darwin, *The Descent of Man*, Vol. 1: 395.

³³⁴ Darwin, *The Descent of Man*, Vol. 1: 400-01.

³³⁵ Darwin, *The Descent of Man*, Vol. 1: 309.

vulgarized *Lepidoptera* wings, and in the artist himself. Indeed, Rich notes that one such portrait, of “Mr. Pap” (**Fig. 2.17**), serves to abbreviate the French word for butterfly, *le papillon*.³³⁶ One can only imagine Dubuffet, in the field with his butterfly net, casting about for the next victim and squashing him, as if he himself were a male flutterer, the viewer his wooed female, and the collages the progeny of the two. As with the owl that became a cat, and the locust that looked like a horse, Dubuffet’s butterflies resemble persons and, within them, emerge newly composed butterfly progeny, flitting around and giving their human forms life. Dubuffet transformed both the butterflies and himself in the process, instituting transgenic mutations in which man creates butterflies (even in spite of his massacre) and butterflies create butterflies (despite their deaths). As Rich has said of these “transformations,” “Man can become other all too easily.”³³⁷ The operation serves as a transpecies disordering, in which any previous advantage the human had over the insect is collapsed, giving the insect himself the power to imitate man and lure him into his own butterfly net.

Like Dubuffet, Walton Ford has paid particular attention to ocelli in his painting *Eothen* (**Fig. 2.18**), in this case of the *Pavo cristatus*, or the Common Peafowl, rather than those of the butterfly.³³⁸ And in a similar vain to Dubuffet, Ford’s animals, as the critic Faye Hirsch observes, are not “sentimentalized.” Ford’s treatment of animals considers a long history of their representation, one extending from Albrecht Dürer to John James Audubon. Dürer’s representation of the rhinoceros is of particular interest to Ford in the

³³⁶ Rich, 57.

³³⁷ Rich, 57-58. It is at this point in her piece that Rich brings in the work of the French intellectual Roger Caillois. See Roger Caillois, *The Mask of Medusa*, translated George Ordish (New York: Clarkson N. Potter, Inc., 1964 [1960]). Rich also cites Caillois, “Mimicry and Legendary Psychasthenia,” in *Minotaure* (1935), reprinted in *The Edge of Surrealism: A Roger Caillois Reader*, ed. Claudine Frank (Durham, N.C.: Duke University Press, 2003): 89-103. This source is also a very good introduction to Caillois’s work.

³³⁸ Walton Ford is represented by the Paul Kasmin Gallery, New York.

way it marks the distance from the animal itself to the representation of it. Dürer claimed to have drawn the animal from life, but thanks to scholars like Gombrich, as we have already seen, we know that the artist actually derived his image from another artist's sketch of it. For his part, Ford cites the art historian Kenneth Clark has remarked on Dürer's errors of accuracy in his depiction of the Indian Rhinoceros. But Ford thinks this is not really the central issue in a contemporary reading of Dürer's etching; rather, he views the armor on the artist's rhinoceros as recalling not machines and knights in armor, but the shells of crustaceans. Since the rhinoceros that Dürer drew ultimately drowned while chained to the deck of a Portuguese ship, Ford sees this resemblance to shellfish as a kind of ironic foreshadowing of the animal's fate. Covered in the scales of lobsters and crabs, Ford argues, Dürer's rhinoceros was transformed into a hybrid creature—a monster.³³⁹ For Dürer, for Audubon, and for Ford, natural history could be said to rely on the dead specimen, on the capacity of an artist to translate the animals he saw dead in person or reproduced on paper into something conceptually and imaginatively unique. As Ford explains:

I'm interested in making the animal look as if I was working from a dead specimen, as Audubon did. Every bird he painted died a violent death and was then reanimated by his own imagination. This is what makes his birds look so strange.³⁴⁰

The Frankenstein monstrosity of Ford's animals, then, lies in their supernatural ability to reanimate these dead models, to bring the physical monstrosity of conceptually distant specimens to a picture plane heightened with visceral presence, and to depict animals not

³³⁹ Hirsch, 137-38. Ford has since gone on to make his own image of a rhinoceros with his *Loss of the Lisbon Rhinoceros* (2008). Of his new painting Ford says: "What I wanted was the rhino that Dürer never saw—that he wished he'd seen, really. But right at the dramatic moment when he's about to become art history, the moment when the actual animal, the way he really looked, sunk under the waves and became this crustacean. This was a transformational moment that brought me chills. I thought, I have to paint that."

³⁴⁰ Mary Haus, "Birds that Sing a Different Tune," *ARTnews* (June 2004): 97.

as they really are (if that were even possible), but as we as humans perceive them. Ford registers in his animals that distance between the actual animal organism and their second life in our own imaginations.

Ford has gained acclaim in recent years with showings and solo exhibitions at the Brooklyn Museum of Art, the Whitney Museum of American Art, MIT List Visual Arts Center and the Southeastern Center for Contemporary Art, among other places.³⁴¹ Ford creates his paintings, says Hirsch, by ripping sheets of watercolor paper from 20-yard rolls, 60 inches high. The artist first “mops” them with water and brown and ochre pigments. Next, he then pins the paper to a board, which he places on two easels. Finally, Ford draws and erases repeatedly to create an animal so convincingly articulated that the

³⁴¹ A list of good sources on Ford’s work would include: Steven Katz and Dodie Kazanjian, *Walton Ford: Tigers of Wrath, Horses of Instruction* (New York: Harry N. Abrams, Inc., Publishers, 2002); Ron Platt, *Walton Ford* (Winston-Salem, NC: Southeastern Center for Contemporary Art, 1997); Constance W. Glenn and Meg Linton, *Avatars: The Watercolors of Walton Ford* (Long Beach, CA: University Art Museum, College of the Arts, California State University, Long Beach, 1998). Other sources include: Harriet Ritvo, Tommy L. Lott, and Rob Platt, *Next of Kin: Looking at the Great Apes* (Cambridge: MIT List Visual Arts Center, 1995); *ART: 21* (Season 2) (New York: PBS Home Video, 2001); Meg Linton, “Inside the Watercolor World of Walton Ford,” *Art Juxtapoz* (May/June 1999); Dodie Kazanjian, “Animal Magnetism,” *Vogue* (July 1999); “Walton Ford,” *Art on Paper* (March-April 2002); Mark Jacobson, “Nature Boy,” *New York Magazine* (21 Oct. 2002); “Painted Birds,” *The New York Sun* (22 Oct. 2002); Grace Glueck, “Walton Ford,” *The New York Times* (8 Nov. 2002); Martha Schwendener, “Walton Ford: Paul Kasmin,” *Artforum* (Jan. 2003); Jonathan Gilmore, “Walton Ford: Paul Kasmin,” *tema celeste* (Jan/Feb. 2003); Nanci Worthington, “Walton Ford Artist,” *The Artful Mind: Berkshires’ & Beyond Monthly Magazine* (June 2003); Matthew Erikson, “Strong Statements Underlie Visual Vividness of Walton Ford,” *The Hartford Courant* (30 Nov. 2003): G1+; Patricia Rosoff, “Birds and Beasts: Walton Ford takes on Audubon (and us) and the NBMAA [the new Britain Museum of American Art],” *Arts Hartford Advocate* (8 Jan. 2004); Alistair Highet, “Animal Planet: The Bestiary of Walton Ford at the new Britain Museum of American Art,” *Artview* (Jan. 2004); Mary Haus, “Birds that Sing a Different Tune,” *ARTnews* (June 2004): 96-97; “A Naturalist Painter Evokes Legends of the Past,” *The New York Times* (10 Jan. 2005); Annette Grant, “America the Beautifully Absurd,” *The New York Times* (22 May 2005); Ilka Scobie, “Super Natural History,” *artnet* (25 May 2005); “Nature without Nurture,” *The New York Sun* (15 June 2005); Sophie Fels, “Walton Ford,” *TimeOut New York* (16-22 June 2005); Kevin Conley, “Built Ford Tough,” *Men’s Vogue* (Fall 2005): -294; David Cohen, “Back to Basics,” *The New York Sun* (22 May 2008): - 22; Ann Landi, “Walton Ford’s Not-So-Peaceable Kingdom,” *Fine Art Connoisseur* (May/June 2008): 52-55; Faye Hirsch, “King of the Beasts,” *Art in America* (Oct. 2008): 132-42.

watercolor, a notoriously unforgiving medium, will be sure to come off just fine, or as he says, not “wonky or weird.”³⁴²

The artist’s paintings fuse the large size of murals, post war Abstract Expressionist works and the elephant folios of Audubon with the intimacy of watercolors and gouaches:

[These watercolors] were like fake Audubons, but I twisted the subject matter a bit and got inside his head and tried to paint as if it was really his tortured soul portrayed, as if his hand betrayed him and he painted what he didn’t want to expose about himself. And it was very important to me to make them look like Audubons, to make them look like they were a hundred years old. Like he painted them, but that they escaped out of him.³⁴³

Ford’s paintings have, in fact, been described as “Audubons on acid,” or “Audubons on Viagra,” labels which underline an unusual confluence of size and medium, and the drama with which he infuses his subjects, juiced up with heightened sexuality and violence.³⁴⁴

These are not the paintings of an arm-chair birdwatcher or a casual nature walker, but of a committed birder and artist who “regularly walks the 80 miles from his Massachusetts home to meet his printer in Brattleboro, Vermont.” As the critic Kevin Conley has said, “[Ford] has turned watercolor, the medium of the Sunday painter, into an act of showmanship requiring the concentration, stamina, and agility of a mountain

³⁴² Hirsch, 139. This entire process is one described by Hirsch. Ford compares the unforgiving quality of watercolor, which requires an artist to work quickly, to that of fresco. Both processes demand a creative process in forward motion, unlike painting in oil, which allows one to “back up.”

³⁴³ Art: 21, interview with Walton Ford, “Political Humor & Colonial Critique,” in *Art in the Twenty-First Century* (New York: PBS, 2001), www.pbs.org/art21/artists/ford/index.html. I should also note that Ford, with Benedikt Taschen, has recently published his own elephant folio of his watercolors: Walton Ford, *Pancha Tantra* (Cologne: Taschen, 2007).

³⁴⁴ See Fels and Jacobson.

climber.”³⁴⁵ Ford has sought to make his animals life-sized, “so that you’re really looking at a specimen.” At times, however, he expands the cues on size and scale he takes from Audubon’s elephant folio of birds: With his Elephant *Nila* (1999-2000), for instance, Ford blows up Audubon’s large folios in a work, albeit in sections, 18 by 12 feet.³⁴⁶

While indebted to the works of Audubon visually, Ford’s oeuvre also provides a sharp critique of Audubon’s mission:

I’d done a lot of reading of his journals. He was a very dark individual, he had a temper and was very bitter because it took him a long time to break through. He had a lot of anger towards the sort of Philadelphia natural history Mafia...when he was in the U.S he tried to pass himself off as a man of Europe...that he’d studied with David, which is nonsense, but when he was in Europe he passed himself off as a Davy Crockett kind of person. He’d put bear grease in his hair, he’d wear fringe...He spent a lot of time very pissed off and he shot a ridiculous quantity of animals...he shot birds off the deck of a ship just to watch them fall in the water, would shoot animals on the bank of a river while he floated by, he just shot things all day long. That idea of him being a dispassionate scientist is just nonsense. He was a sportsman and a marksman, not some kind of conservationist.³⁴⁷

Through his research into his most iconic predecessor’s career, Ford arrives at a view of Audubon that critiques both his character and his historical reception as an advocate of nature.³⁴⁸ And while Ford certainly emulates his style of representation, he also finds his

³⁴⁵ Conley, 293. See also Schwendener for Ford’s subversion of the association of watercolors with Sunday painters.

³⁴⁶ Hirsch, 138; Worthington. See also Rosoff, who compares the effect of his watercolors to Renaissance paintings of tempera on panel, making the images altarpieces of sorts.

³⁴⁷ Worthington. For a PBS interview with Walton Ford, where he describes his interest in environmental issues, as well as his interest in the politics of colonialism see Steve Martin, *Art in the Twenty-First Century*. (Season 2) PBS Home Video, 2001. PBS also has a website with the text of an interview with Ford during the video program. It can be found at <http://www.pbs.org/art21/artists/ford/clip1.html>. In addition, artist Rachel Berwick made a work with the passenger pigeon as its subject. Audubon was part of a culture of bird-shooting, a behavior that contributed significantly to the demise of this particular species.

³⁴⁸ Fels and other critics have indicated the voluminous research that Ford undertakes as a constant activity during his art making process. In many ways this places his project in line with that of Mark Dion, who also relied heavily on scholarly material in the formation of his projects. See Erikson, G4, who sees Ford as having a “like mind” with Mark Dion. Ford, like Dion and like Tomaselli, brings a certain density to his work, which Ford himself acknowledges. See Kazanjian. Not worrying whether people understand

technical abilities leaving something to be desired. His series of quadrupeds images, for instance, that follow on the heels of Audubon's *Birds of America* fail to achieve a convincing verisimilitude. After painting his whole life, Ford says, "He's painting a hognose skunk, and he can't figure out how to foreshorten—at all. He still can't take the animal's face and convincingly make it go back in space from the tip of its nose to the ears. It looks cobbled together out of three different heads. And the background looks like the way kids draw hills: zoop, zoop, zoop, zoop."³⁴⁹ Some critics might find Ford's claims audacious, given Audubon's generally high reputation, and yet his vision may be one that enables him to achieve what he claims Audubon did not. The curator Marilyn Kushner has compared Ford's watercolors to those of John Singer Sargent and Winslow Homer, while Ann Landi calls Ford "one of the premier naturalist painters of our time—indeed of any time."³⁵⁰

In drawing together his body of work Ford and his critics count many naturalists and artists among his influences: Leonardo da Vinci,³⁵¹ Giotto, Lorenzetti, Simone Martini, Dürer,³⁵² Constantine Rafinesque,³⁵³ Alexander Wilson,³⁵⁴ J.J. Grandville,³⁵⁵ John Currin,³⁵⁶ Edward Lear, Pieter Bruegel, Hieronymus Bosch, Benjamin West,

his work, he says: "I want my work to be beautiful and dense and difficult in the way that really good literature is." Landi, however, raises the question about the reception difficulties Ford faces. "If critics have one complaint, it is that the stories Ford references are often obscure and the artist offers few clues to decipher the paintings. Without wall text or other exegeses, we are frequently lost as to the sources and meanings of the works—which suggests a future project for the prolific artist. Just as he ransacks the journals and histories of earlier artists and explorers, perhaps he will kindly provide us with *A World According to Ford*. It could be an even bigger hit than *Birds of America*.

³⁴⁹ Conley.

³⁵⁰ Landi, 52, 55.

³⁵¹ "Nature without Nurture."

³⁵² Hirsch, 135-36.

³⁵³ "A Naturalist Painter Evokes Legends of the Past."

³⁵⁴ Erikson, G1.

³⁵⁵ Haus, 97.

³⁵⁶ Scobie, n.p.

George Catlin, R. Crumb, David Lynch,³⁵⁷ Andy Warhol, Vladimir Nabokov, Lewis Carroll,³⁵⁸ Sir John Tenniel, and Eugene Delacroix.³⁵⁹ Still, Ford counts Audubon among the most important nineteenth-century artist-naturalists to whom he looks for inspiration. As if looking at an Audubon in the late twentieth century, Ford emphasizes the antique quality of many age-worn prints today. He faux “foxes” the edges of his paper, giving the impression of paper age-worn and yellow from exposure to light, field exposure, wear and tear from handling, or improper display or storage.³⁶⁰ Typically, Ford represents a specific species of animal, always pairing their taxonomical binomial with a common name, in a cursive that mimics Audubon’s own script.³⁶¹ As the critic Alistair Highet has said, “In effect, what Ford seems to have done is carry forward this meticulous attention to bird and animal illustration that he developed in childhood, with a kind of 19th-century taxonomical style.”³⁶² If these formal qualities are not enough to suggest the naturalist project, Ford often boxes his paintings in a deep glass frame, making analogies between a painting in a frame and a specimen in a display case.³⁶³

Naturalist images are also notable for flattening out their subjects, as if each form on a two-dimensional page should enable the reading of all angles of the bird or other

³⁵⁷ Grant, n.p.

³⁵⁸ Kazanjian. Bosch and Lear are also included as influences.

³⁵⁹ Katz and Kazanjian, 63. Also included on this list are Lear and Grandville. See also Worthington for references to Delacroix’s works on North Africa.

³⁶⁰ Landi, 55; Hirsch, 132; Conley; Highet and Hirsch, however, make however intentionally, the additional descriptor of “faux,” which more accurately characterizes Ford’s contemporary art practice. Surely he has no time for actual foxing to take place, as the New York art market and his patrons could not possible stand the wait for one of his paintings.

³⁶¹ Landi, 55; Linton. Landi characterizes Ford’s script as being like that found in old prints, and does not refer to it being like Audubon’s writing style specifically. Linton, however, indicates that Ford “mimics Audubon’s handwriting.”

³⁶² Highet. Linton also notes the way in which, “Ford is addressing the present state of the world through nineteenth century notions of natural history.”

³⁶³ Patricia Rosoff, “Birds and Beasts: Walton Ford Takes on Audubon (and us) and the NBMAA [New Britain Museum of American Art],” *Hartford Advocate* (8 Jan. 2004), <http://hartfordadvocate.com/gbase/Arts/content?oid=oid%3A49169>, accessed February 1, 2006.

specimen at once. Audubon, for instance, created fantasy poses not often found in nature, in a desire to provide the best view of the bird's plumage. After shooting his birds in the field, he would bring them home to his studio, posing them post-mortem with the aid of wires and strings. He paid greatest attention to the birds' feathers, attempting to capture the unique qualities of each of his 100 *Birds of America* (1840).³⁶⁴ In *The Carolina Parakeet* (1825), Audubon depicts the now-extinct bird species through seven birds of various age and sex (**Fig. 2.19**). They are all distinctly and differently oriented in order to provide a view a complete view of the bird in the round. This ability to translate a three-dimensional organism to a two-dimensional watercolor is enhanced by Audubon's depiction of complete plumages, the birds wings splayed, flared and flattened so that its full chromatic and morphological field can be conveyed.³⁶⁵ To further enhance the veracity of his images, Audubon placed his birds in their natural habitats: an oyster-catcher runs along the beach, a swan swims in a pond, and a raven perches on the branch of a tree (**Fig. 2.20**). Ford has acknowledged flattening out his birds in the vein of "older natural-history art," enabling him to "convey a lot of information about the species being

³⁶⁴ A thorough, although somewhat adulatory, a good study of Audubon's portfolio of 100 birds is Duff Hart-Davis. *Audubon's Elephant: America's Greatest Naturalist and the Making of the Birds of America*. New York: Henry Holt and Company, 2004. See also John James Audubon, *Writings and Drawings* (New York: The Library of America, 1999); Richard Rhodes, *John James Audubon: The Making of an American* (Vintage: New York, 2006).

³⁶⁵ Angela L. Miller, Janet C. Berlo, Bryan J. Wolf, and Jennifer L. Roberts, *American Encounters: Art, History, and Cultural Identity* (Upper Saddle River, NJ, 2008), 173. This section is likely written by Roberts, as she has written recently on the work of Fred Tomaselli and John James Audubon. Roberts indicates the painting, in addition to being a classic example of Audubon's *Birds of America*, also illustrates nineteenth-century themes of "sentimentalism." These seven birds, she argues, operate as members of a single household, the juvenile bird surrounded and protected by the elder females and male parakeets. Set in the space of a cocklebur tree, the birds become metaphors of the nineteenth-century American family, which imagined itself threatened by the increasing stresses of men working outside the home, the industrial revolution, and increasing immigration and urbanization. I should also note that Audubon's image makes a nice counterpoint to Fred Tomaselli's *Natural Selection* painting discussed in chapter one. The birds attempt to continue their "natural" existence in the bare trees, but they are increasingly threatened by the pressures of machines and money, industrialism, capitalism and technology. And yet they appear to thrive in the space of their two-dimensional aesthetic selves.

represented.”³⁶⁶ Ford’s treatment of feathers and birds also applies to his mammals, and is an approach that makes the artist’s birds recall Audubon, as well as modernist appeals to flatness.³⁶⁷ But Ford’s birds and mammals, like *Eothen*, also diverge from the poise and restrained action of Audubon’s birds: Ford transforms his images into high-voltage contemporary critiques of these familiar and admired antecedents.

While Ford has acknowledged his debt to Audubon and others, we can also see the influence of other naturalists in the artist’s work, particularly that of the nineteenth-century Englishman John Gould. Gould, who made Darwin’s finches come to life on paper, depicted with the restraint of a nineteenth-century palette, as in a *Dasyurus maculates* (**Fig. 2.21**), otherwise known as a Spotted-tailed Quoll. While chromatically in tune with Audubon, Gould’s mammal anticipates much of the menacing qualities evident in Ford’s *Eothen*. And like the avian pest—the starling—this nocturnal quadruped preys upon poultry, making it a particular pest to early settlers.³⁶⁸ In the Gould image, a brown *Dasyurus* with cream-colored spots and a long tail, pins a parrot between his front claws and a log. The Quoll engages the viewer directly and with an air of confidence, holding a blue feather in his mouth, as if the kill itself has become an afterthought. The light blue parakeet with the lime green head expires, its neck crushed under the force of four sharp claws, its mouth aghast with his attempt at one last breath.

³⁶⁶ Katz and Kazanjian, 63.

³⁶⁷ Dodie Kazanjian, “A Conversation with Walton Ford,” in Steven Katz and Dodie Kazanjian, *Walton Ford: Tigers of Wrath, Horses of Instruction* (New York: Harry N. Abrams, Inc., Publishers, 2002): 63. See also Gilmore and Linton.

³⁶⁸ John Gould, *Gould's Mammals: Selections from John Gould's Mammals of Australia* London: David & Charles, 1978 [1863]: 46.

Ford uses saturated hues to paint his opulent peacock in *Eothen*—a Greek word that the artist has noted means “of or from the East.”³⁶⁹ In his composition of watercolor and gouache, a large male bird struts across a landscape-oriented painting after a viper that slithers on the ground in front of him. Three brazen black starlings have landed on his back, a fourth screeches in flight with beak open, wings outstretched, and feet spread in preparation for landing on the peacock’s back. Instead of displaying erect tail coverts,³⁷⁰ the cock’s dazzling purple and blue ocelli, framed in concentric orbs of deep and lighter orange and yellow, smolder in fire as the disabled bird drags his burning feathers behind him. Painted in the weeks following the terrorist attacks of September 11, 2001, as the artists and critic Patricia Rosoff has observed, the burning reiterates the death and destruction that resulted from the conflagrations at the World Trade Center in New York City and the Pentagon in Washington, D.C. A quote, taken from the Koran, and written in script across the top of the watercolor reads: “...wait for the day when the sky will pour down smoke...”³⁷¹ But with Ford, one conflagration may refer to several at once. The artist grew up in a family that hailed from the south, that descended from slave owners, and who saw Sherman as a villain. Looking through photographs and letters from his ancestors, compressing history in the space of current events, Atlanta, New York City and Washington all go up in flames at once.³⁷² Rosoff has read *Eothen* as a Renaissance painting or altarpiece that depicts the peacock and the snake as the Madonna

³⁶⁹ Katz and Kazanjian, 63. At the time that Ford describes this painting in his interview with Kazanjian, the painting is only a conception of his imagination. He also explains his fascination with the Belgian artists Francis Alys, who sent a peacock in his place to the 49th Venice Art Biennale in 2001.

³⁷⁰ Tail coverts grow from the bird’s lower back, and should be distinguished from the tail feathers.

³⁷¹ Rosoff.

³⁷² Erikson, G4.

and Child, the bird stepping on the serpent “a cipher both for Satan and original sin.”³⁷³

In this way, we are never quite sure who is stepping on whom, or whether what emerges from Ford’s depiction is our own redemption or the last and ultimate Fall of our own destruction.

The chromatic plumage of birds, like the peacock, appealed to Ford in particular. He has paid special attention to native species, as well as to those species that had been introduced to India through contact with the West. But one rather monochromatic species of particular interest to Ford is *Sturnus vulgaris*, the Latin binomial for the common bird species, the European Starling. Ford took the bird as a subject in many of his watercolors upon his return from India, where he spent six months in 1995.³⁷⁴ But why? What is it about the European Starling that fits Ford’s artistic mission?³⁷⁵ Starlings represent a highly successful species from the perspective of Darwinian Natural Selection, multiplying rapidly wherever humans have introduced them. The birds are not indigenous to North America, but have thrived since their 1890 introduction. Their diet is diverse, enabling them to choose from plants and bugs to other small creatures. They are ecologically adaptable, and yet they leave much to be desired. Many ornithologists

³⁷³ Rosoff.

³⁷⁴ Walton Ford and Rob Platt. *Walton Ford*. Winston-Salem, NC: Southeastern Center for Contemporary Art, 1997: 5. Platt states that Ford’s “Animals and birds are intended simultaneously as fact and fiction.” I am not the first to note the dominance of the starling in his birds from India. What Platt has not done, however, is to give a detailed investigation of each painting in which the European Starling appears. Neither has he situated the starling-as-colonizer metaphor within the discourse of Subaltern studies. Keep in mind, also, that while Ford reads the Starling as an invading species, the starling is not necessarily a recent presence in India. The bird was even a folk icon in the classic tales by Pandit Rangilal, *The Parrot and the Starling*. See also Walton Ford, Constance Glenn, and Meg Linton. *Avatars: The Watercolors of Walton Ford* (Long Beach, CA: University Art Museum, College of the Arts, California State University, 1998), 2. On Ford’s stay in India see also Steven Katz and Dodie Kazanjian, *Walton Ford: Tigers of Wrath, Horses of Instruction* (New York: Harry N. Abrams, Inc., Publishers, 2002), 9.

³⁷⁵ Platt, 16. It should be noted that Ford himself is a serious birdwatcher, and enjoys playing with birders’ notions of avian behavior by depicting, “Species that don’t interact or share habitat...I want somebody to look at them and say, ‘Hey wait a minute – that species doesn’t live there!’” Ford also says, “I’m interested in using [The Starling] as a stand-in for myself, or for Western attempts to influence global events.” See Katz and Kazanjian 64; and Ford, Glenn, and Linton 2.

admire the Starling for its colorful plumage, but they also travel in enormous (and noisy) flocks, leaving behind large amounts of bacteria-infested waste. They are notoriously aggressive competitors, known to edge out other bird species from their habitats.

The artist has noted that the Starling, “Like Anglo-Saxons, [have] gone everywhere we’ve gone and displaced the native species.”³⁷⁶ The Starling, then, is the quintessential colonizer, which explains why Ford latched onto this particular creature as a metaphor of the colonialist. And just as Ford depicts certain species of birds, here his metaphor applies to British colonialists. Historian Stanley Wolpert has identified the British in India as, “Wily...imperialists ‘burdened’ with their arrogant super-Brahman social-Darwinist baggage.”³⁷⁷ Ford’s animals play the roles of conquered and conqueror, enacting “not just any dramas, but *human* dramas.”³⁷⁸

The metaphor of animal for man is not to be taken lightly in Ford’s work, and plays out in three ways. First, it allows Ford to make analogies between the world of culture and art and the world of nature. In this move, Ford makes nature suddenly “cool enough” again for an art world, that the critic Kevin Conley has argued, has rejected “depictions of nature” for “at least the past 60 years.”³⁷⁹ The critic Martha Schwendener closes in on the importance of Ford’s animals “stand-ins” in a second way, writing the artist, “Shows how the two histories [of man and animal, culture and nature] are

³⁷⁶ Platt, 16. See also Conley, Highet, and Rosoff. Linton describes, also, the particular significance of the starling in nineteenth-century America: “In the late nineteenth century, a gentleman by the name of Eugene Schieffelin has a grand vision. He wanted New York’s Central Park to be filled with all of the birds mentioned in Shakespeare’s literary works. In 1890, he actually released a number of non-invasive species into the park, including 100 European starlings. Most of the birds died, but the starlings thrived. By 1910, this pretty, nasty, little bird has invaded the Midwest and by 1940 had infiltrated California.” As Ford continues in an interview with Platt, quoted in Landi, “I guess the starlings finally made it to Alaska in the fifties. They must be in South America by now.”

³⁷⁷ Stanley Wolpert. *New History of India*. Oxford: Oxford University Press, 2004: 470.

³⁷⁸ Katz and Kazanjian, 11.

³⁷⁹ Conley, n.p.

entwined.”³⁸⁰ Animal “stand-ins” are not mere signifiers for humans, then, but instead illuminate the ways that all organisms occupy the same space physically and conceptually. Finally, Ford’s substitution of animals for humans, has implications for the way that his painted creatures mark out natural history as a highly self-reflective space where construct and reconstruct a definition of nature as something “out there.” And yet, Ford’s reconsideration of natural history and its imagery, makes us aware that we are largely encamped in both “nature” and “culture,” “nature” and “artifice,” all at once. As Ford has said of his own method of approaching nature in his work:

If you’re in nature, most of the time nothing really happens. Only once in a great while have I seen anything that warrants a narrative painting. On Great Pond in Maine, I saw an osprey attacking a great blue heron...But every morning I get up thinking of Bodmer or Lear.³⁸¹

The naturalist project has been as much about art as about animals, as much about selling images as about scientific research. And in the nineteenth century it was as much, if not more, about hunting and sport as it was about conservation and ecology.³⁸² Natural history provides a disciplinary structure for defining nature and culture, but that also allows us to say that these categories are, in fact, constructed and mutable. This is the world that Ford conveys in his paintings and that we see on display in his painting *Eothen*.

³⁸⁰ Schwendener, n.p.

³⁸¹ “A Naturalist Painter Evokes Legends of the Past.”

³⁸² During an interview he gave to the critic Annette Grant, Ford describes what would have been a typical view for nineteenth-century farmers, something he discovered in reading an 1887 copy of W. Hamilton Gibson, *Camp Life in the Woods and the Tricks of Trapping*, Guilford, CT: The Lyons Press, 2002 [1887, 1881]: “...a lost world. I can’t even imagine a place where there’d be deadfalls in the woods everywhere and snares and an abundance of wildlife constantly being trapped. There’d be big nets strung from trees, barrels full of birds going to market—just enormous quantities of flesh on the hoof and in the air. It’s a piece of American history I don’t remember being taught in school.”

The scene Ford depicts in *Eothen* hardly conveys the impression of a lush paradise, but rather takes place against an arid desert, remote, barren, with foreboding mountains in the distance. The peacock's exotic colors vibrate in the barrenness, serving as a kind of desert mirage on which the starlings feast, and whose disappearance is ensured by his apparent immolation. In his painting it is not clear who has set fire to the sumptuous avian, but one suspects the European Starlings have had something to do with it. Soon the snake that the peacock chases may turn to help the starlings devour the falling avatar. In his strut, the bird is as yet unaware or unmoved by the conflagration consuming him. But soon he will stumble and careen from his otherwise charmed life.

In studying evolution, Charles Darwin spent a good deal of his time considering the implications of charm to species success. The notion of charm became one of the central tenets in Darwin's illustration of sexual selection in his *Descent*. Birds like the peacock and insects like butterflies exemplify the ways in which animals use their own visual motifs to attract potential mates. Darwin, then, focused on multiple cues of visuality in his evolutionary thinking—eyes and ocelli; the former the organ itself and the latter the organ coded as patterns. Whether via the operation of seeing or the operation of display and attraction, eyes and ocelli remained central to Darwinism. As regards the peacock, Darwin described how the male peacock attracts the female with his impressively colorful feathers, an attribute that leaves him equally vulnerable to predators. Darwin was most perturbed about the ocelli of the peacock's feathers. What was their function as related to his theories of sexual selection? After visiting the British Museum and having a curator hold erect the feathers of a peacock specimen, Darwin caught the full effect of the polychrome ocelli, watching them transform into three-

dimensional “ball and sockets” that would move like eyeballs. Darwin’s eyes consumed the gazing ocelli. He seems in this narrative to be as attracted to the male bird as a peafowl would be.

I would like to depart for a moment from Ford’s ocelli-charming peacock and return to the realm of Dubuffet’s butterflies to consider the operation of ocelli in similarly winged species. In strategies of survival and propagation, butterflies often take on the characteristic patterns of more dangerous or less palatable Lepidoptera in order to survive. Naturalists have often made use of this patterning motif in their own collection of specimens. Those who chase butterflies, like Darwin, know that an especially assured trick for attracting a high flyer is to pin a dead specimen to a tree, to draw in the next victim. This task is “especially” effective, notes a Mr. Collingwood in *Descent*, “if it [the live butterfly to be caught] be of the opposite sex.”³⁸³ The act is not unlike using shad as bait to catch larger fish. Dubuffet employs this adaptive device of *Batesian* mimicry in his butterfly collages, as Rich explains.³⁸⁴ It would seem that *Mullerian* mimicry could also apply to these collages: not only do the butterfly images imitate a more dangerous animal (a human), but they also repel us by looking “less palatable” than a conventional portrait, at least to eyes less attuned to modernist flatness. Rich points out that both of these conditions—“less palatable or more dangerous”—involve mimicry, including them within the parameters of Batesian mimicry.³⁸⁵ Darwin attributes the observation that one species mimics another by looking like a more dangerous animal to Mr. Bates, but does make the connection of the imitator as being herself less palatable. Mullerian mimicry would entail an actual disgust with the taste of an organism, rather than the mere

³⁸³ Darwin, *The Descent of Man*, Vol. 1: 400.

³⁸⁴ Rich, 55.

³⁸⁵ Rich, 55.

appearance of distaste, which is all that is required to avoid being dinner, as seen with Batesian mimicry. Bates noticed, for instance, that some butterflies morphologically imitate others, as in one that emits a foul smelling odor that prevents it from bird predation.³⁸⁶ The imitator insect, however, does not actually emit the odor-protectant, but merely looks like the other winged creature that does.

The distinction between Batesian and Mullerian mimicry is worth considering in relation to Dubuffet's killing and manipulation of butterflies and of our process of viewing as consuming, as we see with Ford and Darwin's peacocks and the elision of looking and consuming that takes place in these through the processes of survival and sexual selection. Even the ecologically-minded naturalist Alfred Russel Wallace found himself succumbing to the impulses of the hunter and colonialist in the name of sublime beauty and excitement of chasing butterflies:

At times I can lose myself in the pleasure of the quest, and become focused. Yesterday I found a perfectly new and most magnificent species of butterfly. The beauty and brilliancy of this insect are indescribable, and none but the naturalist can understand the intense excitement I experienced. On extracting it from my net and opening the glorious wings, my heart began to beat violently, blood rushing to my head, and I felt like painting. So great was the excitement, produced by what will appear to most people an inadequate cause. Even in taking its life, there was the thrill that in death this creature's beauty would last forever.³⁸⁷

Just as naturalists like Wallace became intoxicated by the rush of the butterfly hunt, the collages, like the dead butterfly pinned to a tree as bait for the catching of other *Lepidoptera*, tempted the human viewer into its frame-as-net. Rich observes that the collages "could sometimes behave as a lure to seduce the curious human viewer with the

³⁸⁶ Darwin, *The Descent of Man*, Vol. 1: 411.

³⁸⁷ Corrin, Kwon and Bryson, 127 [Recorded text 'spoken' by fox in *The Delirium of Alfred Russel Wallace* (1994), performed by Henry Bond and Alison Jacques].

pleasure of decoding visual tropes.”³⁸⁸ “These butterflies are hunters,” she suggests, “as they lure a viewer’s longing for meaning in nature that preexisted human intention.”³⁸⁹ As much as Dubuffet’s images attract us with their brilliant colors and animated ocelli, they also leave a certain distaste, repelling us from the comfortable illusion of three-dimensions into the cold flatness of two-dimensions that betrays the animated world of butterflies and men. The insects, disguised as disturbingly-shaped humans, repel us through our inability to identify with the portrait of a man staring back at us with the eyes of an insect. They are neither human nor butterfly. And yet these butterflies play with our human gaze, receding into two dimensions and morphing into three. The insect-man viscerally repels, while his hypnotizing ocelli attract with a staccato of colors and shapes. Like Darwin who was transformed by the vision of balls dancing in sockets while Mr. Gould displayed himself as an ocelli-bearing peacock while on a visit to The British Museum, so, too, does Dubuffet place the viewer in a trance by reconstructing the *Lepidoptera* eyes, allowing his both awkward and enchanting pictures to enrapture the viewer through the rather sadistic maneuver of sexual selection via murdered flutterers.³⁹⁰ Ford’s peacock, in turn, recalls Darwin’s visual consumption and the violence of Dubuffet’s prints in the simultaneous display of opulent ocelli and the inferno of their destruction.

What I find most transformative about Rich’s piece is the notion of shifting attention she describes as characteristic of the flight of the butterfly: “As the insect that famously changes from caterpillar to winged thing, the butterfly always already indicates

³⁸⁸ Rich, 56.

³⁸⁹ Rich, 63.

³⁹⁰ Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*. London: John Murray, Vol. 2, 1st edition, 1871: 92; also available at www.darwin-online.org.uk.

a changing of form, a shifting of meaning...in its drunken flight from flower to stone to tree trunk...a denotation that is always on the move ‘that,’ then ‘that,’ then ‘that’...shifting.”³⁹¹ As butterflies mimic other butterflies and flit from here to there as other beings, as Dubuffet displays the butterfly as man and man as the butterfly, all associations and stabilities of matter become fleeting. “Everything would become something else, would imitate, and nothing could remain authentically its own,” Rich states.³⁹² A slippage occurs between the identities of species; both between one another and, in the Lacanian sense, between the man as corpus and man as ego (as if the two could be isolated). Rich’s later comment that the world exposed through Dubuffet’s butterfly collages “is *both* all-seeing *and* exhibitionistic,” seems even more appropriate.³⁹³ For if authenticity is fleeting, so equally is that which mimics it—its imitator, its copy. And yet, here, the butterflies suggest something more elusive, neither the authentic nor the copy, and neither *not*. In a kind of Baudrillardian inversion even simulacra elude us, being as unstable as the original. The associations are too fleeting in flight to determine where representation lies. In Dubuffet’s collages, as captured by Rich, one can hardly rest in a place safe enough from predators to contemplate what it means to be the Butterfly-Man. But beginning to come to terms with that space and time has much to do with taking in the “all-seeing” gaze of the “exhibitionistic” ocelli.

In a final flurry through the ocelli of butterflies and peacocks I would like to return to Ford’s *Eothen*. As the national bird of India, the peacock occupies a space all the more provocative with its burning ocelli in the artist’s watercolor. In *Eothen* Ford has symbolically castrated the bird that Darwin most identified with sexual selection. The

³⁹¹ Rich, 58.

³⁹² Rich, 58.

³⁹³ Rich, 68.

peacock's burning tail coverts, a mark of his secondary sexual characteristics, and of the homicide of the bird himself, poses analogies to colonialist attempts to control the Indian body. Ford's watercolors of starlings and other birds like the peacock engage with postcolonial discourses, drawing analogies with the daily, bodily effects of colonial occupation, and enabling us to understand better what it has been like, for many in the East, to live under the "English Grip," to quote Mahatma Gandhi's phrasing in *Hind Swaraj*.³⁹⁴ He highlights the prerogatives of nineteenth-century naturalists, ideals that were often not in tune with environmental and species protection, let alone the dynamics of acculturation and cultural convergence that take place with global voyages in pursuit of knowledge, enlightenment and material resources and goods.

But in terms of the operation of vision and charm, the conflagration of tail coverts also impairs our gaze and the ability of the bird to tempt us, just as the peacock ocelli tempted Darwin and the butterfly ocelli tempted Dubuffet. Caught in a moment of temptation and disgust, the burning peacock ocelli operate like squashed butterflies, both bearing a glimmer of their former charming selves, but having been transformed into fleeting signs of life, attraction and gaze. Life becomes dispersed among various selves, as with the monkey-man, the butterfly-man, as with Darwin, the peacock-man. One can only imagine how "struck" Darwin would have been had he been alive to see Ford's *Eothen*; since he confessed to feeling "too often like a peacock admiring his own tail."³⁹⁵ The strategies of sexual selection, at most ensuring the continuance of a species for another generation, themselves become as fleeting as the flit of a butterfly and the strut of

³⁹⁴ M.K. Gandhi. *Indian Home Rule [or Hind Swaraj]* (Ahmedabad [India]: Navajivan Pub. House, 1939 [1909]), 60-1.

³⁹⁵ Darwin uses this word extensively in his writings, varying from being "struck" to the more emphatic "so struck" or "much struck." Darwin, *The Autobiography of Charles Darwin*, 1689.

a peacock. The gaze, like the display, as Rich has pointed out, is neither here nor there (nor there). The transience marked by the ocelli, however, does not suggest its triviality. Instead, this transience is in fact central to evolution—that all species, along with our gazes, our attentions, our methods of display, our concepts of life and our identities, change. Just as the peacock emerges from the desert as a landing strip for the Starlings, so too will the bird and its charming ocelli disappear from our view like a mirage.

VII. “‘Floating Fast like a *Hummingbird*’”

While Ford’s peacock leaves us anxious about the nature of our visions, a kind of nightmarish vision of beauty, evolution and life gone up in smoke, *Eothen* also suggests the rising of a phoenix from the ashes and the artist’s metaphorical effigy of a visionary burning man. Like Ford, Brooklyn-based artist Fred Tomaselli registers a dreamlike space with the potential to transform the everyday and imbue it with a heightened visionary consciousness. Tomaselli has embraced the astonishing complexity of our life experience, and continues to make paintings that register the slippage of experience and the ability of paintings to transcend their two-dimensional space. As he put it:

We live in a mutating landscape of rapidly hybridizing bits—on the level of DNA and binary code, in the cross-pollination of global instant-access culture, of Eastern and Western pictorial traditions, and vernacular and ‘high’ art references. We see the world through a scrim of ideologies and technologies and the crackling static of chemicals and electronic media. Purity is a myth.³⁹⁶

Before moving to New York, Tomaselli lived in southern California, where he grew up, as he recalls, so close to Disneyland that he routinely witnessed Tinkerbell flying through

³⁹⁶ Fred Tomaselli, “My Chemical Sublime,” in Fiona Bradley, et. al. *Fred Tomaselli: Monsters of Paradise* (Edinburgh: Fruitmarket Gallery, 2004), 43.

the night sky outside his home.³⁹⁷ The “mutating landscape of rapidly hybridizing bits” and the image of residential requiem punctuated by the bright lights and fantastical fairies of Walt Disney’s Magic Kingdom provide a clue to the bricolage of forms the artist brings to his works. In one painting from 2004—*Hummingbird*—we find ourselves “floating fast” within a swirling pharmacopoeia of pills, flowers, leaves, birds, body parts, and celestial geometries (**Fig. 2.22**). Enlisting the music of the rock band Wilco, the artist generates *Hummingbird* as a confluence of visual and sonic associations.³⁹⁸ By considering Wilco’s song “Hummingbird,” the Atlas Project of Aby Warburg, and multivalent *Kunstkammern*, I will explore how *Hummingbird* demonstrates allegiances between historical and contemporary displays of information.³⁹⁹

As the centerpiece of his painting, the hummingbird’s industrious buzz is only briefly held in check by the materials of paint and wood panel (**Fig. 2.23**). In full extension, the avian’s red and purple feathers present an abundance of ornamental and

³⁹⁷ This fact has been noted on numerous occasions, but the most fully developed version of it has been provided in James Rondeau, “Interview with Fred Tomaselli,” in *Fred Tomaselli* (Berlin: Galerie Gebauer, 1999), n.p. In full Tomaselli said, “I grew up in California, so near Disneyland that I could sit on my roof and watch Tinkerbell fly from a fabricated Swiss Mountain through the night sky amid bursting fireworks. Artificial, immersive theme park reality was such a normal part of my everyday life that when I saw my first natural waterfall I couldn’t believe it didn’t involve plumbing or electricity. My confusion over what was nature and what was culture—the smearing of the boundaries between the authentic and the artificial—was further compounded by my immersion in seventies stoner culture.” This quotation was also used in Rondeau, “Transcendence is pop.” It should be noted that Tomaselli continues to observe birds in his backyard in Williamsburg, NY, where according to the critic Dorothy Spears, who interviewed the artist, “hummingbird sightings are common.” See Spears, AR 29.

³⁹⁸ See Lauren O’Neill-Butler, who views Tomaselli’s recent work as orchestrating, “An ultrasensorial atmosphere, one that generates the kind of ‘aha’ moments typically inspired by meticulously layered aural harmonies.”

³⁹⁹ *The Wilco Book* (New York: Wilco and Picture Box, 2004). Wilco published their book and released their song “Hummingbird” on their *Ghost is Born* CD the same year that Tomaselli completed his painting *Hummingbird*. Wilco included original images by Tomaselli in their book, and included a two-page spread about time with a silhouette of a hummingbird in white. That Tomaselli frequently includes references to rock, punk and other forms of popular music in his paintings, and the evidence of his contribution to Wilco’s book, leaves little doubt that his painting *Hummingbird* also rounded out, although not officially so, this larger music-art project. See Trenton Doyle Hancock’s interview with Tomaselli and the artist Dan Nadel, where Tomaselli observes that in “A pop song, you get seduced by the melody and then later you like by the lyrics, and it becomes a total mind-body experience.”

psychotropic flowers and fungi. The bird extends his head to sip sugared liquid from a yellow-tipped red floral bud that spills nectar in milky raindrops, and marks the tip of botanical and mycological swirls suspended from a cosmic ceiling (**Fig. 2.24**). Red, electric blue, white, tangerine and violet tendrils shelter flowers and mushrooms within elaborate patterns of growth, vines oscillating between clockwise and counterclockwise spirals that culminate in fruitful bodies. Leaves and flames run the length of the tendrils alternately, suggesting the motion of millipedes. With Tomaselli, a brushstroke so often becomes a form bubbling with life.

Hummingbirds do not perch while sipping sweet nectar, but stay aloft, beating their wings rapidly, not unlike the way one treads water to stay afloat. Ranging in length from two-and-a-half to eight inches, hummingbirds ingest up to two-thirds of their body weight in nectar everyday. In the act of feeding, the hummingbird finds himself “floating fast,” darting from one fragrant botanical to the next in a state of rapture derived equally from the required indulgence of consuming the flower’s potent sweet solution and the magic mushrooms with which Tomaselli codes his bird. Here we can fully appreciate and experience the notion of “floating fast,” a phrase coined by lead singer Jeff Tweedy of the rock band Wilco. While I will expand upon Tomaselli’s connection to Wilco as it relates to *Hummingbird*, I would at least like to proffer a notion of “floating fast” as one in which the self negotiates a full range of experience with a certain focus and intensity, but also eloquence, with the mind and body interacting with an infinite array of material forms and states of being. As the art historian Jennifer Roberts has noted, the bird species Tomaselli represents are in fact more portable, freer to fly away, than those that appear in

the works of art themselves.⁴⁰⁰ Hardly a limitation of the effect the artist provides, the allusion to the hummingbird's movement, its ability to float freely, induces our own sense of floating through the paintings and into other spaces and times.

With naturalist imagery affixed to wood panels covered in black acrylics, the artist's paintings provide an alternative to the white surfaces on which naturalists have typically depicted specimens. But these collages entail more than cutting-and-pasting. The artist characterizes his compositions, rather, as embodying a "collage/hybrid aesthetic."⁴⁰¹ He intersperses materials from magazines, naturalist guidebooks, and actual botanical specimens, with a pharmacist's cabinet of tablets, capsules and lozenges. Tomaselli ensures the fixity of his composition by sealing the plants, pills and other found materials under coats of clear resin, sanded and polished, in turn rendering the botanicals and mind-altering adjuncts physically inaccessible. Often, he paints on top of the resin seal to render a final layer of acrylics that recalls the effect of painting on glass (Fig. 2.25).

Hummingbird attests to the rich visionary effects of Tomaselli's intensive collage/hybrid process. His composition presents a range of references across the continua of nature and culture, art and science, high art and pop culture, utopia and dystopia, landscape and mindscape, rationality and altered consciousness. But I think it

⁴⁰⁰ Jennifer Roberts, "Dreams of Transmission: Fred Tomaselli's Bird Collages and American Ornithological Illustration," talk given May 5, 2007 at Princeton University's *American Views: A Symposium in Honor of Professor John Wilmerding*. She likens this phenomenon in Tomaselli's works to that at work in Audubon, saying his Double Elephant Folio of 100 birds remained the largest and heaviest volume until 2003, literally making it too heavy to transport easily. I should also note that the critic Annette Grant has remarked about the way Walton Ford's paintings "are so precisely rendered that they look as if they could fly or jump right out of their frames." Portability is also a theme Roberts has dealt with in her work on John Singleton Copley and his portrait of *Henry Pelham (Boy with a Squirrel)* (1765). See Roberts, "Copley's Cargo: Boy with a Squirrel and the Dilemma of Transit," *American Art* 21 no. 2 (Summer 2007): 20-41.

⁴⁰¹ *The Heavenly Tree Grows Downward: Selected Works by Harry Smith, Philip Taaffe, Fred Tomaselli* (New York: James Cohan Gallery, 2002), 65.

more productive to consider Tomaselli's collage/hybrid compositions as presenting these often opposing states along a continuum of ideological positions and definitions, a view which more fully embraces the generative currents in the artist's work. As Tomaselli himself has said, his paintings are "hybrid art form[s], not just in terms of materiality but in terms of...ideologies and pictorial traditions."⁴⁰² Tomaselli provides compositional and ideological balance by mixing and arranging the material signs of these often bifurcated positions, an effect that recalls the image displays of the art historian Aby Warburg's Atlas Project.

The effect of Tomaselli's "collage/hybrid" aesthetic at work in the artist's *Hummingbird*, recalls the visual negotiations at play in Warburg's *Mnemosyne* (**Fig. 2.26**). Warburg's Atlas project provides a lens through which we can view Tomaselli's *Hummingbird*, which unfolds in an analogous fashion, mediating what is here, there and in between to provide a continual field of presence, direction and redirection. Like the associative imagery that plays out on Warburg's numerous Atlas screens, Tomaselli's dense paintings prompts a host of references, some overt and others less so—black light posters and rock music, newly waxed cars and surfboards, phosphene blooms and psychotropics, peacocks and paisleys, Boeing A160 Hummingbird helicopters and Darwin's evolutionist writings.⁴⁰³ As the artist himself has said, "I don't think that a painting can have too much information. I know that each artist has to decide what he or

⁴⁰² *The Heavenly Tree Grows Downward: Selected Works by Harry Smith, Philip Taaffe, Fred Tomaselli*, 65.

⁴⁰³ Eugenie Tsai, "Beauty, Desire, Seduction: The Art of Fred Tomaselli," in *Fred Tomaselli: Gravity's Rainbow* (New York: Whitney Museum of American Art at Philip Morris, 2000), 8. Tsai specifically refers to surfboards and cars as displaying the kind of "finish fetish" to which Tomaselli's resin-coated surfaces attend. This material treatment only reinforces my idea of "floating fast" through the analogy of riding the ocean toward the shore, where a surfer is moving along the wave, yet simultaneously floats on a particular whitecap.

she won't put in the work, but if I could put the whole world in my work I would."⁴⁰⁴ The painting *Hummingbird* elicits layers upon layers of information contained within Tomaselli's resin seal, engendering a viewer who, like the hummingbird, finds himself floating fast within a menagerie of visual and sonic cues. The artist encourages free associations in works of art, and has commented that ideal paintings expand and grow when viewed over time, providing "different levels of information."⁴⁰⁵ While some of these recollections serve only to illuminate a viewer's own "private meanings"—as Gombrich has said of Warburg's Atlas—there are other more public and collective connections that are a bit more difficult to deny.

In 2004, the same year as Tomaselli's painting, the rock band Wilco released the song "Hummingbird" on their CD *A Ghost is Born* (**Fig. 2.27**). At the same time the band published *The Wilco Book*, a volume that recounts the making of their *Ghost* CD through photographs, writings by Henry Miller and Rick Moody, and images by Tomaselli. As Emily Rosenblum, a representative for Wilco has explained, Wilco approached Tomaselli to create work for their own book, after seeing the artist's work reproduced in the picture book *The Ganzfeld 3* (2003).⁴⁰⁶ "Fred [Tomaselli], being a fan of the band, graciously obliged," Rosenblum says.⁴⁰⁷ While Tomaselli does not attend to hummingbirds specifically in his *Wilco Book* imagery—leaving that instead to his painting—the band does reference these miniature flyers in their music and in the book,

⁴⁰⁴ Dan Nadel, n.p.

⁴⁰⁵ *The Heavenly Tree Grows Downward: Selected Works by Harry Smith, Philip Taaffe, Fred Tomaselli*, 51.

⁴⁰⁶ Dan Nadel, Ed. *The Ganzfeld 3* (Brooklyn, NY: PictureBox, Inc., 2003). I have reserved discussion of this text for a larger article on Fred Tomaselli, Wilco, picture books and hummingbirds.

⁴⁰⁷ Emily Rosenblum, representative for Wilco at Tony Margherita Management. Letter to Jennifer Malyn Walls. (10 March 2009). In the collection of Alissa Walls Mazow.

suggesting that Tomaselli's painting was inspired by their song and the book. But Rosenblum argues that the attentions the band and the painter have paid to the hummingbird is "totally accidental." As she argues, "In Jeff's [Tweedy] case the reference is to Henry Miller's essay "Stand Still Like a Hummingbird" and in Fred's case it's just part of a larger body of work utilizing bird imagery. A happy coincidence."⁴⁰⁸ It is with this same sense of accident or chance that hummingbird images appear in Wilco and Tomaselli's works.

In the first appearance of a hummingbird in the band's *The Wilco Book*, a bird in white silhouette flies across a black ground under the word "Time" and above a timeline of events that occur in one second or less, ending with the rate at which a hummingbird beats its wings—70 times per second (**Fig. 2.28**). Two light bulbs in the upper left of the page, one off and one on, accompany a description of the persistence of figures in darkness after light. A text also explains that forms "projected onto the retina in very quick succession...mix optically to form new images."⁴⁰⁹

Tomaselli's painting also attends to phenomena of vision. Littered among his fungi and flowers, vines and tendrils are phosphene blooms, which result when one presses on the eyeballs and releases (**Fig. 2.29**).⁴¹⁰ Reified in paint and pills, Tomaselli's phosphene blooms make permanent the effects of a transitory retinal event. Scattered across the artist's panel and coupled with the hummingbird's red eye and the paisley peacock eyes, these forms convey multiple layers of vision, loci that reiterate the process

⁴⁰⁸ Emily Rosenblum, representative for Wilco at Tony Margherita Management. Letter to Jennifer Malyn Walls. (10 March 2009). In the collection of Alissa Walls Mazow.

⁴⁰⁹ *The Wilco Book*, 100-01.

⁴¹⁰ Micaela Giovannotti and Joyce B. Korotkin, *Neo Baroque!* (Milan: Charta, 2005): 78, 83. Tomaselli's painting *Millennium Phosphene Bloom* (2005) is reproduced in this catalogue, and the forms in it repeat throughout his work. Given the optical nature of the term and his use of its effects in his work, I have chosen the term to refer more broadly to these patterns.

of observation and surveillance in which the painting itself becomes not only the object of our gaze but the gazer.

We find another reference to hummingbirds in an appendix to *The Wilco Book*, where the band provides anecdotes about the production of their *Ghost* CD. One band member notes the influence of techno music in the recording of “Hummingbird,” explaining the song’s “godawfully loud” kick drum. The sonic suggestiveness of techno beats and rock music kick drums summons the visual rhythms and repetitions at work in Tomaselli’s painting. The bird produces its own beats with the rapid flapping of its wings, which some bird observers have likened to the buzzing of bees or mechanical hedge trimmers. In the bird’s wings we can almost hear the pulses of electronic music and the beats of kick drums. The fast flutter of these wings also recalls the increased tempos of electronic music. In his painting, Tomaselli quiets the rapidly beating wings of the hummingbird, rendering his flyer motionless under layers of resin. We can also view the bird as a captive, like a fly caught in amber, but we could alternately interpret Tomaselli’s quelling as less a silencing of the bird than a preservation of its most notable attribute. The artist tunes into this fast flutter as a way not only to negotiate the skies, but also as a way to defy gravity. This is a phenomenon addressed in Audubon’s own paintings which as Roberts points out, are caught between “weight and levity, mass and flight.”⁴¹¹ The poet and critic John Yau has assessed the significance of Tomaselli’s attention to the physical force:

For many years now, theorists, particularly those with a material bias, have argued that painting is no longer relevant to postmodern life, that it is unable to address contemporary life and culture. In his depictions of visionary figures, Tomaselli gets back to the very basic human desire to

⁴¹¹ Roberts, “Dreams of Transmission: Fred Tomaselli’s Bird Collages and American Ornithological Illustration.”

overcome gravity. It is as close to being a universal subject as I can imagine.⁴¹²

The hummingbird in Tomaselli's painting alludes to our own experience of gravity and gives us a sense of what it would be like to transcend the laws of earthly physics. In his painting the artist bestows upon the flyer's frenzied flight melodic grace, and the mystical aura of floating in a hallucinatory time and space of cosmic weightlessness.⁴¹³

Tomaselli punctuates the hummingbird's cosmic sphere with little white dots, visual beats that buoy our transport through the artist's swelling celestial sea (**Fig. 2.30**). Although he routinely includes little white tablets in his paintings—usually ephedrine—those in *Hummingbird* appear to be painted in. A regulated behind-the-counter stimulant, ephedrine is alternately known as mini-thins or trucker's speed. Ephedrine can provide a subject with a little more pep, or have more pronounced effects that include sweating, jittering, and increased heart rate and palpitations. Taken in large quantities ephedrine can induce delirium and/or hallucinations. Here Tomaselli's hummingbird finds his flight infused with body and mind-altering drugs, from the psychoactive fungi with which the bird himself is partially composed, to the machine-cut ephedrine pills. With *Hummingbird*, the artist illuminates a world of syncopations, from the bird's nectar-fueled flutter to the rhythmic pounding out of capsules by a factory machine, to the quickening of a human heart sped up by the consumption of too many little white pills.

In a final reference to the small bird in *The Wilco Book*, in the pages between the white-silhouetted hummingbird and the techno-inspired kick drum of the song, we find a photograph of the typed "Hummingbird" lyrics (**Fig. 2.31**). Wilco's song describes a man

⁴¹² John Yau, "Beyond a Shadow of a Doubt," in Bradley, et. al., 20.

⁴¹³ See R.C. Baker, who reads the "visual overload" of Tomaselli's paintings as being "strangely quite and reflective," achieving, in essence, "a slow-motion hallucination."

“riding alone” searching for connection in the world. He feels a sense of belonging under the starry sky and solace in the flight of a hummingbird:

His goal in life was to be an echo
The type of sound that floats around and then back down
Like a feather
But in the deep chrome canyons of the loudest Mannhattans
No one could hear him
Or anything

So he slept on a mountain
In a sleeping bag underneath the stars
He would lie awake and count them
And the gray fountain spray of the great Milky Way
Would never let him
Die alone

Remember to remember me
Standing still in your past
Floating fast like a hummingbird

In Wilco’s “Hummingbird” the echo floats like a feather, so soft it cannot be heard in the din of a never-sleeping city. Only under the sparkling of a starry night does the subject feel a sense of belonging, seeing in the stars the possibility of a Universal protector. Tomaselli’s *Hummingbird* marks a visionary iteration of Wilco’s “great Milky Way,” which will “never let him [or us] / Die alone.”

And yet there is another aspect to the stars in Tomaselli’s paintings. In a painting that speaks so well to the song of a rock and roll band, here the stars imply not only celestial spheres, but rock stars. This is a connection the artist has made in many of his other paintings, something which, as John Yau has pointed out, provides a certain richness of association. Yau has observed the ways in which “one might consider how many individuals map out their lives, as well as group their memories, according to the

music they remember listening to.”⁴¹⁴ This added dimension draws out a duality of remembering, occurring both visually and sonically, through the hummingbird and through the song which marks a historical locus and “group of memories” associated with that place. Wilco’s “me” might reference less a Universal protector than the song itself, playing again and again through the individual’s mind, evoked by the visual iteration of the hummingbird. Tomaselli’s painting further assures the continuance of the memory or at the very least that the memory will be secured with his resin pour.⁴¹⁵

The artist’s resin seals the contents of his collage/hybrids and stills his hummingbird, allowing us to glimpse the eloquence of his flurried flight and feed amidst a bursting bouquet of botanicals, fungi and phosphene blooms. In Wilco’s song the subject asks his former flame to remember him, directing his speech not only to this individual, but to the audience and to himself. The song demonstrates a plurality of requests to remember, just as Tomaselli’s painting produces a variety of visual patterns, beats and gazes. We should also note the flying patterns of hummingbirds here, creatures that can fly backwards, as well as forwards, an ability that suggests a subject floating fast between the past and the future. The lyrics simultaneously chart the subject and the Milky Way under which he lies. The protagonist observes the attributes of the night sky in the same way that our attention is pulled among the elements of Tomaselli’s painting, eyes and feathers, phosphene blooms and ephedrine. Almost as if the night sky and the bird finally bestowed upon him a sense of his life and gave him a connection with the vast

⁴¹⁴ Yau, in Bradley, et. al., 16.

⁴¹⁵ *High and Inside*, 3. In his introduction to a group show that Tomaselli’s work appeared in in 2003 at the Marlborough Gallery in New York City, Judd Tully writes that “Memory, both personal and digital, also serves as a critical component of these artists’ work.” In addition to Tomaselli’s work, the exhibition contained the work of Beth Campbell, Janice Caswell, Steven Charles, Lisa Corrine Davis, Brad Hampton, Mark Lombardi, John J. O’Connor and Dan Zeller.

cosmos, the subject reminds himself to “remember to remember me / standing still in your past.” The hummingbirds of Wilco and Tomaselli call on us not only to connect with humanity, but to remember the astonishing complexity of the Universe and the wonder of the small—here the hummingbird—while traversing our Manhattan canyons.⁴¹⁶ The subject of Wilco’s song wants to be remembered as a hummingbird “floating fast,” a vision reified by Tomaselli’s “collage/hybrid aesthetic.” But Wilco also identifies him as being “an echo” and “like a feather,” his subjectivity ultimately dispersed across stanzas of space.

The images in Wilco’s book, from guitar picks to song lyrics, could easily be compared to the visual accumulations of Tomaselli’s paintings and Warburg’s picture atlas. While I hesitate to suggest Warburg’s *Mnemosyne* as a direct parallel to Tomaselli’s *Hummingbird* and Wilco’s song by the same title, I am struck by some suggestive associations between them. Gombrich described Warburg’s Atlas as an “abortive project,” annotations of a larger and more diachronic research endeavor, unaccompanied by explanatory text.⁴¹⁷ And yet Warburg’s tableaux convey the ways that the scholar becomes, not merely an investigative reporter, but an active generator of creative associations and meanings. We might even consider Warburg’s Atlas as an art work in its own right, a composition that forces multiple perspectives, temporal and thematic drifts across the space of a room and a viewer’s mind. Warburg arranges a host of vassociations, gathered in a kind of visual shorthand on a series of single panels that, taken together, constitute a larger, imaginary room that is aesthetically akin to a

⁴¹⁶ See Dan Cameron. Cameron associates Tomaselli’s paintings with “cosmic maps” or “celestial maps.” “[Tomaselli] seems to understand,” Cameron observes, “that a painting is nothing more than a stand-in for that same nighttime sky that he stood beneath as a child, filled with wonderment as the inexplicable miracle of perception.”

⁴¹⁷ Ernst Gombrich, *Aby Warburg: An Intellectual Biography*, 59.

Kunstkammer. And as Tomaselli's *Hummingbird* provides a similarly loaded display of materiality and suggestion, we might also consider the painting itself a kind of two-dimensional *Kunstkammer*.

I would like to leave Tomaselli's *Hummingbird* for a bit in order to explore Warburg's Atlas Project and the aesthetic of the *Kunstkammern*, in an effort to better understand the operations at work in Tomaselli's painting. At the center of Warburg's sixth slide panel is a photographic reproduction of the *Laocoön* group (see **Fig. Intro. 4**). As mentioned in the Introduction, the art historian Horst Bredekamp argues that serpentine statues like the *Laocoön* had a particular function within *Kunstkammern*. In the case of the sixteenth- and early seventeenth-century *Kunstkammer* of Rudolf II (1583-1612), in Prague, for instance, the sculpture imbued the objects it surrounded, as well as the viewer, with a sense of movement and life.⁴¹⁸ With the addition of ancient sculptures like the *Laocoön*, and reproductions of modern bodies, as with the photograph of a female golfer teeing off, Warburg's Atlas Project also manifests itself as an installation of movement (see **Fig. Intro. 5**). Photographic reproductions of the *Laocoön* and the golfer imbued the images surrounding them with kinetic energy through their own suggestive movements. Placed within the context of his working library, Warburg's screens enliven the books we find closed on his shelves, provide new windows onto the world, so to speak. Warburg's space of creative formulation, then, operates as an amalgam of screens and shelves, collages and books, reproductions and references. His Atlas provides a visual antecedent to works like Tomaselli's, which assemble a range of images and references in a defined space in order to infuse the whole with energy and movement.

⁴¹⁸ Horst Bredekamp, *The Lure of Antiquity and the Cult of the Machine: The Kunstkammer and the Evolution of Nature, Art and Technology* (Princeton: Markus Wiener Publishers, 1995), 48.

With Tomaselli's *Hummingbird*, reproductions of fungi and vegetation cut from print material, paint and images of swirling tendrils creep like millipedes to embrace the heroically-scaled bird, fueling his movement as he floats from one sign to another.

Bredekamp's description of the *Kunstammer* as being akin to "the stage of a theater," suggests the space of a black box filled with language, images, and movement. Tomaselli's black paintings convey a comparable sense of wonder, choreographed with leaves, next to paint, next to pharmaceutical pills. They are admixtures of art and science and a web of associated technologies. They register, as the historian Anthony T. Grafton has said of Bredekamp's work, the "radical view that the baroque *Kunstammer* is also the nucleus of modern cyberspace."⁴¹⁹ We "twitch and squirm" like the mechanical turtles did in a Renaissance *Kunstammer*, as much as we surf the visuality of information available to us today on the World Wide Web. Similarly, Tomaselli's *Hummingbird*, marks a space where we "float fast"—as the rock band Wilco recorded in their song "Hummingbird"—in a sea of history and materiality, memory and dreams. His painting marks a space in which music and theatre, science and art, the specimen and the painted swirl all come to life. Tomaselli's painting leaves us less attendant to a single point of view or sense of perception than to an amalgam of seeing and hearing, gazes and beats. The numerous eyes—from the paisley eye at upper right to the allusion of peacock ocelli to the affected red eye of the hummingbird—suggest a state of enhanced vision where multiple gazes permit us to see the simultaneity of nature and culture, chaos and

⁴¹⁹ Bredekamp, back cover review. See also Mark A. Meadow, "Merchants and Marvels: Hans Jacob Fugger and the Origins of the *Wunderkammer*," in Pamela H. Smith and Paula Findlen, Eds. *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002): 182-86. Meadow views the collections of a University holistically through the lens of a *Kunstammer*, emphasizing as he says, "metaphors of threads, networks, and skeins...intimately bound...worlds of information...in the digital community...the 'net' or the 'web.'"

order. Warburg similarly noted the visionary effects of his own winged flyer: “Beneath the dark flutter of the griffon’s wings we dream—between gripping and being gripped—the concept of consciousness.”⁴²⁰ Tomaselli’s hummingbird is on the verge of coming unhinged in the visual complexity of the moment, “floating fast” in two dimensions between the rhythmic stamping out of tablets, kick drums and beating wings. We and the avian find ourselves “floating fast” amidst the deliriously rich sensuality of sugared nectar, tripping eyeballs and the hypnotic effect of Tomaselli’s visual pharmacopoeia.

VIII. *The Delirium of Alfred Russel Wallace and the Ecstasy of a Space Monkey*

Tomaselli’s paintings, like that of the *Hummingbird*, offer states of transcendence in their operations as Renaissance *Kunstkammern* and windows onto the world, in their incorporation of psychotropic substances into the pieces themselves and in their overall vibratory effect. The artist’s use of painting as a way to get to another place, to induce in the self states to which we can only gain access via drugs, ecstatic visions or meditation, for instance, becomes heightened through his allusions to natural history and evolutionary theory. Darwin’s theory of natural selection was not wholly his own, despite the fact that he was the naturalist responsible for its proof through a lengthy number of examples set forth in *Origins*. While sweating and chilling out a delirium-inducing malarial fever in the spring of 1858 on the island of Ternate in the Moluccas (now Indonesia), the naturalist and discoverer of natural selection Alfred Russel Wallace meditated on the

⁴²⁰ Ernst Gombrich, *Aby Warburg: An Intellectual Biography*, 303; See also Matthew Rampley, “Archives of Memory: Walter Benjamin’s Arcades Project and Aby Warburg’s Mnemosyne Atlas,” in Alex Coles, ed. *The Optic of Walter Benjamin* (London: Black Dog Publishing, 1999), 95. Rampley also mentions the griffon and notes the way in which Warburg became occupied with the dirigible in the last year of his life. “In particular his essay ‘Airship and Submarine in the Medieval Imagination’ had analyzed the meaning of the myth of Alexander the Great’s flight in the airship drawn by griffons. The dirigible also occupied Warburg’s attention in the final year of his life; he included press photographs of the voyage of the *Graf Zeppelin* on one of the first plates of *Mnemosyne*, his unfinished pictorial atlas.”

origin of the great diversity of the earth's species. Coming in and out of malarial fogs, Wallace penned a 4,000-word manuscript to Darwin on his theory of natural selection—"On the Tendency of Varieties to Depart Indefinitely from the Original Type"—a hypothesis he claimed "occurred to [him], suddenly."⁴²¹ In chapter one, we saw Darwin struggling to edify his own trip reports and becoming astonished with Wallace's rhetorically convincing and terse trip report—call it a "sick" report—on natural selection.

Darwin was, reportedly, "dumbfounded," upon receiving a description of his theory, independently arrived at and explicated by another naturalist, one that was so concisely and persuasively written, a *fait accompli* of something Darwin had spent the large part of the last twenty years mulling over.⁴²² We can only speculate how Wallace arrived at his theory so concisely and precisely when Darwin, an intelligent and creative thinker and a diligent researcher, had spent so long organizing his own thoughts on the subject. Like those researchers who have benefited from the clear and directed thought brought on by psychedelics like LSD-25 and other altered states, Darwin might have benefited in expression from an encounter with his grandfather Erasmus's wares, or the altered state provided by Wallace's malarial trip.⁴²³ Darwin, however, would gain the recognition for natural selection, in part because of his wealth and formal education.⁴²⁴ He had all the right societal tickets, so to speak. The art historian Helen Molesworth argues that Darwin's greater renown than Wallace has something to do with work ethic.

"The nineteenth and twentieth centuries have...rewarded those who embody the

⁴²¹ Alfred R. Wallace, letter to A. Newton (3 Dec. 1887), *The Autobiography of Charles Darwin*, 1726.

⁴²² Tony Rice, *Voyages of Discovery: Three Centuries of Natural History Exploration*. Intro. David Bellamy. London: The Natural History Museum, 1999: 260.

⁴²³ See Richard M. Doyle's forthcoming book on a massing of such researchers, including Francis Crick's envisioning of the structure of DNA as a double helix and Kary Mullis's "discovery" of PCR, or Polymerase Chain Reaction.

⁴²⁴ Corrin, 60.

Protestant work ethic, or who offer themselves as its good representatives. Other forms of thinking—intuitive, irrational, speculative, non-linear—are not seen to be as valid, indeed sometimes they are not even registered as work.”⁴²⁵ Wallace was just as startled later on by the way that Darwinism was twisted into a rational rhetoric of a Cartesian science by German scholars like Ernst Haeckel. Rejecting “Haeckel’s denial of a spirit world,” Wallace had not only stumbled upon the altered states experienced during malarial trips, but also sought out altered-universes and states of consciousness through séances, an activity that our present, empirically-centered selves might find to be as inconsistent with one of the first rhetoricians of natural selection.⁴²⁶ “His [Wallace’s] reputation as an eccentric liberated his ability to act as an outspoken advocate for conservation, social justice and spiritualism,” states Lisa Graziose Corrin.⁴²⁷ Corrin’s view of Wallace as an eccentric here is certainly no critique in light of the possible colonialist overtones to much of the naturalist project in the twentieth century and the general propriety of the Victorian world view. Wallace was very much a leader of his age, scientifically, socially and spiritually. Darwin and Wallace were ultimately induced into states of clear vision and what the scholar Richard M. Doyle describes as “eloquence,” as a result of their botanical or animal encounters—whether via a *Plasmodium* mutation of mosquito parasites or their sublime encounters with flora and fauna in remote tropics and other distant lands.

⁴²⁵ Molesworth, 32. While Molesworth essay focuses on Dion’s installation *The Delirium of Alfred Russel Wallace*, it does so from the standpoint of work ethic looking at the projects of Darwin and Wallace through the evolutionary theories of, respectively, gradualism and catastrophism.

⁴²⁶ Lynn Margulis and Dorion Sagan, *What is Life*, Forward by Niles Eldredge (Berkeley and Los Angeles: University of California Press, 1995), 45.

⁴²⁷ Corrin, 60.

In a piece completed just a few years after his Mickey Cuvier series, Mark Dion produced the portrait installation *The Delirium of Alfred Russel Wallace* (1994), which captures Wallace in his hybrid state of delirious eloquence (**Fig. 2.32**). While many of Dion's pieces transform the museum into a laboratory, this particular naturalist extract serves as a diorama of Alfred Russel Wallace, at the very moment that he finds himself working out the ideas of natural selection in the midst of his tropical delirium. Once again, as Dion transformed Cuvier into a stuffed mouse, he replaces the human figure of Wallace with a stuffed animal, in this case, a taxidermic fox. The spectacle-adorned creature lies supine in a red and orange plaid woven hammock, covered with two blankets bearing the patterns of Welsh tartans. A palm tree and a leafless deciduous tree parenthetically hold the hammock, as well as the entire tableau, in place. Another string running above the hammock holds a mosquito net in place over "Wallace." Sundry items frame the fox's infirmary, including two wood travel chests, books, butterfly nets, plants, glass bottles and metal cooking implements, binoculars, a hat, a lantern, and a wooden barrel cask. A large bird, similar to a Great Indian Hornbill, stands perched in the leafless tree at right, watching over the convalescent.

What Wallace-the-Fox experienced in his altered-state is not dissimilar from that which an artist registers in the process of completing work. In both cases, all of the pieces are essential to composing the whole. In Dion's *Delirium*, an orange ribbon on the tree at the upper right of the installation ties the piece together, formally, with the orange of the hammock at center and the orange stick explosive, magnifying glass cover and lining of the dissection kit at left (**Fig. 2.33**). In this way, each element that Dion has chosen contributes to the effectiveness of the work. It is as if he has selected the material objects

of his installation using the same sort of associative criteria favored by a naturalist, hunting and collecting in the field, and organizing his specimens into a display in his cabinet of natural wonders. Corrin argues that Dion's *Wallace* installation is of particular significance to his larger body of work, and marks the transition from pieces where the artist identified with the naturalist through the animal other (the mouse or the fox), to future pieces where the artist becomes the naturalist himself (as in the *Roundup* project).⁴²⁸ In his oeuvre Dion's roles constantly shift, between the artist and the naturalist, and among a man and cartoon mouse, fox and bug. His occupations and subjectivities constantly morph in the world of natural history where one's identity is more likely to transmute than to remain fixed.

Dion's *Wallace* installation reiterates the transformative effects of naturalist activity and specimen collecting. In the piece, the Great Indian Hornbill holds an image of a toucan species from a naturalist text upside down in his beak. Here the representation of the bird in print reiterates the representation of the living bird as his taxidermic (and evolutionary) other.⁴²⁹ And yet the taxidermic bird, so life-like as it perches on his lofty lookout, suggests an avian very much alive. The stuffed bird pulls one over, so to speak, on his two-dimensional representation. Dion, too, with his Wallace-speaking voice-recording spewing from the mouth of the fox, suggests a state where a species and its subdued specimen collapse, and neither one makes themselves overtly apparent. Each, rather, titillates behind a splash of orange, and a feather of yellow. This is the complex space through which Wallace and Darwin had to negotiate their conception of the living world.

⁴²⁸ Corrin, 60-61.

⁴²⁹ Molesworth, 33.

In the process of extensive travel, study and contemplation, Wallace did, however, come to some conclusions. He came to see the way species form interconnections and evolutionary entwinements in the continuation of life. Contemporary paleoanthropologists, like Holly Dunsworth, have continued where evolutionary theorists since Darwin and Wallace have left off. Dunsworth excavates fossils in Kenya each summer in search of new keys to evolutionary history. “The experience deepens my understanding not just about what drives my life, but all our lives, where we come from. And the deeper I go, the more I understand that everything is connected. A bullfrog to a gorilla, a hummingbird to me, to you,” she says.⁴³⁰ Like Dunsworth, Darwin and Wallace must have known the implications of linking species together. Ultimately the species at the top of the Great Chain of Being, *Homo sapiens*, connected to “the lower animals,” via a complex family tree. But even the suggestion that we find our closest relatives in the primates remains as controversial to some today as it was in the days of Wallace and Darwin. Artists like Dion have registered not only the interconnection of science and art and living beings and representations of them, but also the possibilities of closing the culturally-constructed distance between human and non-human animals.

Walton Ford picks up on man’s anxiety of descending from an animal other in his super-sexualized watercolor *Space Monkey* (2001) (**Fig. 2.34**). In a vertically-oriented tribute to the Bonobo, a female chimpanzee of the genus and species *Pan paniscus* grandly straddles a male of her species who lies on his back under her with a demonstrably erect penis. Amidst the lowlands of a mountain jungle, ensconced in the

⁴³⁰ Holly Dunsworth, “I am Evolution,” *The New York Times* (11 May 2008): Weekend Edition, Sunday.

bright spring green grasses and small palms, the male relaxes his legs, while he grabs blades of grass with his left hand above his head. He tilts his head back, lips slightly parted and eyes closed, his right elbow in the air as he grabs another grass clump with his right arm. The female frowns ever so slightly, staring out along a horizon line not visible to the viewer. With her arm positioned alongside her body, her left arm holds a toddler chimpanzee against her hip. The young infant hangs onto his mother's arm with his right hand and rests his left arm between her two ample breasts. The young *paniscus* looks down upon the male chimpanzee with gentle eyes and with his lips ever so slightly upturned as if containing a grin. The lips, the breasts, the penis and the vulva are emphasized with the fleshy pink tones of flesh.

Bonobos are thought to be the closest living relatives of humans, and their primate culture is well known for its matriarchal structure and its high frequency of sexual activity. In fact, bonobos, unlike chimpanzees, are known for assuming a wide variety of sexual positions, favoring ventro-ventral (e.g. "missionary style") over ventro-dorsal positions (e.g. canine-style).⁴³¹ But the actors in his stories often tell more than one tale. Ford's painting, on the one hand, reveals a narrative, in this case, a sexual tryst. For instance, it is possible that the male chimpanzee—though his relaxed, arguably ecstatic pose marks a post-orgasmic moment—also represents a primate that has just been physically overpowered or even murdered by the female towering over him. In this case, Ford might be providing us with a primatological view of the femme fatale. Although ethologists have observed peaceful and egalitarian behavior among Bonobos, and have characterized them as exhibiting strong female dominance through female bonding, more

⁴³¹ For one of the best references on bonobo sexual behavior see Frans B. M. de Waal and Frans Lanting, "Apes from Venus," in *Bonobo: The Forgotten Ape* (Berkeley: University of California Press, 1997): 99-132.

recent studies have suggested the limited application of these observations as the primates were in controlled groups in captivity. In the wild, many possible tensions are relieved, it is believed, through frequent sexual encounters, but the groups do experience more upheaval than in captivity, the females migrating, while the males remain “philopatric,” or in the same place throughout their lives.⁴³² Ford’s painting, then, displays an ambiguity that allows for reading the female bonobo as both the initiator of peace through sexual encounters and the independent female who might abandon her male counterparts at any time for greener jungles, so to speak.

When I first saw Ford’s *Space Monkey*, I flashed back to the first ten minutes of Stanley Kubrick’s (1928-99) *2001: A Space Odyssey* (1968) (**Fig. 2.35**). The introductory sequence, also known as “The Dawn of Man,” zooms in as the viewer quickly surmises man’s ancestral primates. The ape-like humanoids, unkempt and sporting bushing hair all over their bodies, inhabit a foreboding and desolate landscape, asleep in caves and rock cliffs until awakened by mystical music. Signaled by this sonic invocation, the first ape to open his eyes witnesses a minimalist and vertically-oriented black rectangular monolith suddenly appear. The ape and his companions jump around and communicate through grunts, gestures and contortions of facial physiognomy. They approach the monolith with some hesitation, but after one ape gains comfort in touching it, they all begin to feel its surfaces and properties. The apes are drawn to the object as it seems to provide them with the first recognition of their own origin in nature. The monolith becomes the site of their evolution, the film sequence shifting to the moment when these apes understood the

⁴³² For good studies on the behavior of bonobos see: Linda Marchant, *Behavioural Diversity in Chimpanzees and Bonobos*, edited by Christophe Boesch and Gottfried Hohmann (Cambridge: Cambridge University Press, 2002); Takeshi Furuichi and Jo Thompson, Eds. *The Bonobos: Behavior, Ecology, and Conservation* (New York: Springer, 2008); and Frans B. M. de Waal and Frans Lanting, *Bonobo: The Forgotten Ape* (Berkeley: University of California Press, 1997).

capacity of a monolith-like object, in this case an animal bone, to become a tool. With their new origin story and their evolutionary altar, they transform into and foreshadow future primates with supposedly more complex cultures.⁴³³

Ford's chimpanzee image recalls a transformational moment of recognition that struck Kubrick's early humanoids, when mere existence and survival are traded for tools and more complex frameworks of evolution. Kubrick's humanoids are, ostensibly, the "space monkeys" in his space odyssey.⁴³⁴ Portrayed as pre-humans, among the lower animals, Kubrick's primates, like Ford's register a moment of frenzied transformation. Through their ritual with the megalith and, in the case of Ford's *Space Monkey*, though the ritual of orgasmic copulation, the primates find themselves transformed. The anxiety Ford's painting produces, like Kubrick's introductory scene, lies in our identification with these acts, with the humanoids' communal acts of competition for food, leadership and a united purpose and in the recognition of sexuality as somehow (non-human) animalized. In the space in which humans negotiate eating, sleeping, procreating, and organizing ourselves as societies and establishing forms of culture, we so often glimpse our evolutionary selves in the mirror, not so distant from the hairy chimpanzee. As the critic Martha Schwendener has observed, "[Ford] doesn't try to crawl back in time," but "collapses the past into the present."⁴³⁵ Indeed, Ford revels in taking arcane knowledge—which could be an image of a rhinoceros by Dürer, the evolutionary texts of Charles

⁴³³ For a fascinating account of the monolith's meaning see the work of film critic Bob Ager. Ager argues that the musical invocation that accompanies the three depictions of the monolith in *2001*—in "The Dawn of Man" scene, on a planet in outer space, and floating around Jupiter—also appears at two scene transitions in the movie where the screen fades to black. The black, Ager argues, is in fact the monolith and we, the humanoids. And when the monolith is turned on its side, it appears like the film screen itself. In this way, the object and subject positions of the screen, the monolith, the humans and the humanoids merge, drawing into their black vortex transformation, evolution and representation.

⁴³⁴ This view is made all the more timely as Kubrick's movie was released just one year before the first manned moon landing.

⁴³⁵ Schwendener, n.p.

Darwin, the 1969 moon landing or the songs of Patti Smith, depending on your historical knowledge or generational perspective—and reviving it, making the past somehow relevant in the present.⁴³⁶ His is a project, in this way, not that dissimilar to the work of Aby Warburg, who used his nymphs to revive the Renaissance in his contemporary period, ostensibly working out contemporary anxieties through remnants of the past and a consciousness of history.

Ford's paintings, like the maximalist compositions of Fred Tomaselli, read with a certain density and richness:

I'm trying to cram in as much as possible. It has to do with going to places like the American Museum of Natural History. As a child it was my favorite place in the world. My parents would take me there when we went to the city. The wall texts and those crazy dioramas with painting and animals and taxidermy were a wealth of information. There's so much to know, so much freaky stuff, and I want to pass that feeling along. I'm also interested in...a tremendous layering of code, and yet they always communicate to us, no matter what, even in the areas that are really mysterious.⁴³⁷

In the painting of a chimpanzee, then, Ford evokes a range of possible readings, alluding to everything from evolutionary theory and space travel to popular films and music. For instance, allusions to space monkeys would not be lost on those, who are like Ford, familiar with the NASA missions that preceded the "human" astronaut missions that culminated in the moon landing in the summer of 1969. The United States first sent monkeys into orbit beginning on May 28, 1959, serving as unwitting harbingers of a future human celestial voyage (**Fig. 2.36**). The monkeys became virtual mascots of the early space program, with news agencies featuring them on television upon their successful returns into earth's atmosphere. The 1983 movie of Tom Wolfe's book *The*

⁴³⁶ Grant, n.p.

⁴³⁷ Katz and Kazanjian, 64.

Right Stuff (1979) features the primates in their spacesuits. Ford's *Space Monkey* serves as a kind of heroic portrait, then, of the first primate in space.⁴³⁸

But Ford drops clues to another reading in the upper left corner of *Space Monkey* with the words: "Patti Smith Group – *Easter* – Track #2."⁴³⁹ The Patti Smith Group did, in fact, title the second track on their *Easter* (1978) album "Space Monkey." *Easter* was re-released in 1996, making Ford's song with a space monkey as its subject all the more compelling at that moment (**Fig. 2.37**). From the group's first really commercially successful album, the song begins with the subject walking the streets of New York, mulling over "souls...invaded" with news violence and the "mad...church."⁴⁴⁰ The lyrics suggest not only the madness of the church, but the (then) far more violent urban streets of Manhattan and the macro-violence of war as experienced in Vietnam. With the arrival

⁴³⁸ But certainly monkeys were not the first animals. The former U.S.S.R. used female dogs as their harbinger cosmonauts, a genus of which Darwin would have most certainly approved, often using his own dog's behavior as exemplifying the similarities of *Homo sapiens* and other animals. Unfortunately, five of the eleven canines (not to mention a rabbit) never returned to earth alive, a fact noted in *An Oil Portrait Gallery of the Heroic Canines of the Soviet Space Program* at The Museum of Jurassic Technology, Culver City, CA.⁴³⁸ A puppy from a litter birthed by a canine cosmonaut that did return was, fascinatingly enough, given to Caroline Kennedy by Nikita Krushchev as a gift from the Soviet people.

⁴³⁹ See Schendener, who seems to suggest that Patti Smith, through her song *Space Monkey*, where she is accosted by a "Space Monkey UFO," parallels animals taken from their environment by people seeking to fill natural history museums. Ford, in turn, "hijacks" Smith and the Space Monkey into the frame of his own painting, not unlike Smith has done to herself, via her own lyrics in her song. For explanations of the incorporation of script into Ford's work see Linton. Linton observes that Ford "incorporates Audubon's habit of making field notes in the borders of his paintings." This is a phenomenon we see disappearing in Ford's newer works. See Hirsch, 132. Ford claims that this earlier writing exemplified, "A certain insecurity on my part, and a certain kind of pedantry in my personality. The least successful work is over-explained. These stories are really deep and they're really rich, but it's sometimes better if they're not written all over the pieces. I just allow myself to have faith in the image. What I was trying to convey with notes were my efforts at research." In her interview with Ford, Hirsch then says that the "archaic script" adds "to the visual impact." Ford, in turn, adds: "There are these Audubon watercolors where he's writing—sometimes really peevishly, to his printer or even to himself—that the legs are actually pink, and white around the eye, please put in a scene that shows a rocky cliff and the seashore. He's in such a hurry that he just gives you the bird specimen. Or a note to James Mason, a young assistant of his, who was doing vegetation in the backgrounds, and it would say, Paint a magnolia branch better than you did the last time. You get indications of his fury to finish this project—his impatience and stress. These notes are pretty amazing. And I loved that, when I saw the watercolors in the New-York Historical Society with such revealing personal bits. I decided to use that in my own watercolors."

⁴⁴⁰ In 1971, another singer, Don McLean (b. 1945), sang in his song "American Pie" of such madness producing "a generation lost in space."

of the “space monkey” deemed “sort of divine” with the “sensitive ridge” the song proceeds into a dream sequence that features French actor “Pierre Clementi,” a “lavender room,” and a “divine-vine.” The chorus takes on a hallucinatory edge when a “rusty Polaroid” given to the space monkey crumbles and become a “jack-knife.”⁴⁴¹ Further alluding to drug culture, cocaine, that staple of 1970s mind-body alterations and the multi-colored rooms of discos, is often referred to as the “monkey on my back,” and those partaking of these substances as “spaced” out. The last verse suggests a senseless murder of a boy at the hands of the jack-knife-wielding space monkey. In the final verse, the subject sees in the trees a “banana-shaped object” that turns out to be a U.F.O. with space monkey on board, who abducts the subject from her earthly body. “I’ll never do dishes again,” she says, contemplating both the mundane task of washing dishes and her fantasy of copulating with her extra-terrestrial space monkey who has just “jack-knifed” her with his dish (a.k.a. flying saucer).

Ford’s visual rhetoric illuminates man’s role within his own species, as well as his interconnection with others. The artist’s anthropomorphic animals have served as metaphors of humanity, while at other times, the primate plays the role of himself,

⁴⁴¹ Critics have observed the hallucinatory aspects of Ford’s paintings. See Landi 54; Hirsch, 132, 142; Scobie; and Worthington. Ford may also be particularly attuned to the hallucinatory state, having traveled to India, as many critics and scholars have noted, with his wife Julie when she received a six-month Fulbright fellowship to study, according to Worthington, “Tantric art, meditational diagrams, temple architecture, and the relationship between all of those things.” She studied the visual equivalent mantras, known as “yantras.” Further, Ford would likely be cued in to the current state of mind-altering drugs in America, if for no other reason, than his brother Flick Ford “became the art director at *High Times* magazine.” Landi sees Ford’s work, with “more meticulous temperament and hallucinatory subject matter,” as distinct from the work of David Salle and Eric Fischl, who she sees as working more in an “expressionist vein.” In Ford’s *Bough* (2002), Hirsch says, thousands of passenger pigeons sit on a single tree branch that the artist paints breaking off dramatically. Ford, she says, captures “the hallucinatory power of Audubon’s written account of the extinct North American species, which at its peak, during the continent’s colonization, numbered in the billions.” In this interview Ford also describes the way that he is “in the head of a delirious Audubon, or a delirious [Carl] Akeley,” in many of his paintings. Scobie observes how Ford’s painting *Delirium* (2004), explores the “mutual delirium of the animal [here an Eagle] and the artist [here Audubon, in the image, and by proxy Ford].”

subverting hierarchies of human-animal relations and refuting any notions that humans and primates are not genetically related. Ford asks us to look at and through the eyes of our relative primates to consider issues from colonialism to evolution to the social construction of taxonomic hierarchies, as well as drug, space, and extra-terrestrial cultures. By labeling his “naturalist” subjects as “space monkeys,” Ford brings us a little closer to looking with greater acuity at ourselves, the earth men.

Though Dennett’s *Darwin’s Dangerous Dilemma* provides compelling illuminations of Darwin’s evolutionary theories, its proposal that Darwin remained invested in the origin of *species*, not the “meaning of life, or even its origin,” is problematic.⁴⁴² Darwin’s story of the eye, for instance, remains very much in tune with someone concerned with the evolutionary origins of man. Darwin was so acutely aware of how his *Origin* theories would shock readers, that he, as Dennett does indeed argue, restrained himself from denying God’s existence and man’s evolution from primates. Darwin was a scientist very much concerned with man’s origins, theories of which he takes up at length in *Descent*, particularly in section two.

Now, it is true that by origin, Dennett might be referring to an origin in genes, for instance, which surely Darwin did not understand (but one can even argue he had some abstract concept of a structural cause). Or he may be alluding to the larger teleological question of the first origin, which Darwin does admittedly not attempt to answer with his mechanism of natural selection, if his previously discussed letter to Gray provides any evidence of this. But to say that Darwin was only concerned with the origin of species, rather than the origin of life, is to buy Darwin’s titular subterfuge at face value. Once one

⁴⁴² Daniel C. Dennett, *Darwin’s Dangerous Idea: Evolution and the Meaning of Life*. New York: Simon & Schuster, 1995, 35.

accepts his concept of variation, that species do not arrive wholly and uniquely formed from the mind of God, then inevitably we are dealing in the origins of life. Darwin was a master at drawing in his readers and knew that laying out an “Origin of Man” in the title of his first largely published work would have scared away the public, as well as most of his scientific contemporaries. He was having a hard enough time rationalizing his story of the eye, let alone his story of man.

Darwin the naturalist traversed the Tree of Life in search of the origins of all species—routes from man to zoophyte and back again. I would argue that Darwin was less fascinated with these distinct species categories than he was with their strict categorization. In other words, at what point would a species vary enough to become another species altogether? This problem has been addressed most pointedly in the art works discussed in this chapter, as we have noticed more transgenic crossings that result in artists’ constructions of hybrid species. These “transmigrations” of species can only undermine the traditional, Linnaean insistence on taxonomical borders and neat ladders of life where man stands near the top, one rung under God the Creator. The artists in this study have been particularly attuned to discussions of species origins and intelligences, deliberations that too often come across as vacuous rehashes of dark moments in American history as exemplified by the Scopes Monkey Trial (1925). By featuring primates in his work, for instance, Ford has enlivened these debates and challenged us once more to consider our very human desire to dismiss our own origin stories.

Artists like Dion and Ford, who have made a habit of turning humans into animal others, delve into the transfigurations that take place in man’s encounters with other animals. Through transgenic transformations where man finds himself transformed into

stuffed mice and foxes, or even, like Darwin, so in touch with the sublimity of the astonishing diversity of the tropics that he can hardly relate his encounter, man finds himself in a startling position where his corporeality as *Homo sapiens* becomes no longer stable. As Henry David Thoreau once noted:

We are conscious of an animal in us, which awakens in proportion as our higher nature slumbers. It is reptile and sensual, and perhaps cannot be wholly expelled; like the worms which, even in life and health, occupy our bodies. Possible we may withdraw from it, but never change its nature.⁴⁴³

These artists have discovered that, in many ways, we humans often find ourselves well situated in the world of animals and primates, and in some cases, fit in almost too neatly among the “lower animals,”—the zoophytes, who dwell amidst the taxonomical slippage of biological kingdoms, from plant to animal and back to plant again—or often, some unknown place in between.

⁴⁴³ Thoreau, 132.

Chapter 3

Fungi: Navigating a Route Home

WHAT SCARED YOU INTO TIME? INTO BODY? INTO SHIT? I
WILL TELL YOU. THE WORD. THE-THEE WORD. IN THEE
BEGINNING WAS THE WORD. SCARED YO U ALL INTO SHIT
FOREVER. COME OUT FOREVER. COME OUT OF THE TIME
WORD THE FOREVER. COME OUT OF THE BODY WORD THEE
FOREVER. COME OUT OF THE SHIT WORD THE FOREVER. ALL
OUT OF TIME AND INTO SPACE. FOREVER. THERE IS NO THING
TO FEAR. THERE IS NO THING IN SPACE...THERE IS NO WORD
TO FEAR. THERE IS NO WORD...THE WRITING OF SPACE. THE
WRITING OF SILENCE.

LOOK LOOK LOOK⁴⁴⁴

--William S. Burroughs

Mushrooms are making sounds (as they produce spores) and we should be
listening to them.⁴⁴⁵

--John Cage

I. *Homo sapiens*, Human Race

Homo sapiens: 1. The binomial name (Lat. *Homo*, man + *sapiens*, wise) for modern and contemporary humankind. See: human race. 2. Single animal species with the ability to undermine the future of the rest of them.

Human race: 1. Composed of two principle groups; number one, yourself; number two, all the others. 2. The only race more unpredictable than a horse race.⁴⁴⁶

⁴⁴⁴ William S. Burroughs and Allen Ginsburg, *The Yage Letters Redux* (San Francisco: City Lights Books, 2006 [from a letter to Allen Ginsberg, June 21, 1960]), 71.

⁴⁴⁵ *Boston Mycological Club Notes* (Feb. 1967), as quoted in *The New York Times*: John Cage Mycology Collection, University of California, Santa Cruz (hereafter JCMC).

⁴⁴⁶ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon Gallery, 1997), 62.

II. Phrasing Fungi: Cut-Out, Cut-Up

A supersized humanoid walks in a landscape of short green grasses punctuated with white and caramel colored mushroom caps, many of which can be identified as members of the psychedelic *Psilocybe* genus (**Fig. 3.1**). The male figure tends to the mushroom field with a long hoe, accented with yellow rays that endow the agrarian tool with a supernatural property.⁴⁴⁷ The pseudo-human body, composed of the cut-out muscles, tendons and organs of other beings, leans forward with a raking motion. Set against the blackness of night and a red glow signaling the sun's evening descent, the mushroomer effortlessly supports the weight of a swirling celestial cornucopia of butterflies, phosphene blooms and little white pharmaceutical stars.⁴⁴⁸ The artist Fred Tomaselli painted and assembled this image, *Field Guides*, in 2003, marking the artist's engagement with the natural world and his representation of its entwinement, incorporating plants, animals *and* fungi, into his works of art.

Mushrooms are particularly compelling organisms in their defiance of the categorical properties that align living beings as belonging to a particular kingdom. As part of the fungi kingdom, they elude definition as plant or animal, despite their having properties of both of these latter taxonomical subdivisions. Fungi do not produce chlorophyll, and rely on food sources from their surrounding environment. Some fungi

⁴⁴⁷ Fiona Bradley, gallery guide for *Monsters of Paradise*, held at The Fruitmarket Gallery, Edinburgh, Scotland, July 31-October 3, 2004, 3. Bradley calls the hoe an "axe," which "is made from several smaller handles." Instead the axe appears more as a garden hoe, composed of the handles not of axes, but of shovels. The critic Carol Kino also calls the tool an ax. See Carol Kino, "Fred Tomaselli at James Cohan," *Art in America* (Dec. 2003): 104-05.

⁴⁴⁸ Tom Breidenbach, "Fred Tomaselli at James Cohan Gallery," *Artforum* (Sept. 2003): 227. Breidenbach also describes the hoer as "trailing a vast paisley of butterflies." Though, his assessment of the image is less of transcendence than of "toil and eventual consumption...a vivid and terrible vision of life eating itself." Still, it is possible, as we will see with Paine and his fungi field later in this chapter, that life as we know it, or as we categorize it, must in fact consume itself in order to persist and transcend. This is less a terrible vision than an awakening to new possibilities of existence. Breidenbach's description, then, of self-consumption may suggest transcendence as much as its does destruction.

reproduce asexually with vegetative spores, while others reproduce sexually through meiosis. Mushrooms were originally studied within the realm of botany, but today we know that fungi actually exhibit properties more similar to animals than to plants. Now mycology denotes the branch of the natural sciences dedicated to the study of fungi. The field is still considered a fringe discipline by many accomplished scholars in the natural sciences, and many colleges of science do not even have professorships let alone departments dedicated to the study of mycology. The *Oxford English Dictionary* considers mycology “a field within lower plants,” along with bryology (the study of mosses) and algology (the study of algae or seaweeds). If one attended a mycology conference, the papers could cover a range of subjects, from the problem of delineating the taxa of truffles to understanding what mycotoxins are attacking southern magnolias, to the biological role of lichens, symbiotic organisms derived from the joining of fungi and algae. In many universities, mycologists find themselves in such departments as plant pathology, suggesting the continued confusion over the proper place of this specialized field. Such ambiguity, even ambivalence, also demonstrates the hybridity and cross-over of many of the earth’s species, and especially mushrooms; species contained within tables, phylogenetic trees and now phylogenetic circles, but classified in these schemes such that they never quite achieve neat distinctions from one another.⁴⁴⁹

The only artist in this dissertation to have incorporated the three kingdoms of organisms into a single work, Tomaselli marks in *Field Guides* a space where the visual reiterates a nature-culture continuum in a way that encourages the imagining of metaphysical, mystical and spiritual visions. The painting’s title encourages one to ask

⁴⁴⁹ Davis, 216-17. Davis argues that Paine’s fungi exhibit “an almost animistic sense of iteration,” suggesting movement and corporeality beyond the traditional conceptual limits of plants and fungi.

just who constitutes the “field guides” in Tomaselli’s work. It is quite possible that the collaged humanoid serves as the guide, his path alchemical and numinous. His glowing self could open a door for the viewer into another realm, suggesting an enlightened shaman who tends a sacramental crop in preparation for rituals of the spirit.⁴⁵⁰ Tomaselli offers something other-worldly with his humanoid, made of parts of this and that—arthropods for thighs, eyeballs for knees and claws for toes.⁴⁵¹ These displaced parts run through his body in place of blood, enabling his gait and his tending of the earth. Like many shamans this figure takes on the organic emblems of the living world, animals and otherwise. The anthropologist Ruth Benedict (1887-1948) wrote on the role of shamans and their place in “patterns of culture:”

Shamanism is one of the most general human institutions. The shaman is the religious practitioner who, by whatever kind of personal experience is recognized as supernatural in his tribe, gets his power directly from the gods. He is often, like Cassandra and others of those who spoke with tongues, a person whose instability has marked him out for his profession. In North America shamans are characteristically those who have the experience of the vision.⁴⁵²

For Benedict, shamanism suggests a pervasive cultural institution whose medicine men and women, having had the experience of visions, possess a certain societal instability. Tending to the spirit world, shamans purvey botanical and fungal potions for ritual

⁴⁵⁰ See John Yau, “Beyond a Shadow of a Doubt,” in ,” in by Jonathan Lethem, et. al. *Monsters of Paradise* (Edinburgh: The Fruitmarket Gallery, 2005), 19. Yau views Tomaselli’s painting as archetypal, and asks whether or not the figure in the painting is a “shaman harvesting magic mushrooms?”

⁴⁵¹ See Fiona Bradley, “Introduction,” in by Jonathan Lethem, et. al. *Monsters of Paradise* (Edinburgh: The Fruitmarket Gallery, 2005), 8. Bradley reads the painting as exploring “rural archetypes,” something she does not expand upon, but surely places Tomaselli’s work within the art historical lineage of Millet’s pastoral paintings of peasants that includes *The Sower* (1850), *The Gleaners* (1857) and his *Angelus* (1857-59). Bradley sees Tomaselli’s focusing on pathology, between abstraction and figuration, the decorative and the narrative, and the utopian and the dystopian. She also points out that for Tomaselli, “detail” is his “technology.” See also Allison Kave, “Fred Tomaselli: *Monsters of Paradise*,” *artkrush* (15 June 2005). Kave views Tomaselli’s works unify “his own personal history with a collective narrative of humankind,” as they take “the viewer on a drug-glazed journey through the creative experience.”

⁴⁵² Ruth Benedict, *Patterns of Culture* Preface by Margaret Mead, Foreword by Mary Catherine Bateson (Boston: Houghton Mifflin Company, 1989 [1959, 1934]), 96.

healing of body and mind. Although I cannot say whether the field guide or Tomaselli get their respective “power directly from the gods,” I think it is fair to say that artists like Tomaselli do “have the experience of the vision.” At least at some level, I would argue, they are in touch with a kind of cosmological experience of the world, of its fluidity and interconnection.

In fact, the artist has long focused on the potential of art works to transform. A flyer for a 1996 exhibition of his work includes Tomaselli’s assertion that, “The urge to be transported remains fundamental to human experience, whether the vehicle is drugs, art, entertainment, sex or religion.”⁴⁵³ No doubt the artist infuses his practice and his painting with the transformative potential, making his painted subjects and his role in their creation wholly shamanic. And given that mushrooms are not typically cultivated above ground, and certainly not hoed, Tomaselli presents a humanoid in an imagined, fantastical, if not hallucinogenic garden of the night. The critic Dorothy Spears has observed that the artist displays in paintings like this his own transformation from gardener to painter—two activities that instill in him “a sense of profound wonder.”⁴⁵⁴ It is Tomaselli’s ability to transport us into the materiality of his own garden and version of natural history, with his collection of leaves, flowers and grasses, that enables him to suggest vision-making as something both extraordinary and accessible. The shamanic becomes something acted out not by a few, but in the everyday encounter with other organisms.

⁴⁵³ Flyer from the exhibition *Fred Tomaselli: The Urge to Be Transported*, organized by Center for the Arts at Yerba Buena Gardens, San Francisco, CA, and the Huntington Beach Art Gallery, Huntington Beach, CA, which traveled to Rice University Art Gallery, September 27-November 3, 1996.

⁴⁵⁴ Dorothy Spears, “Where Art Imitates Gardening (And Vice Versa),” *The New York Times* (8 Oct. 2006): AR 29.

We can more closely consider the shamanic qualities of the mushroomer through his physical formation. The humanoid's left foot and right hand suggest the morphological qualities of *Homo sapiens* with fleshy skin and groomed nails, but his right foot and left hand offer something entirely different. The figure bends his left thumb backwards, recalling the flexibility of tree-swinging primates. His right foot leads the way down his path exposing the sharp, claw-like nails that protrude from his nail bed. These features give the humanoid the quality of a lion or other large wildcat. This man relate to the fact that the medicine man, in shamanic cultures, typically takes on an animal being during rituals. Here, Tomaselli's field guide transforms into a hybrid self, bringing the viewer into his transgenic ritual trek.

An alternate reading considers the fungi themselves as field guides. In this case, the fungi themselves provide the mushroomer with a visionary light, illuminating his way through the field on the darkest of nights. The humanoid hoes his way through an alkaloidal path, guided not only by the mushrooms themselves, but by the array of *Lepidoptera* spurring him along with their collective flutter.⁴⁵⁵ Considering the mushrooms as guides would resolve the plurality of the painting's title as guides, not merely a single guide. Of course Tomaselli has also organized the humanoid, the butterflies and the mushrooms into a kind of symphonic meditation, the plants, animals and fungi guiding one another through the nocturnal dreamlike landscape with the sounds of spores producing, humanoids hoeing and butterfly wings aflutter.

Still, another interpretive possibility is prompted by this painting, one that considers Tomaselli's play with words and phrases. "Field guides" likely references

⁴⁵⁵ Yau, 19. Yau raises the possibility that the butterflies can be read as souls, "flying back to this unsuspecting host," like the ancient Greeks believed.

beings as active agents in a physical and spiritual journey, *as well as* the books that naturalists have created and lovers of nature have consulted to identify species according to a universal taxonomy. Such an ordered system prizes the external morphological properties of plants, animals and fungi. But Tomaselli's painting diverges from this kind of system more than it adheres to it. While his butterflies and mushrooms are depicted with enough detail to distinguish one species from another, Tomaselli's mushroomer exhibits less specificity. Part mammal, arthropod, and human, the figure stands as an amalgam of cut-out imagery. He is a collage, a visual rendering of what writer William S. Burroughs called the cut-up.⁴⁵⁶

On June 21, 1960, Burroughs wrote to his friend, the poet Allen Ginsberg about his new method of writing. This new method of stemmed from his friendship with British writer Brion Gysin, who developed the cut-up technique in 1959. Gysin describes making his discovery:

While cutting a mount for a drawing in room 25 [of the Beat Hotel in Paris], I sliced through a pile of newspapers with my Stanley blade and thought of what I had said to Burroughs some six months earlier about the necessity for turning painters' techniques directly into writing. I picked up the raw words and began to piece together texts.⁴⁵⁷

⁴⁵⁶ For sources on Burroughs cut-ups, which he derived from a technique developed by the British writer Brian Gysin, see: Oliver Harris, "Introduction," in Burroughs and Ginsberg, *The Yage Letters Redux*: ix-xlix; Richard Doyle, *Wetwares: Experiments in Postvital Living* (Minneapolis, MN: University of Minnesota Press, 2003); Barry Miles, *The Beat Hotel: Ginsberg, Burroughs, and Corso in Paris, 1957-1963* (New York: Grover Press, 2000); Ann Charters, Ed. *The Portable Beat Reader* (New York: Penguin Books, 1992); Larry McCaffery, *Storming the Reality Studio: A Casebook of Cyberpunk & Postmodern Science Fiction* (Durham: Duke University Press, 1992); and Robin Lydenberg, *Word Cultures: Radical Theory and Practice in William S. Burroughs' Fiction* (Urbana and Chicago: University of Illinois Press, 1987). For the connection of the cut-up to late 1970s punk music see Mark Sinker, "Joy Division" [film review] *Sight and Sound* 18: 5 (May 2008): 70-71. For an compelling scholarly "academic" treatment of the cut-up see Mike Kelley, "An Academic Cut-Up, in Easily Digestible Paragraph-Size Chunks; Or, the New King of Pop: Dr. Konstantin Raudive," 11 *Grey Room* (Spring 2003): 22-43. For examples of Burroughs's cut-up technique and his own explanations of the strategy see William S. Burroughs, *Naked Lunch: The Restored Text*, edited by James Grauerholz and Barry Miles (New York: Grove Press, 2004 [1959]) and William S. Burroughs, *My Education: A Book of Dreams* (New York: Penguin, 1995).

⁴⁵⁷ Miles, 194.

Gysin's technique, which Burroughs took up with enthusiasm, involved a remixing of words and an intentional disordering of syntax. This process can easily be compared to Tomaselli's own procedure of finding images in naturalist guidebooks and popular catalogues and magazines, excising them with an exacto knife or blade, and reordering them. Burroughs's use of the technique certainly suggests the cutting up of his own text, rather than text already found, making the parallel to Tomaselli's project of ordering found images less clear. But I think we can also argue that words are by their very nature found, already part of the taxonomical system of language that we draw on every day to speak and write. Burroughs's texts, then, like the texts of all writers, are in this sense always found objects, making his project, all the more similar to the artists, since both writer and artist execute a reordering of words and images.

Burroughs's cut-up technique, in addition to putting into practice this avant-garde practice of Gysin, also drew from his own frequent forays into altered states. The instructions for cutting-up that Burroughs send to Ginsberg appeared in the book *Yage Letters* in November 1963. *Yage*, otherwise known as ayahuasca, is a South American psychoactive used by shamans and of which Burroughs partook. The substance is in its own way a cut-up—a combination of the vine *Banisteriopsis caapi* and other admixtures such as *Psychotria viridis* (or other DMT-containing plants). The plant, and the method of writing, provided persuasive rhetorical devices that kept Burroughs on the cut-up path, keeping his words and his consciousness open to altered syntaxes and states.

Ayahuasca and *Yage Letters* have gained new attention with increased tourism to South America, recent Supreme Court cases, and the republication of *Yage Letters* as

Yage Letters Redux, edited by Oliver Harris.⁴⁵⁸ Giving instructions to Ginsberg in a letter that appears in the book, Burroughs wrote:

Take the enclosed copy of this letter. Cut along the lines. Rearrange putting section one by section three and section two by section four. Now read aloud and you will hear My Voice. Whose voice? Listen. Cut and rearrange in any combination. Read aloud. I can not choose but hear. Don't think about it. Don't theorize. Try it.⁴⁵⁹

Burroughs directs us to "LOOK." Look at Universe, look at "what sacred you all into your bodies." Burroughs's cut-up technique seeks to jar us from corporeality, to jar us from the fixity of syntax, to instead re-write space, silence, and the body through a collaged rewriting.⁴⁶⁰

⁴⁵⁸ In February 2006 the Supreme Court faced a case involving freedom of religious practice in *Gonzalez, Et Al vs. Centro Espirita Beneficente Uniao Do Vegetal, Et Al*. The Court unanimously determined that a New Mexico church of the Uniao do Vegetal (UDV) may "receive communion by drinking *hoasca* [ayahuasca or *yage*], a tea brewed from plants unique to the Amazon Rainforest that contains DMT, a hallucinogen regulated under schedule I of the Controlled Substances Act." The Brazilian Amazon remains home to the UDV, but the religion, a hybrid of Christianity and local Indian practice, has established a growing following within the United States. The transnational religious and spiritual meeting of a Brazilian church and New Mexican residents challenges current Drug Enforcement Administration scheduling, but also marks a resurgence in the compound's uses by Americans, many of whom travel on spiritual tours to the Amazon to partake of the offerings of the vine-leaf admixture.

⁴⁵⁹ Burroughs and Ginsburg, *The Yage Letters Redux*, 70.

⁴⁶⁰ Writers and philosophers have also approached the limits of knowledge via our liminal bodies. In his text *The Doors of Perception* (1954) writer Aldous Huxley (1894-1963) recounted and asserted his support for British philosopher C.D. Broad's (1887-1971) notions of "Mind at Large." Broad's theory stipulated that humans process very little of the universe's available knowledge, sifting sensory observations through the brain and the rest of the nervous system. It was Huxley's belief that certain compounds opened up the body's safety valve (the brain), allowing us a glimpse into otherwise hidden knowledges available in Mind at Large. According to Broad, this filtering of knowledge provided the right amount of material necessary for survival; without a filter, we would be overwhelmed and with it, as Huxley elaborates, we might achieve expanded knowledge or consciousness "either spontaneously, or through deliberate 'spiritual exercises,' or through hypnosis, or by means of drugs."⁴⁶⁰ Some people, however, were for Huxley already more attuned to altered states of consciousness and thus different forms of knowledge. "What the rest of us see only under the influence of mescaline, the artist is congenitally equipped to see all the time. His perception is not limited to what is biologically or socially useful. A little of the knowledge belonging to Mind at Large oozes past the reducing valve of brain and ego, into his consciousness," he stated.⁴⁶⁰ Writing of his experience into another world of knowing through altered-states, Huxley noted artists' perceptive knowledge, a cut of consciousness that illuminates the elusive nature of knowledge in our everyday experience. Knowledge seems nothing but a mere category of consciousness, a cherished state of awareness in which we believe we understand the nature of things in our observable world. See Aldous Huxley, *The Doors of Perception* [1954] and *Heaven and Hell* [1956] (New York: HarperCollins, 2004). Quotations are taken from pp. 24, 33.

Like Burroughs, Tomaselli encourages a remixing of voice and image through his cutting out of images and subsequent cutting up of the self. His work demands an unmaking and remaking of the self to arrive at the space of his paintings' cut-up-ness, and their subsequent rereading as fissured wholes. Though his technique of cutting out and reassembling parts privileges certain species of flora and fauna, it also disperses naturalist forms, unraveling them from any clear hierarchical order. The parts give way to a new whole in which no one species gains preeminence through Tomaselli's oeuvre. His cut-up paintings indicate a symbiotically-generated universe of life markedly at odds with the strict system of species classification adopted by the likes of such naturalists as Carolus Linnaeus.

As in *Field Guides* the artist's transparent cut-up shaman reappears in numerous paintings. *Fungi and Flowers* (2002), for instance, portrays a humanoid in full-length, standing to the right of center in a field of grass, angiosperms and fungi (**Fig. 3.2**). His left hand dangles at his side, interlaced in the stems of mushrooms protruding from his left thigh. His index finger points downward, directing one's gaze to the foot below, whose toes, couple with an awkward foreshortening, recalls the cloven foot of Pan. He turns his head to the right, looking at the palm of his hand, which radiates red and yellow bursts of light and energy. A central exterior vessel emerges from his eye, curling into vines of light and embracing a single flower balanced in his outstretched hand. He sticks his tongue out, and projects saliva from his mouth, a suggestion of his eventual eating of the specimens that surround him. Shamans, during ritual ceremonies, send forth chants and songs from the sacred self, which can comprise a second reading of the speaking, spewing tongue.

Like the shaman-figure in *Field Guides*, Tomaselli's figure in *Fungi and Flowers* also finds himself composed of cut-outs. The artist cuts out images from other texts to form the beings around his humanoid— butterflies, flowers, leaves and mushrooms. The main figure embodies in these paintings, like the paintings themselves, the essence of Burroughs's cut-up technique. The cut-up here stands as a more specific example of a collage, a post war technique of remixing writing to decorporealize the self, to disengage it from a linear narrative and develop an ego-less self more entwined with "skies," "space," and "silence." In paintings of his botanical-zoological-mycological shamanic humanoid, the artist extinguishes the structure of our skeletons and skins, replacing them instead with fragments of a whole, but not a whole that reads as the text *Homo sapiens*. The critic Daniel Pinchbeck reads Tomaselli's paintings as displaying a range of conceptions about corporeality, including transcendence, something, he argues, the artist hardly trivializes:

[His paintings] are like fables synthesizing contemporary concerns with the body and the deconstructed self with Gnostic concepts or mythic archetypes...the figures in works such as *Field Guides* stand upon the earth like flayed saints, both terrified of and yearning for contact with that ineffable an infinite "Otherness" that our deluded culture desperately seeks to deny.⁴⁶¹

The new being suggests less a cohesive whole, of one becoming another, than a fission, where the points of contact of different subjects begin to split the self, to destabilize identity.

Yage Redux, too, reintroduces Burroughs's cut-up technique into syntactical order. "Redux" itself means to return to a happy state, or the return of an organ to a healthy state. Redux can also indicate a point of friction resulting from a reconnection and re-contact. Tomaselli's humanoid seems to emit the currents and sparks of static

⁴⁶¹ Daniel Pinchbeck, "Tomaselli's Postmodern Gnosticism," 67 *Parkett* (2003): 110-19.

electricity, bursting at the seams of his collaged skin through the visual and visceral force of the cut-up technique. As curator Eugenie Tsai observes, “Tomaselli’s work transports the viewer to new heights of self-awareness, reaffirming the power of vision to change our lives.”⁴⁶² The artist’s shamanic humanoids and his mushrooms extract us from the frame of our corporeality, screaming as Burroughs did to Ginsburg: “COME OUT FOREVER. COME OUT OF THE TIME WORD THE FOREVER. COME OUT OF THE BODY WORD THEE FOREVER. COME OUT OF THE SHIT WORD THE FOREVER. ALL OUT OF TIME AND INTO SPACE. FOREVER.”⁴⁶³

III. Phylogenizing Fungi

Imagine standing in an art gallery where mushrooms spring fully formed from wooden floorboards as if they had forgotten their own distance from green pasture or meadow. The specimens at times cluster in groups, and at others isolate themselves as individual fungal units. Their Santa Claus caps denote an alkaloidal potential, instead of the typical white buttons found in most grocery stores. These hallucinogenic mushrooms, also known as fly agaric, could be encountered in nature by a skilled amateur mushroomer or expert mycologist, but these particular mushroom massings are inedible, since they are the sculptural installations by Roxy Paine.⁴⁶⁴ Paine has made numerous

⁴⁶² Eugenie Tsai, “Beauty, Desire, Seduction: The Art of Fred Tomaselli,” in *Fred Tomaselli: Gravity’s Rainbow* (New York: Whitney Museum of American Art at Philip Morris, 2000), 9.

⁴⁶³ Burroughs, *The Yage Letters Redux*, 71.

⁴⁶⁴ Erik Davis, “Ecstasy: In and About Altered States,” *Artforum* (Jan. 2006): 215-16. Davis calls Paine’s *Amanitas* “the Santa Claus caps of fly agaric.” Popular lore of these mushrooms draws analogies between the red mushrooms with white speckles and the red costume Santa Claus, highlighted with white fur trim. Even the ethnomycologist R. Gordon Wasson, who will be discussed later in this chapter, wrote to Swiss scientist and LSD-25 discoverer Albert Hoffman about this mythology: ““The Ojibway discovery was a major breakthrough. The mycologists and anthropologists will not be happy. I was much impressed by Felipe Araujo’s letter. I liked his idea that the costume of Santa Claus was in effect *A. muscaria*...as Araujo says, the ergot possibility for Soma naturally occurred to me. There are difficulties in the

illusionistic sculptures of hallucinogenic and poisonous fungi, from the species *Psilocybe cubensis* and *Amanita muscaria* to the deadly *Amanita virosa*, a fact made obvious through his pieces bearing these titles. This particular species of the genus *Amanita* has gained less attention in the scholarship on Paine.⁴⁶⁵ As with Tomaselli's works, Paine's *Amanita Field* (2000) (**Fig. 3.3**) provokes a discussion of issues that extend well beyond the white gallery walls of galleries and museums. In a 2002 interview with artist Allan McCollum, Paine acknowledged the range of associations present in his work: "I imagine each piece as a field. A field as in a place where the mind can play."⁴⁶⁶ In the context of Paine's mushrooms we can articulate three broad areas where the artist's *Amanita Field* operates: representation, reproduction/replication, and transformation. These large areas of discourse spur numerous subtexts, which contribute not only to our understanding of Paine's field, but the ways his oeuvre operates as an unbounded field for understanding the limits of structures and systems (here included are bodies and knowledge). And yet these boundaries operate as illusions, where surfaces are less fixed than osmotic, opening the field to bodies, senses and knowledge unbounded by images and texts.

With pieces like Paine's *Amanita Field*, one is never sure what is real or unreal.

Individuals viewing the artist's mushrooms might assume that the organisms are in fact

elimination of *A. muscaria*. The color suggestions in the RgVeda are too numerous perhaps to be dismissed lightly." Here Wasson refers to his argument that *Amanita muscaria* is in fact the famous psychoactive from the Rigveda, Soma. See R. Gordon Wasson, letter to Albert Hoffman (4 Nov. 1978), The Tina and R. Gordon Wasson Archives Ethnomycological Collection Archives, Harvard University Herbaria (hereafter TRGW).

⁴⁶⁵ A number of sources discuss Paine's mushroom works, but many do so generally enough that I have chosen to specifically cite other sources in this section. This criticism, I should state, is not necessarily ineffective, but may merely attend to group shows or other concerns. A listing of sources that briefly or generally discuss Paine's fungi include: Barry Schwabsky, "Surrounded by Sculpture," *Art in America* (Jan. 1999): 56-58; Eleanor Heartney, "Ecstasy Now," *Art in America* (March 2006): 46-51; Stephanie Cash, "Roxy Paine at Ronald Feldman," *Art in America* (July 1999): 89-90.

⁴⁶⁶ Roxy Paine and Allan McCollum, "Conversation," in Michael Crewdson, et. al. *Roxy Paine: Bluff*, with contributions by Tom Eccles and Susan Freedman, edited by Anne Wehr (New York: Public Art Fund, 2002), 11.

actual specimens. The canonical red color of the fly agaric fades to a burnt sienna and then a pale taupe from the center of the cap to its edges. Little white dots accent the surface of the cap, in keeping with the morphological characteristics of the species. Paine, however, constructs his mushrooms, like his poppies, out of synthetic materials, including polymer, lacquer, glass, oil, steel, and wood. Once a viewer realizes that Paine's mushrooms consist not of RNA but resin, she begins to wonder about the end game of such faithful renderings in polymer and paint. As the artist has explained his work:

It's part of a process where I try to learn each plant species I'm working with so well that I can improvise within their rules. Once you learn a language, you can create an infinite number of new sentences using the rules of that language...breaking down these natural things to their components and then being able to assemble a new mushroom, by essentially using the rules of that species rather than re-creating or casting one. There are a lot of complexities involved...each species has such a distinct edge and form. There's no machine I've found that can create that kind of variety, especially in a constantly changing way. Humans are still the best machines for doing, or replicating, something like that.⁴⁶⁷

His mushroom sculptures recall *trompe l'oeil* paintings, but Paine is quick to distinguish between the particularized goal of this technique and his own desire to produce a more generalized, systematic reproduction. "One urge I always have is to present facts and events without embellishment and frills. At times, it feels mannered to stylize. I'm creating the facts of a species. I'm not re-creating one mushroom that existed," he explains.⁴⁶⁸ This attention to the characteristics of a species, this assertion of scientific schemes of systemization in art, speaks to the often intensive research that goes into the artist's pieces and the extensive reading he conducts in such fields as botany and

⁴⁶⁷ João Ribas, "The AI Interview: Roxy Paine," *ArtInfo* (Jan. 2006).

⁴⁶⁸ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 25

mycology.⁴⁶⁹ As the critic Ann Landi has noted, “He casually drops facts that may be unknown to the average plant lover.”⁴⁷⁰ And once the mushrooms are painted, Landi observes, “they are as true to nature as any skilled botanist’s renderings of the fungus world.”⁴⁷¹ But Landi misreads this operation as something “true to nature,” as somehow mimetic, rather than working toward a formula of representation more typically sought by scientists and naturalists seeking to identify and represent a type.

Paine’s attempt to distinguish between the operation of painting a specific mushroom and painting the facts of a species, clarifies the position of the contemporary scientist who seeks a single representative image to quantify her data. This approach, also speaks to the effect desired by an eighteenth- or nineteenth-century naturalist. So often the renditions of birds and mammals that naturalists sought to bring home as evidence of a new species occupied a median place, a generally-accepted example of a species among all the possible variations he in fact witnessed. Where Paine clearly diverges from this project is in the vast number of mushrooms he produced. While Audubon, for instance, provided only one example of each bird in his *Birds of America*, Paine instead offers us hundreds and sometimes thousands of possible variations of a single species. If he represents as he says not a single mushroom, but “the facts of a species,” then we have to consider the ways these facts are the artist’s facts (as was so often the case with the naturalist), particularly in this case, where he is not working from life or from casts as he did with the poppies.⁴⁷² Like Dürer’s rhinoceros as discussed in E.H. Gombrich’s *Art and Illusion*, Paine’s mushrooms flourish among the artist’s personal expression of the

⁴⁶⁹ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 21, 69; Ann Landi, “The Big Dipper,” *ARTnews* (Jan. 2001), 139.

⁴⁷⁰ Landi, 139.

⁴⁷¹ Landi, 137.

⁴⁷² Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 26.

species *Amanita muscaria*. For some this representation proves as much fiction as fact, poles of truth continually contradicted in Paine's pieces. As Mary-Kay Lombino, the curator of a group show, which included Paine's work, has put it:

Meditations on authenticity and fakery, they lead us to call into question our understanding of the natural world and alienate us from the familiar. We being to contemplate the ways in which our ever-evolving technological society has made the distinction between the real and the artificial harder and harder to discern.⁴⁷³

I tend to disagree with Lombino's further conclusion that these distinctions are "yet ever more vital to preserve." Her observation that the collapse of "real" and "artificial" states "raises the troublesome question of simulated biology and the challenge it poses to our own relative importance," suggests a reassertion of the Great Chain of Being, a desire to separate out, if not nature from culture, at the very least man from machine-like-life.

Lombino's own observations seem to me to reflect the anxieties of nature-culture dialectics much more than the work she seeks to describe. In a world where "reality" is often rendered ambiguous, ironically enough, by heightened reality and pseudo-"realistic" representation—"reality TV," "virtual reality," "Second Life," and genetic clones—Paine leaves his categorical directives intentionally unstable. Paine challenges our attempts to control experience, perception and consciousness, and our bodies, heightening the "real" in the face of its slipping away.

Many artist-naturalists have effectively unraveled the hierarchical structure of the *scala naturae* or the Great Chain of Being, something I hope to contribute to in this study by including fungi, living beings long viewed to sit on the bottom rungs of this organismal ladder. Artists such as Fred Tomaselli, Roxy Paine and Cy Twombly have

⁴⁷³ Mary-Kay Lombino, "Artists in the Garden: Where Nature and Culture Collide," in Mary-Kay Lombino, *UnNaturally*, with a short story by Philip K. Dick (New York: Independent Curators International, 2003): 48-49.

taken up fungi at admittedly different ends of the artistic spectrum, from the naturalist bricolage of Tomaselli's visionary paintings to the craftsmanship of Paine's fungal replicant resin sculptures, to the erudite *écriture* and collage of Twombly's mid-1970's print portfolio. But their respective projects share a common concern in their critique of histories of knowing, and of knowledge as it has been ordered and constructed within natural history. The naturalist paradigm unfolds in their works as a historical touchstone of many of the ordering principles that we have brought into the present day, from the scheduling system of the Drug Enforcement Administration to the divergent rights of animal species to the most basic systems of ordering on which our capitalist economy relies. Our economic system, which relies on the trading of goods for greenbacks, has long participated in the same kinds of exchange of material artifacts and specimens, both living and manmade.

The marketing and exchange of these goods depends on an organizational structure that mirrors the morphological tables of taxonomists, retailers displaying their own goods on aisles and shelves as opposed to scientific tables of columns and rows. This phenomenon is something artists have acknowledged in their works outside of this specific project, and can be seen even in more familiar, iconic works like Andy Warhol's silkscreens of Campbell's Soup cans. Warhol's pieces sharply illuminate the standardization of products through streamlined programs of labeling and advertising, but also continue to rely on text to mark the distinctions between one soup specimen and another, between say, chicken noodle and beef vegetable. Like the slipping registers of Warhol's print method, these artists' works suggest a fissure in the very nature of being,

in our operations as corporeal beings and the chasms that persist between what we see and what we think we know, between words and images.

Paine is an artist who envisions big ideas for his small mushrooms, ideas that interrogate aesthetic verisimilitude in a manner that “people perceive information and construct knowledge.”⁴⁷⁴ He has admitted the ways that his mushroom fields “embed” “contradictory information” like the real and the unreal, truth and fiction, ostensibly in an effort to gauge the stability of words and images.⁴⁷⁵ The titles of the pieces assert an order to his sculptures, or play with the viewer’s perception of their veracity. In his fungi fields, the species as represented and the species as named double Paine’s effort to contradict what we think we see and know. “If I establish one idea, I want to question it within the same place,” he says.⁴⁷⁶ There is an intentionality to the commingling of fact and fiction in *Amanita Field*, and yet there is something more subversive going on here even in the artistic process. While some viewers realize they have been fooled by the artist’s fungi upon realizing they are merely plastic, many also consider the ways Paine is himself not even completely capable of delineating the real from the unreal. With his process entering into the realm of the obsessive-compulsive creator, Paine may himself not fully appreciate the ways his role in the realm of aesthetic creation converges upon the realm of the biologically reproduced.⁴⁷⁷ In his sculptural installation, the artist’s polymer *Amanitas* almost too effectively render themselves as new species.⁴⁷⁸

⁴⁷⁴ Joseph D. Ketner, Lynn M. Herbert and Gregory Volk, *Roxy Paine: Second Nature* (Houston: Contemporary Arts Museum, 2002), 8.

⁴⁷⁵ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 13; Joseph D. Ketner, “Introduction” in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 11.

⁴⁷⁶ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 13.

⁴⁷⁷ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 20.

⁴⁷⁸ Tim Griffin, “At Breakneck Speed,” in Crewdson, et. al. *Roxy Paine: Bluff*, 69.

The curator Joseph D. Ketner notes that in Paine's rhetorical riffs on mushrooms and representation, "The artist is not motivated by a nihilistic desire to destroy our foundation of knowledge. Instead, he strives to make us aware of some of the changes that have come with the digital age."⁴⁷⁹ In addition to his sculptural installations of mushrooms, poppies and trees, Paine also makes machines that draw, paint, sculpt and even erode soil. While I do not want to stray from my mushroom foray here, I think it is worth pointing out that the continuum between man and the machine is always present for Paine.⁴⁸⁰ Allusions to virtual reality, clones and Second Life are fitting for the work of an artist who makes distinctions between reproduction and replication (manmade copies or biological clones, either at the micro-cellular or organismal level), often calling the fungi that he creates for his gallery fields "replicants," the polymer version of the actual mushrooms he once installed in his pieces. Paine had to give up his real mushrooms once they began to emit strong odors in the process of rotting in the galleries.⁴⁸¹ The decomposing mushrooms would have heightened the sensory effect of decay within the gallery space, and suggested the way blue chip art galleries and premier art museums are to many themselves bastions of the overripe, if not rotting.

These themes of creation, reproduction and decay recur in his *Psilocybe Cubensis Field* (1997), a field similar to his *Amanita Field* in concept, provides a touchstone for paradigmatic discussions of the reproduced and the replicated (**Fig. 3.4**).⁴⁸² In this second field the viewer finds herself looking at 2200 light brown mind-altering mushrooms

⁴⁷⁹ Ketner in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 11.

⁴⁸⁰ Gregory Volk "Roxy Paine: Dreams and Mathematics," in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 30. In explaining Paine's art machines and his nature art, he says: "Where both bodies of work really meet is a hybrid areas in which technology and nature intersect, whether it's Paine's use of computer programs for his machines, or his use of chemicals and metals for his plants."

⁴⁸¹ Lynn M. Herbert, "Interview with Roxy Paine," in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 16; Griffin in Crewdson, et. al. *Roxy Paine: Bluff*, 69.

⁴⁸² Not all of Paine's mushrooms are clearly marked as psychotropic.

meandering across a museum's wood floor.⁴⁸³ This patch of visionary mushrooms appears almost without warning, as do those in nature particularly after a storm.⁴⁸⁴ Like most of Paine's fungi fields, this gathering of mushrooms proliferates before one's eyes, suggesting limitless fecundity and the exponential sprouting of their fruitful bodies. But the unexpected appearance of the *Psilocybe Cubensis Field* also alludes to the impermanent quality of nature. These psychotropic fungi are suffused with an aura of secrecy, with crops arising in nature from year to year in different locations, ensuring the species' survival by eluding animal consumption.

The most striking thing about Paine's piece is the sheer mass of mushrooms at hand—2200 and all hand made. The craftsmanship, the obsessive drive to create such an overwhelmingly large crop, the extrapolation of the first mushroom out to the 2200th suggests a minimalist megalomania and reminds one of McCollum's forays into plaster cast frames and dinosaur bones. And yet there is also something obviously attentive and deliberate about Paine's creation of so many little mushrooms, each one with its own characteristic size, sway, and swaths of color. "I think mushrooms are incredibly beautiful with all their variation of form," says Paine.⁴⁸⁵ Here the artist is as much concerned with the reiteration of beauty in its many forms as he is with the subjects themselves. Despite their handmade quality and Paine's attention to craft and beauty,

⁴⁸³ Erik Davis, "'Ecstasy: In and About Altered States,'" *Artforum* (Jan. 2006): 215; Margaret Mittelbach and Michael Crewdson, "Sylvan Artists," in Crewdson, et. al. *Roxy Paine: Bluff*, 66; Polly Staple, "The Greenhouse Effect: Serpentine Gallery London," *Art Monthly* No. 236 (May 2000): 38. Staple calls the mushrooms in Paine's *Psilocybe Cubensis Field* "marvelous to behold."

⁴⁸⁴ Lisa Mark, "Roxy Paine," in Paul Schimmel and Gloria Sutton, *Ecstasy: In and About Altered States* (Los Angeles and Cambridge, MA: The Museum of Contemporary Art and The MIT Press, 2005): 110. Mark observes that Paine's fungi field "are spread out in loose and irregular clusters to mimic their natural growth pattern."

⁴⁸⁵ Herbert in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 16.

their sheer quantity brings the mushrooms into the realm of the mechanically reproduced, the discourses of the multiple and Walter Benjamin, Baudrillard and the simulacra.

The art critic Tim Griffin offers an alternative reading to the artist's multiples. "Paine's work is less compelling as a sign of *reproduction* than as one of *replication*—a situation where distinctions between organic and mechanical are hardly applicable," he states.⁴⁸⁶ Indeed the paradigms of Benjamin are no longer relevant in an artistic and social milieu where more often than not the hand and the gesture find themselves to be coterminous with the machine and a burgeoning system of informatics. In this sense Paine's work addresses some of the earliest anxieties of the Industrial Revolution, when people first saw machines take over the work of the hand in a widespread and systematic fashion. And yet this post-Benjaminian milieu offers a space in which the continuity of man and machine are fully realized, and not with anxiety, but with possibilities for the same kinds of variation that we see in biological systems, in the origins of species, as well as the origins of art. The artist and critic David Burrows brings the pieces of Paine's replicants together, noting the way that they occupy the place of neither the reproduced nor the simulacra., "Instead of pondering the lost referent, the viewer is drawn by the detail of the displays, as if seeing nature for the first time, creating narratives about the origin of Paine's specimens."⁴⁸⁷ Leaving reproductions and simulacra in the dust, Paine marks out the post-original, post-authentic being. At the cutting edge of this representational mode, we are still trying to figure out, as Lombino seems to have noticed, what that means and looks like.

⁴⁸⁶ Griffin in Crewdson, et. al. *Roxy Paine: Bluff*, 76.

⁴⁸⁷ David Burrows, "Dunkin' Donuts," *Art Monthly* (March 1999): 7.

With his *Amanita Field*, there is a sense that Paine himself becomes himself a machine-man, as he doles out polymers with peptides. For him the repetition involved in creating his fungi crop almost provides a substitute for cell division that takes place in gestation:

I think repetition gives meaning to life. I think our minds have evolved to respond to repeated motifs. Repeated endlessly, some actions are much more interesting than they were when done only once. One mark on a page is not as interesting as a thousand marks or a million marks. One isolated branching incident is not that interesting, but repeating endlessly, it reflects something essential about growth in our existence.⁴⁸⁸

Paine's allusions to trees that branch suggest not only complex Cor-Ten steel trees he himself constructs, but also the evolutionary tree of life. The visual enunciation of his mushrooms, the branching tree, and biological replication move the artist's work into the realm of the history of life and its future morphologies. Here repetition recalls not so much the maneuvers of Warhol's Brillo Boxes or his silkscreen multiples, as it does the cellular process of meiosis and mitosis that result in new organisms.

Nature becomes so proximate to us in the artist's mushroom fields largely because of the investment Paine has made in the process of researching his subject species, as well as the meticulousness with which he executes his simulations. With this in mind, it is not a surprise to learn that all "real," "living" mushrooms, even when growing in a field outside rather than on the floorboards of a museum are, in fact, closely related. "All fungi are essentially replicants after all, since a given patch of individual mushrooms will generally share the same DNA," notes Erik Davis.⁴⁸⁹ Paine's artistic replication, then, reiterates a process of mycological replication. He presents us with the variation we would encounter in a meadow, and yet creates enough visual commonalities with each

⁴⁸⁸ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 23.

⁴⁸⁹ Davis, 216-17.

cap that we find ourselves pouring over the distinctions between copies, reproductions, representations, simulacra, and replicants. With Paine's mushrooms, the creative process of art becomes concomitant with the biological processes of fungal replication. "I think he's dealing with a much bigger question—about the nature of creation, and about what's natural and unnatural," observes Landi.⁴⁹⁰ In *Psilocybe Cubensis Field* the artist takes on his own role as an organic generator, giving life to polymer, lacquer, wood, glass, oil, and steel, and providing illusionistic fungi with taxonomical specificity. Paine becomes the maker and the mushroomer, the creator and the naturalist who attempts to control and come to terms with the very beings he has created.

But there is yet another operation at work in amassing 2200 painted plastic *Psilocybe* caps. What they really simulate, according to Michael Crewdson and Margaret Mittelbach, is a "psychoactive vision."⁴⁹¹ Paine's mushrooms can be read with a look-but-don't-touch (or eat) property, the psychoactive potentiality of the mushrooms encased in his own resin seal. "The goal is to shift perception without chemical means," the artist states.⁴⁹² Having ingested many of the alkaloids that he now suggests in his magic mushroom installations, Paine has traded his trips and other drugs experiences for an engagement with ontologies through art. Yet Paine, like Tomaselli, remains very much aware of the effects of psychoactively shifting one's perceptions. As Gregory Volk has said, "Paine grew up in McLean, Virginia—that McLean, Virginia, home to *that* famously secretive institution."⁴⁹³ Volk is referring to the Central Intelligence Agency

⁴⁹⁰ Landi, 139.

⁴⁹¹ Mittelbach and Crewdson in Crewdson, et. al. *Roxy Paine: Bluff*, 66.

⁴⁹² Landi, 137; Ketner in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 10

⁴⁹³ Gregory Volk, "Roxy Paine: Dreams and Mathematics," in Joseph D. Ketner, Lynn M. Herbert and Gregory Volk, *Roxy Paine: Second Nature*, with contributions by Joseph D. Ketner and edited by Lynn M. Herbert (Houston: Contemporary Arts Museum, 2002), 30.

(CIA), infamous for its covert activities, and notably those involving illicit substances; the CIA spent a notable amount of time in the 1950s and 1960s looking at mind-altering compounds as potential instruments of mind control.⁴⁹⁴

While I have alluded to altered states periodically throughout this study, it is worth detailing the CIA's involvement with entheogens, the establishment of the Drug Enforcement Administration (DEA), and its subsequent system of scheduling psychoactive substances. This provides a context for the way the wider history of alkaloidal adjuncts in the Americas significantly raises the stakes for Paine's fungi fields. Paine, like Tomaselli, calls on viewers to reevaluate that space of the scheduled, of the classified, of the contained, particularly how these categories relate to mind-altering drugs. Their respective uses and classifications—from ancient indigenous peoples to 1960s counterculture to academic institutions and governmental organizations—have as much to do with historical time and place as with any inherent alkaloidal property or toxicity. As much as they play in the realm of representation, and shift critical discourse sensibilities from the reproduction and the simulacra to the replicant, Paine's mushrooms also attempt to transform. This is a two-part operation; one, the virtual hallucinogenic effects of the plastic mushrooms and second, the way that the artist initiates his own hierarchical undoing, trading animals and plants for lowly mushrooms and all their associations—death, decay and entropy. I see these two arenas as intimately entwined. In the attempt to control mind altering adjuncts, the DEA relies on the classificatory

⁴⁹⁴ The primary source for information on CIA activities with psychoactive substances is John Marks, *The Search for the 'Manchurian Candidate': The CIA and Mind Control* (New York: Times Books, 1979). Marks acquired 16,000 CIA documents under the Freedom of Information Act related to MKULTRA. Other good sources are Victor Marchetti and John D. Marks, *The CIA and the Cult of Intelligence* (New York: Alfred A. Knopf, 1974); and Robert L. Borosage, *The CIA File* (New York: Grossman Publishers, 1976).

structures of natural history. Paine himself runs riot over many of these systems, undermining their restrictiveness and underscoring the irrationality with which any such mechanisms of control and order come up short.

Among the species Paine articulates most frequently in his works are the ones we see in the two sculpture fields—*Amanita muscaria* and *Psilocybe cubensis*. *Amanitas* have a long history and mythology, which includes the Old Norse Berserks whose consumption of these mushrooms, as legend has it, explained their mad, irrational behavior.⁴⁹⁵ They were made famous as the forest cushion for a hookah-smoking caterpillar in Lewis Carroll's *Alice in Wonderland* (1865). Like the poppy fields in *Oz*, Paine's limitless fungi production overwhelms the eyes with sensations of repeating patterns, something derived equally in mechanical reproduction, cellular replication, and the hallucinogenic trip. While the veristically-rendered mushrooms leave the viewer awestruck at Paine's painstaking species specificity, the vision they provide really relies upon the sheer abundance of their outcroppings, their presentation as a group rather than as individuals, tripping up the readers' eyes and feet in a fungal foray through an otherwise sterile exhibition space. The multiplicity of Paine's fungal outcroppings suggests the rambling repetitions of muscarial and musical visions. This variety became, in fact, associated with the ambrosia of the ancient Hindu *Rigveda* hymns, which

⁴⁹⁵ Paul Dimeo, Ed. *Drugs, Alcohol and Sport: A Critical History* (New York: Routledge, 2006), 89. As Dimeo states, "Many of the early stimulants were of plant origin. The legendary Berserkers of Norse mythology used bufotein to 'increase their fighting strength twelve fold.' This drug came from fly-agaric (*Amanita muscaria*), a mushroom containing muscarine." This quotation is, in turn, taken from L. Prokop, "The Struggle Against Doping and its History," *Journal of Sports Medicine and Physical Fitness* 10 No. 1 (1970): 45-48; See also Michael P. Speidel, "Berserks: A History of Indo-European 'Mad Warriors,'" *Journal of World History* 13 No. 2 (2002): 253-290; Howard D. Fabing, "On Going Berserk: A Neurochemical Inquiry" 83 *Scientific Monthly* (Nov. 1956): 232-37; and Richard Goldman [undergraduate student, Harvard University], letter to R. Gordon Wasson ([likely after April 21] 1957) TRGW.

described the transformative divinatory intoxicant *Soma*.⁴⁹⁶ *Soma* has long been the unidentified species of plant or fungi that the Sanskrit text describes as productive of spiritual visions.

Many scholars now believe *Soma* to be correctly identified as *Amanita muscaria*, in large part a result of the research of ethnomycologist R. Gordon Wasson,⁴⁹⁷ an avid mushroomer, banker and intellectual who maintained academic leanings in botany despite his lack of formal university credentials. By 1974, Wasson hardly qualified as an “amateur,” despite his lack of degrees in the field. He had served for much of the past decade as an honorary research fellow at the Botanical Museum at Harvard. As a vice-president of J.P. Morgan & Company in the early 1950s, he was hardly poised to become the first known American to have taken hallucinogenic mushrooms recreationally. Wasson and his wife Valentina Pavlovna, a pediatrician from Russia, a country known for its mycophilia, had been interested in fungi since they took a walk through the woods during their honeymoon in 1921.⁴⁹⁸ The Wassons’ initial interest in mushrooming expanded to include, by the 1950s, the legendary sacred mushrooms of Mesoamerica. These include Paine’s *Psilocybe cubensis* species, arguably the most famous among the visionary fungi. They have been eaten for centuries by the Mesoamericans, whose curenderas, or healers, have long been apt at locating them for harvest during their brief

⁴⁹⁶ R. Gordon Wasson, letter to Albert Hofmann (9 June 1965), TRGW. This is the first instance in Wasson’s letters in which he suspects he is on the verge of identifying *Amanita muscaria* as *soma*.

⁴⁹⁷ See Terrence McKenna, *Food of the Gods: The Search for the Original Tree of Knowledge, a Radical History of Plants, Drugs and Human Evolution* (New York: Bantam, 1993): 97-120, 127, 136.

⁴⁹⁸ Valentina picked an outcropping of mushrooms and cooked them for dinner. Thinking they might be poisonous, Wasson refused the cuisine in horror. Valentina, who consumed the mushrooms, of course, lived, and it sparked between them a discussion of their different cultural perspectives on mushroom hunting. In Russia, mushrooms have long held a vivid place in the cultural imagination. In America, however, mushrooms had been a less popular culinary choice historically.

period of potency. The Wassons published their ethnomycological expeditions to Oaxaca and their experiences with altered states in *Life* magazine on June 10, 1957.

The Wassons made their first trip to Mexico in 1953, observing the famous shamanistic rituals that included psychoactive fungi fare. Not until his third exposition to the Sierra Mazateca of Oaxaca, however, did he finally try some of the mushrooms himself, something that would gain the attention of the CIA and its ARTICHOKE project, which sought to use chemicals, drugs and torture on human beings in order to break their will and make them submissive.⁴⁹⁹ Seeking a CIA truth serum, director Morse Allen sent CIA scientist James Moore to Mexico to gather samples of the piule plant and other potentially mind-altering botanicals.⁵⁰⁰ Moore, then a 29-year-old scientist at Parke, Davis & Company in Detroit, Michigan, became the first inside CIA circles to try magic mushrooms. In 1955 he joined the faculty at the University of Delaware in Newark as an assistant professor, an ideal cover for his role as the CIA's primary drug supplier and researcher of brain-change adjuncts.⁵⁰¹

⁴⁹⁹ On June 29, 1955 he took the mushrooms in the company of his photographer-friend Allan Richardson. Doña Maria Sabina performed the *velada*, or sacred ceremony. His wife and 19-year-old daughter partook on the night of July 5, 1955. The age of Wasson's daughter at the time was likely 19, although Wasson himself reported her as being as young as 13, and Edmund Wilson of *The Nation* says she was 16-years-old. The Wasson's "trip" is detailed in R. Gordon Wasson, "Seeking the Magic Mushroom," *Life* 42 (11 May 1957): 100-7+; Valentina Pavlovna Wasson and R. Gordon Wasson, *Mushrooms, Russia, and History* (New York: Pantheon Books, 1957); and Edmund Wilson, "Mushrooms, Russia, and the Wassons," *The Nation* 185 (16 Nov. 1957): 364-370. ARTICHOKE was one of about 150 projects under the larger program MKULTRA, a unit of the CIA fully dedicated to mind-control. CIA Director Allen Dulles created MKULTRA in April 1953 in response to rumors of communist brainwashing of POWs during the Korean War. The CIA destroyed many of MKULTRA's records in 1973.

⁵⁰⁰ In the meantime, thinking ahead to the CIA's need to cultivate desirable samples in large quantities, on June 24, 1953 he drove to Toughkenamon, PA in the southeastern part of the state, the heart of the largest mushroom growing area in the world. Here, mushroom executives reluctantly agreed to grow whatever fungus the government needed. But Allen also thought that the CIA would be better off creating synthetic equivalents for the Mexican hallucinogens. CIA chemist Sid Gottlieb worked to decode the chemical compositions of the samples. Gottlieb and his assistant Henry Bortner passed some of the samples to corporate and academic researchers.

⁵⁰¹ John Marks, *The Search for the 'Manchurian Candidate': The CIA and Mind Control* (New York: Times Books, 1979); Victor Marchetti and John D. Marks, *The CIA and the Cult of Intelligence*

In 1956, Moore and Wasson, along with the world-renowned French mycologist Roger Heim, made their first and only trip to Mexico together.⁵⁰² Moore's trip garnered him a fifteen-pound bag of mushrooms, but he was unable to isolate the hallucinogenic compounds of the mushrooms in a timely fashion. Instead, Heim and the Swiss scientist and inventor of LSD-25 Albert Hofmann (1906-2008) first identified and chemically reproduced the mushroom's psychoactive substance as psilocin.⁵⁰³ While the CIA continued to explore possible uses of psilocybin, it soon became clear that the trips the drugs produced were unpredictable and too unreliable to be used as mind-control tools.

While Moore and his partners at the CIA were primarily interested in the potential of magic mushrooms to aid U.S. national security measures, the Wassons represented a growing number of mycological enthusiasts in America. Wasson's 1957 *Life* magazine article contained a number of color photographs, and spoke approvingly of the newly re-found natural substance. The article spurred an interest in the possibilities of such fungi to broaden one's capacities of perspective. The psychology professor Timothy Leary (1920-1996)—who had been installed at the Center for Research in Personality at Harvard University as a lecturer of Clinical Psychology and researcher by 1960—for instance, went to Mexico in search of mushrooms after reading the article. The trip preceded Leary's infamous adventures with the CIA and LSD, and his rise into the milieu of counterculture. This trip also begins the misreading of Leary as merely an LSD guru, rather than a scholarly pioneer in the possible productive uses of mind-altering

(New York: Alfred A. Knopf, 1974); and Robert L. Borosage, *The CIA File* (New York: Grossman Publishers, 1976).

⁵⁰² Moore approached Wasson claiming to be a scientist interested in the anesthetic properties of Mexican mushrooms. He indicated their trip would garner a \$2,000 grant from the Geschickter Fund, a CIA channel.

⁵⁰³ Albert Hofmann first synthesized LSD in 1938, but was unaware of its psychotropic effects until he ingested an unusually high dose in his laboratory at Sandoz Research Laboratories in Basel, Switzerland, in 1943.

compounds, specifically psilocybin, which we now know as an effective but still illegal, treatment for migraines, depression and other physical and psychological ailments. Leary has long been depicted in American culture as a Ken Kesey-like figure, out of control in an era of free love. Rarely do critics acknowledge that Leary was in fact a faculty member at Harvard, running trial psychological experiments with the legal substance psilocybin. LSD (which Leary was not experimenting with at Harvard) was, in fact, legal until October 6, 1966. Leary spent much of his later life evading drug charges, seeking asylum outside the United States, whose FBI sought to make an example out of him. Leary's outlaw status had everything to do with classification and order; one day his experimental psychoactive was unscheduled, the next it was.⁵⁰⁴

Wasson, in his alliance with ethnobotanists such as Richard Evans Schultes (1915-2001) at Harvard University, placed himself in fundamental opposition to the increasingly psychedelic camp of Leary. In December of that year, he had met Wasson and his family over dinner, and had embarked on devising with Wasson and Harvard graduate students a mycological bibliography; he could not, however, convince Wasson to come to Harvard to speak on his Mexican adventures.⁵⁰⁵ As early as 1961, Leary's research on the compound psilocybin diverged into transformative pathways that left many including Wasson and other academic mushroomers at the Boston Mycological Society, feeling uneasy. And there would be others at Harvard, such as Schultes, and scientists at Sandoz Pharmaceutical in Switzerland who became uneasy about Leary's new associations. According to Wasson, the writer Aldous Huxley spent the spring 1961

⁵⁰⁴ For a biography on Leary that attempts to present him as "a compelling but troubled American icon," see: Robert Greenfield, *Timothy Leary: A Biography* (New York: Harcourt, 2006).

⁵⁰⁵ Timothy Leary, letter to R. Gordon Wasson (9 Dec. 1960), TRGW; R. Gordon Wasson, letter to Timothy Leary (13 Dec. 1960), TRGW. Many letters over the bibliography ensue between Leary and Wasson after these initial contacts. See TRGW.

term at Harvard, and became rather friendly with Leary. Schultes, angry over what he perceived as a mismanagement of the collaborative Wasson-Leary mycological bibliography, cryptically penned a note to Wasson during the subsequent summer wishing “to discuss certain things with [him] about Leary’s studies.”⁵⁰⁶ In August 1961 Leary attended the International Congress of Psychology in Copenhagen, Denmark where writer Huxley read his paper “Visionary Experience.”⁵⁰⁷ By September Sandoz, supplier of psilocybin to Leary’s research team, became apprehensive about his allegedly frivolous and open use of the substance with students. With Harvard notables also disgruntled with Leary’s research direction and with a medical doctor no longer clearly associated with his projects, Sandoz considered “cutting” Leary’s psilocybin supply. According to Wasson, “neither he nor Sandoz want to be wrapped up in such an affair.”⁵⁰⁸ Either unaware of or unphased by this controversy, Leary requested another “2,000 tablets” from Sandoz, with only six days to deliver the experimental adjuncts.⁵⁰⁹ He also wrote to Wasson again, requesting that he speak at Harvard.⁵¹⁰ In December of 1962 Schultes wrote to Wasson that “Leary is at it again,” after the lecturer and his colleague Richard Alpert aka Baba Ram Dass (b. 1931) claimed in *Newsweek* that Harvard infringed upon their academic freedom by trying to control their administration of drugs to students.⁵¹¹

Leary proceeded with his inquiries, establishing a research venue in Mexico that

⁵⁰⁶ Richard Evans Schultes, letter to R. Gordon Wasson (4 June 1961), TRGW.

⁵⁰⁷ Aldous Huxley folder, TRGW. This information can also be found in *Letters of Aldous Huxley*, edited by Grover Smith. New York: Harper & Row, 1969. Wasson and Huxley themselves corresponded about psychotropics between Jan. 1, 1955 and May 17, 1962. See also memorandum for Thomas S. Lamont, (13 Sept. 1961), TRGW.

⁵⁰⁸ Memorandum for Thomas S. Lamont [likely Jr., vice-chair of Morgan Guaranty Trust], (13 Sept. 1961), TRGW.

⁵⁰⁹ Timothy Leary, letter to Carl Henze, M.D. [Sandoz], (11 Nov. 1961), TRGW.

⁵¹⁰ Leary, letter to R. Gordon Wasson, (21 Nov. 1961), TRGW.

⁵¹¹ Schultes, letter to R. Gordon Wasson (13 Dec. 1962), TRGW.

ultimately resulted in his firing by Harvard on May 1, 1963, “due to his failure to fulfill his teaching responsibilities.”⁵¹² In many ways, Leary’s firing clarified the various mushroom camps evolving in 1960s America. Hofmann wrote to Wasson in November 1966 in response to Wasson bringing Leary’s 1966 *Playboy* interview to Hofmann’s attention saying, “It will give of course a new stimulus for the non-medical use of LSD.”⁵¹³ He also clarified that he did not write or authorize an article on LSD that was printed with his name in the French magazine *Crapouillot* along with a reprint of the Leary *Playboy* interview.⁵¹⁴ “You see I get into trouble without going to San Francisco,” he retorted. In December 1966 Bernard S. Aaronson, Chief, Section of Experimental Psychology, State of New Jersey, Bureau of Research in Neurology and Psychiatry wrote Wasson that the Canadian psychiatrist Humphrey Osmond (1917-2004) and he would like to invite Wasson to participate in a book they were editing on “psychedelic agents.”⁵¹⁵ Wasson sent the letter to Schultes for his thoughts on the project, with doubts about his ability to offer the proper time to it.⁵¹⁶ Schultes’s objections, however, were more politically and morally-rooted:

I know that you could give a wonderful contribution to the proposed book, but beyond the question of your time do you really want to get involved with Osmond and Aronson. They themselves are very good men but they often seem to lean over pretty far to the Leary side—at least Osmond does.

⁵¹² Wasson knew about the firings at least as early as May 21, 1963, see memo, Timothy Leary folders; and Frank Ferguson, letter to R. Gordon Wasson, (21 June 1963) in which Ferguson includes the official memo that announces Leary’s termination. On it, Ferguson notes how rare it is for a professor to be fired from Harvard, TRGW.

⁵¹³ Albert Hofmann, letter to R. Gordon Wasson (7 Nov. 1966), TRGW; “Playboy Interview: Timothy Leary—a candid conversation with the controversial ex-harvard professor, prime partisan and prophet of LSD,” *Playboy* 13 (Sept. 1996): 93 et seq.

⁵¹⁴ Published in Paris, issue no. 71.

⁵¹⁵ Bernard S. Aaronson, letter to R. Gordon Wasson (15 Dec. 1966), TRGW.

⁵¹⁶ Wasson, letter to Schultes (27 Dec. 1966), TRGW.

This is up to you, but the problem is getting so serious that I personally feel reputable men must draw a strict line now.⁵¹⁷

Both Wasson and Schultes may have bemoaned the chance to be part of a book—

Psychedelics: The Uses and Implications of Hallucinogenic Drugs—that ultimately went on to become a bestseller, though surely they would have scoffed at its title.⁵¹⁸ When Leary finds himself seeking political asylum in Switzerland in 1971, in hopes of avoiding extradition to the United States, Wasson steadfastly refused to join those financially supporting his \$120,000 bond.⁵¹⁹

In later years Leary explained that in the 1960s, particularly among the scholarly community of brain scientists, three states of consciousness were known: (1) “normal, rational consciousness,” (2) unconsciousness,” and (3) “altered states, pathological consciousness.” Conventionally, the first state was thought to be “normal, natural, good,” and was further marked by being “drug-free.” Any altering of the brain or body through drugs, as with anesthetics or tranquilizers, was to be done medicinally by a “state authorized agent” to restore a subject to the first “normal, natural” state. Psychedelic drugs were thought to have no place in an industrial society where rationality reigned. As Leary noted:

The modern factory society requires an astonishing degree of conformity, uniformity, dependability, replicability to build cars and airplanes and hair dryers and hospitals and schools and keep them running. Nothing could be more threatening to a highly organized assembly-line society than self-

⁵¹⁷ Schultes, letter to Wasson (9 Jan. 1967), TRGW. Schultes also indicates in this letter that Aaronson and Humphrey had not contact him, but even if they had that he is “now far too loaded to contemplate any more conferences, talks, chapters for any person or place.”

⁵¹⁸ Bernard Aaronson and Humphrey Osmond, eds, *Psychedelics: The Uses and Implications of Hallucinogenic Drugs* (New York: Anchor Books, 1970).

⁵¹⁹ Huston Smith, letter to Wasson [on MIT letterhead], (16 July 1971); Wasson, letter to Smith (2 Aug. 1971), TRGW.

administered drugs which activate in the brain unique, nonconditioned, visionary, subjective patterns.⁵²⁰

We now know, however, that there was very much a place for these kinds of compounds in an industrial society, just not as Leary had envisioned. Leary's project was in part shut down because the CIA conduits at Harvard sought a monopoly on psychedelics as possible mind control agents in the Cold War era.⁵²¹ In 1973 the Nixon administration established the DEA to codify the government's hold over ethnobotanical and synthetic alkaloidal adjuncts. The agency has repeatedly used the taxonomical categories of plants and fungi to regulate what we can and cannot legally put into our bodies; in essence, controlling which switches of our mind we are allowed to turn on and off.

Carolus Linnaeus's development of our modern taxonomical system, which divided the natural world into discreet categories of animals, vegetables, and minerals, has become a source of critique to those whose work uncovers our *connections to*, not *distinctions from*, other organisms in the biosphere. Paine questions not only the long-standing taxonomical "science" of Linnaeus, but also its modern application by government agencies and people in their everyday lives. The implications of the artist's fungal forays proves to be as much about his explicit treatment of boundaries, hierarchies and taxonomies—the paradigms of classification from Linnaeus to the DEA—that will continue to make his work meaningful. In an age when our own genetic codes of classification have become the subject of analysis, ordering, and surveillance, Paine's mushrooms continue to offer a place not so easily categorized.

⁵²⁰ Timothy Leary, *Flashbacks: A Personal and Cultural History of an Era*, with a foreword by William S. Burroughs (New York: Putnam, 1983), 380.

⁵²¹ Leary, 391.

Recall that mushrooms have just as many cellular characteristics of animals as they do plants; they are, categorically speaking, their own kind of hybrid zoophyte. And Paine finds their status among “the more base kingdom” particularly appealing. McCollum has even called fungi “the evil opposite of plants,” a characterization Paine no doubt would acknowledge.⁵²² Despite his best efforts to limit moralizing in his work, the artist offers us more than just a new mode of thinking, or system of knowledge. Here the fungi, the biological underdogs, stand in for the underrepresented, the marginalized, and the overlooked. After all, why choose fungi? In terms of Paine’s consideration of reproduction and replication, the answer lies, at least in part, to the mushrooms’ cellular property of replicating, rather than reproducing. As regards his attention to the mind-altering action of mushrooms, the artist’s choice of fungi relates directly to the transformative potential of the organisms. The artist has expressed his own amazement “that this stuff that comes from the shit, the base, can then inspire such a transformation or flight of the mind.”⁵²³ Yet while significant, their alkaloidal potential points to only one mode of transport.⁵²⁴

Observers of Paine’s fungi fields should not dismiss too quickly the transparency of his magic mushroom vision quest. Within these fields of consciousness lies another level of transport, one less connected to altered-states than to the life cycle. His *Amanitas*, for instance, exhibit various moments in its life cycle, resulting in an abundance of autumnal hues, from burnt umbers to ochres to the brown-speckled specimens that are in their final stage of decay. These latter exemplars collapse in slow motion with their heads

⁵²² Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 12.

⁵²³ Herbert in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 16.

⁵²⁴ Davis, 216-17. Davis observes that Paine’s fungi “can make the most innocuous floorboards seethe and sprout with multitudinous life.” This criticism fits with my reading of Paine’s mushrooms as being as much about life and transcendence than about dissolution and decay.

nestling the gallery floor and barely making a last gasp at life, leaving impotent any associations of their alkaloidal potential. McCollum notes the associations of Paine's works with "entropy, neglect, decay and sickliness," particularly with the artist's fungi.⁵²⁵ This entropic reading of the artist's work recalls a similar dynamic recognized in the work of Robert Smithson. His *Spiral Jetty*, for instance, has been read a sight of entropy, as has his sandbox, a place where physical events cannot be undone, wherein the black and white sand, once mixed, cannot be separated out again. Entropy, essentially the Second Law of Thermodynamics, suggests a state where things cannot be put back, an irreversible dissipation. Yet throughout their interview McCollum and Paine shift our perception of entropy (and subsequently Paine's works) from one of deterioration to regeneration:

AM: If you look at things anthropocentrically, cancer is horrible. If you're looking from the position of the cancer, it's great. The black magician Alistair Crowley once said he loved looking at rotting corpses because the maggots and the decay were such beautiful, positive signs of life's will to continue on!

RP: When something dies, we think of it as the stopping point.

AM: Fungi can be read as signs of transition between one life form and another, really. Things are recycled.

RP: In terms of the cycle, fungus is necessary. They decompose vegetable matter first, then the bacteria and microbes come in and can work with that material. I've read that without fungus we'd have a mile deep of vegetable matter everywhere because all the dead trees and vegetation would never break down.

AM: So a fungus is a kind of natural regulator in a way. Like the enzymes in the body or something.

RP: Yes, it's very cleansing that way.⁵²⁶

⁵²⁵ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 12.

⁵²⁶ Paine and McCollum in Crewdson, et. al. *Roxy Paine: Bluff*, 18.

What McCullough and Paine articulate in their exchange is the way that entropy operates not as an endgame but rather an avenue to another state of being. In death there is always new life. In decomposition and disarticulation, in the fissuring of bodies, emerges new forms and energies, freedoms from hierarchical divisions and one-way streets from cradle to grave. In a kind of entropic reversal Paine's pieces enable us to consider the ways that life and death have traditionally been erected as beginning and ending sign posts in the life of a body. The categories of life and death, as much as the categories of an organismal kingdom, or various state of consciousness, become increasingly difficult to reify in Paine's work. Often bodies or states slip from one thing into another. States of total energy depletion instead emerge as the locus for regeneration, renewal and transcendence.⁵²⁷ In mushrooms' ability to transform consciousness either through a psychoactive trip or an entropic inversion, then, one finds what Paine himself articulates visually: that fungi offer one of the least expected places, but also one of the most radically and readily available sites of transformation.

⁵²⁷ Volk in Ketner, Herbert and Volk, *Roxy Paine: Second Nature*, 30. Volk discusses Paine's work as being in line with nineteenth-century Transcendentalism: "[His] representations of nature, however transformed and artificial, nevertheless retain a mind-bending, ecstatically tinged power, offering a decidedly idiosyncratic take on a utopian tradition in American art and literature that has long been based on ecstatic encounters with nature. This includes Emersonian Transcendentalism and Walt Whitman's poetry, as well as Hudson River School Romanticism and the shimmering, spiritualized landscapes and seascapes of the nineteenth-century Luminists. More recently, one could point to elements of Land Art, James Turrell's sky installations in which an excised section of ceiling reveals the real sky, Agnes Martin's abstract desertscapes, and several of Edward Hopper's paintings in which ethereal, seemingly otherworldly shafts of sunlight illuminate otherwise bland domestic scenes, among many other examples." See also Crewdson and Mittelbach, 66. They discuss Paine's Cor-Ten steel tree *Bluff* in relation to the work of the nineteenth-century landscape architect Frederick Law Olmstead. Paine's sculpture, they argue, "had the bewitching ability to elevate the spirits of viewers and leave them temporarily giddy, a feeling of intoxication not unlike what Olmstead intended to evoke with his mirage of rural countryside in the middle of New York City [Central Park]. He used nature as a means to dramatically affect the unconscious minds of harried city dwellers in a way that would stay with them even after they left the park. Of nature's spell and its effect on the human mind, Olmstead wrote, 'Gradually and silently the charm comes over us; the beauty has entered our souls; we know not exactly when or how, but going away we remember it with a tender, subdued, filial-like joy.'" Notably, Olmstead's attention to the concept of "charm" parallels the work of Charles Darwin, bringing aesthetic and evolutionary vision in line.

IV. Cy Twombly, John Cage and the Art of Contemplating Mushrooms

He sits and looks, moves around the room and looks again, contemplating his next move. Two mushroom species appear as if taken from a mushroom guidebook. One is surely a morel, but a piece of graph paper covers its stem and its Latin binomial, denying confirmation. Another variety emerges more clearly in the center of the paper, this one covering the floor plan of a Baroque church. Next to it another sheet of graph paper with zigzags. Other mushrooms are drawn in loosely, abstracted from their guidebook alter-egos, one with phallic suggestion, and more a missile than a mushroom. Then there are the scribbles, the smears, the spans of crisp white paper, and then an addition of scrap sticker labels. This is not your typical field guide to mushrooms. This is one of ten prints taken from the artist's portfolio *Natural History Part I Mushrooms* (1974).⁵²⁸ Twombly's pacing position in print and paint echoes that of his father, the former college athletic coach who found himself so often formulating his own game plan on a blackboard.⁵²⁹ And then there was the artist's own stint as a cryptologist for the Army, uncovering codes and secrets in the cover of night.⁵³⁰ But in the studio he is an artist dealing with an expansiveness of space, faced with a blank canvas that awaits his mark. He looks out into his garden from his second-floor studio, down over the hills to the water below. The cerulean sea that spills forth below his Italian villa reminds him of the blue skies of his

⁵²⁸ For an informative history of prints in the modern era see Diane Kelder, "Tradition and Craftsmanship in Modern Prints," *Art News* (Jan. 1972): 56-59+; "New in the Collection," *Collections* [The Magazine of the Columbia Museum of Art and the Gibbes Planetarium] 5 No. 2 (Spring 1993): 4. The article speaks briefly of Twombly's works with prints, saying: "Twombly admits to having a feeling for paper rather than print. Despite this interest, he has done only 77 prints, mostly en suite, published between 1953 and 1984. *Untitled*, the CMA print, reveals the dominant lines of Twombly's mature work, which often suggest a chalk and blackboard relationship."

⁵²⁹ Kirk Varnedoe, *Cy Twombly: A Retrospective* (New York: The Museum of Modern Art, 1994): 10-11, 53 (f.n. 4,6).

⁵³⁰ Varnedoe, 19-20. See also Victoria Donohoe, "Cy Twombly Defies All Tradition," *Philadelphia Inquirer* (23 March 1975).

native Virginia. He has been here before in the wanderings of words across the page, as a young boy reading Homer, reading Virgil as a young man, but now he lives in Italy, wed into an aristocratic family.⁵³¹ He looks back to his canvas, his brushes, his pencils and crayons. There will be lines and scrawls, scribbles and smudges. A number here, a letter there. He catches the glimpse of a Bay tree, his peonies, the green grasses below. It has been raining for the past two days, but the sun has returned. The mushrooms will soon erupt, shooting through the grasses and forest undergrowth in clusters. His memory called them forth even before their sporing. But they are also there on his shelf, in his natural history guidebooks. Neatly presented in word and image, an order his twitching mind and his gesturing hand rarely welcome. His last fungal foray, or walk on which one collects mushrooms, took him to the Val Gardena in the Dolomites of northern Italy, the name of which we find written near the right edge of print *No. VI*; he has been photographed hiking there with his son Alessandro, now grown and also a painter (**Fig. 3.5**).⁵³² Later in his studio he gathers the mushrooms in his memory, recalling the curves of each cap, the turgidity of each stem, the smell of fecund earth, the variety of colors. He picks up his

⁵³¹ For a good source on the cross-cultural dynamics of Twombly's oeuvre, particularly in Italy and America, and his aesthetic connection to Dubuffet see Martin Gayford, "Not Much Like Home," *Modern Painters* 7 No. 4 (Winter 1994): 71-73. For background on his wife Tatiana Franchetti's family see Edmund White, *Arts and Letters* (San Francisco, CA: Cleir Press, Inc., 2001): 261-66.

⁵³² Suzanne Delehanty, "The Alchemy of Mind and Hand," in Nicola del Roscio, Ed. *Writings on Cy Twombly* (Munich: Schirmer/Mosel (2002 [1975]), 67, 72. Delehanty says that Twombly spent the summer of 1964 at Val Gardena in the Italian Alps. She also notes that mushroom hunting was one of the favorite pastimes of Twombly's son Alessandro. See also Claire Daigle, *Reading Barthes/Writing Twombly* (Ph.D. dissertation, CUNY, 2004), 183. Daigle suggests that Twombly may have used as the pretext for his mushroom collages mushroom gathering in the Val Gardena in the Dolomites. She indicates that one of the collages includes a photograph with inscription of the site. She readily admits, however, that Twombly was not likely drawing *in the field*, instead "by the time Twombly sat down to make these works, a book of botanical illustrations had mediated the activity." Finally, see *Cy Twombly: Catalogue Raisonné des Oeuvres sur Papier* Volume VI, 1973-76 With a text by Roland Barthes (Milan: Multhipla Edizioni, 1979). A brief introduction to a group of mushroom works in the book indicates that, "The mushrooms of the Val Gardena, and their harvesting, especially as the pretext for a long walk, are not unknown to the *Mushroom* series (winter 1973-1974, in Rome)." In her discussion of Twombly's process, the critic Catherine Craft has called Twombly's sketchbooks, and works on paper that test out his ideas before a larger work is commences, "forays," the place where he can "daydream and think." See Catherine Craft, "Cy Twombly: Paris and London," *The Burlington Magazine* (Feb. 2004): 124.

pencil (puts on his shoes), the canvas gives way to the graphite (the ground gathers his weight). Scribble, scrawl, gesture, smudge. An outcropping here, a span of emptiness there—patterns and repetitions, diversions and intermissions. He takes his shoes off, puts his crayon down. Sits in his chair, and takes out his books. The artist makes no pretense of knowing anything definite, only that what we know for the moment lies in the process of making prints, marks, and collages. This art that negotiates the spaces between thoughts and actions, and the temporalities we traverse in the imperative to know anything. He reads, he walks, he makes marks. He turns the page, he forages for mushrooms, he stands over a table of paints, contemplating his next move.⁵³³

Between 1973 and 1976, Cy Twombly embarked on a mediation of mushrooms in collage and print. Completed in an edition of 98, *Natural History Part I, Mushrooms* (1974) comprises a portfolio of ten prints that marks an important—if often overlooked—model for the intersection of art and science in later twentieth-century visual culture.⁵³⁴ In

⁵³³ See Kirk Varnedoe, Ed., “Cy Twombly: An Artist’s Artist,” *Res* 28 (Autumn 1995): 167, 176. This piece was a transcript of a conversation about Twombly’s work that occurred on October 4, 1994 at the MoMA, on the occasion of his 1994 retrospective at the MoMA, with Francesco Clemente, Brice Marden, and Richard Serra (with an intervention from the audience by Julia Schnabel and moderated by Kirk Varnedoe. Marden talks about working in the studio of Robert Rauschenberg for a long time, among Twombly’s paintings, and where he also saw Twombly at work. He had in working, “the sort of voyeuristic aspect of him where he would kind of sit back and watch everything that was going on. And there was a familiar feeling with the work. It was interesting to see that when he first arrived in Europe, he went all over the Mediterranean and really checked it out. It is like looking at it all. Francesco says, ‘Getting up and looking out the window.’ It means that in all these photographs he always uses in his books, of just looking out at the landscape, there is a real inclination to almost passive observation and just letting it seep in... I like that he ends up making these paintings that are not just the result of the process of their making: *the actual experience is always there*.” Brice Marden also talks about Joan Mitchell and Cy Twombly being [figuratively speaking] in the garden... this chance to really observe nature and work with it.” And as David Sylvester says of the artist’s sculpture in “The White Originals,” page 74, “Twombly cultivates a garden where the spadework has been done by others.” The critic Sarah Whitfield, upon the opening of a Twombly exhibition at Inverleith House, Edinburgh, calls the artist “a painter of nature,” and explains that the paintings on view were “inspired by the garden Twombly and Nicola del Roscio created at Gaeta [Twombly’s house], a few miles from the beach town of Sperlonga on the west coast of Italy.” See Sarah Whitfield, “Edinburgh: Cy Twombly,” *Burlington Magazine* (Nov. 2002): 703-704.

⁵³⁴ The portfolio of mushrooms (and a portfolio of trees) is reproduced in Heiner Bastian, *Cy Twombly: A Catalogue Raisonné of the Printed Graphic Work, 1953-1984* (New York: New York University Press, 1985). The mushroom collages are reprinted in Yvon Lambert, *Cy Twombly: Catalogue*

his fungal foray, Twombly integrates the collage and the sketch, the painting and the diagram, the image and the word. These lithographs address such diverse themes as repetition and process, artistic reproduction and biological reproduction, life and death. Reproductions of Leonardo's paintings find themselves next to morels. Some species share space with more modern art works, such as a Donald Judd sculpture or a fluorescent light installation that recalls the works of Dan Flavin. A tourist post card from a beach accompanies a color chart, a motif that appears in another print with a photograph of a burial ceremony. Numbers litter the prints, some with the regularity of an electronic spreadsheet and others placed with less determinism. Other prints extend the study of natural history beyond mushrooms themselves to the geological formations of rock outcroppings. The artist's portfolio collapses the natural and built environments, the worlds of nature and culture. His mushroom prints situate themselves at a crossroads of taxonomical methodologies, between morphology, the classification of organisms by the shape and form of their external structures, and the modern endeavor to systematize the living world through the analysis of DNA. They broaden the ways that we can read Twombly's oeuvre, and help us understand why the subject of natural history and mycology proved so appealing to the artist.

As works quite distinct from his earlier and later paintings, both in their more intimate format as lithographs and their inclusion of identifiable subject matter, the mushroom prints are not the works for which Twombly today remains best known. Within the canon of art history, Twombly often finds himself grouped within the

generation of Jasper Johns and Robert Rauschenberg.⁵³⁵ He was a student at the Art Students League in New York City, as well as at Black Mountain College in North Carolina, there studying under Willem de Kooning, Frank Kline and Robert Motherwell. Rauschenberg and Twombly became friends and traveling companions, making a trip to North Africa soon after their stay at Black Mountain. Rauschenberg also became known in the 1950s for his white paintings, paintings that at first sought to be of nothing, monochromes that would make the likes of critic Clement Greenberg quite uneasy. And while a previous generation of Abstract Expressionists created works that were increasingly devoid of subject matter in the immediate post war epoch, many notable artists that followed, including Johns and Rauschenberg, reintroduced the presence of recognizable imagery. Painting was no longer merely about painting (if it ever was), as

⁵³⁵ A thorough and essential article on the history of Twombly and Rauschenberg's time together, particularly their nine-month trip to Europe in the early 1950s, see Nicholas Cullinan, "Double Exposure: Robert Rauschenberg's and Cy Twombly's Roman Holiday," *The Burlington Magazine* (July 2008): 460-70. In an early show with the artist Gandy held at the Kootz Gallery, December 4-22, 1951, the critic James Fitzsimmons compared Twombly's work to that of Clyfford Still and Weldon Kees. He also describes the artist's paintings as "irregular circles of grimy white [that] seem to mushroom on grey or black field." See James Fitzsimmons, "New Talent," *The Art Digest* (1 Dec. 1951): 20. The critic Prudence B. Read describes Twombly's work in the same show as displaying "elegance," and "the possible influence of Dubuffet," a compelling comparison given the attention given to Dubuffet in chapter two of this dissertation. Twombly, she notes, was studying at Black Mountain during the exhibition. She also, fascinatingly, lists the two artists' paintings selling for \$300-\$400. See Prudence B. Read, "Duet," *Art News* (Dec. 1951): 48. Twombly first exhibits with Rauschenberg at Stable, September 15-October 3, 1953. See Lawrence Campbell, "Rauschenberg and Twombly," *Art News* (Sept. 1953): 50 and Dore Ashton, "Cy Twombly," *The Art Digest* (15 Sept. 1953): 20. Another piece characterizes both Twombly and Rauschenberg as abstract expressionists whose works leaves much to be desired in their "excesses," and "ineptness and inexpressiveness." See "Exhibition at the Stable Gallery," *Arts and Architecture* (October 1953): 33-34. In the 1980s, Twombly is pulled away from the *angst* and heroics of the Abstract Expressionists," as the critic Roni Feinstein has said. See Roni Feinstein, "Cy Twombly's Eloquent Voice," *Arts Magazine* (Jan. 1985): 92. Feinstein, citing Leo Steinberg's "Other Criteria" explains how "Twombly, [Jasper] Johns, and Robert Rauschenberg all conceived of their canvases as 'flatbeds of information,' as literally flat surfaces filled with ideas about art, culture, and the self." The metaphor of the blackboard is continued and extended to the "whiteboard," in James Hall, "Doodlings in Time," *Architect's Journal* (10 July 1987). This piece was written upon the occasion of Twombly's "first full-scale show in London," held at the Whitechapel Art Gallery, November 15, 1987. By the 1990s, critics began to see Twombly as "breaking" with the Abstract Expressionists. See Stephen Ellis, "After the Fall," *Teme Celeste* (Jan.-March 1992): 56-59. Ellis includes Twombly among contemporary artists invested in the "open border." Like Rauschenberg, Johns, Richter, Warhol and Polke, Ellis sees Twombly as seeking out "a web of connections," in his work. Elsewhere Twombly is called a "minimal expressionist." See "New in the Collection," 4.

Greenberg idealized, but about life, or about that area between art and life, as Rauschenberg professed of his work. Johns created targets and body casts, American flags and maps, imagery that would spur the Pop Artists who came into their own in the 1960s. Rauschenberg's white paintings were not as "pure" as he initially claimed. They eventually gained their renown from Cage's reading of them as shadow and dust collectors, life recorders. His black paintings teemed with the stuff of life, cigarette butts and newspapers, for instance. Rauschenberg's combines further advanced his first project as divergent from the existential claims of the gestural painters, in particular. Taxidermic rams, a tire, collages of photos, prints, scribbles, paintings that came off the wall, sculptures that verged on installations all laid claim to the reintroduction of subject matter from the experiential world.

Far from our present concern with fungi and natural history, Twombly has built his reputation largely on his heroically sized white paintings and equally massive gray paintings of the 1950s and 60s, respectively.⁵³⁶ The white and gray (often dubbed

⁵³⁶ For reviews of Twombly's white paintings see: Hubert Crehan, "Cy Twombly," *Arts Digest* (1 Jan. 1955): 26. The critic Hubert Crehan called Twombly's paintings, on view at Stable January 10-29, 1955, "stillborn," further explaining the paintings have "no unity" between the "the scrawl or the scribble and the white or off-white patterns." He says these works exhibit "hapless automatism." The critic and poet Frank O'Hara called the paintings in the same show "clear and strong." This is the review in which he says, "A bird seems to have passed through the impasto with cream-colored screams and bitter claw-marks." This is a phrase I use in my own essay on Twombly, and also one that the critic Jon Bird uses in his recent essay on the artist's work. See Alissa Walls Mazow, "Cy Twombly's *Natural History Part I Mushrooms*" 57, No. 2 *Shenandoah* (Spring 2007): 25-33 and Jon Bird, "Indeterminacy and (Dis)order in the work of Cy Twombly," *Oxford Art Journal* 30 No. 3 (2007): 484-504. Interestingly, the critic John Russell observes the way that Twombly's "written mark, as distinct from the mark that is brushed, poured or dripped," operates "as a trail or spoor." A spoor, according to the Oxford English Dictionary, is "the trace, track, or trail of a person or animal, especially wild animals pursued as game." See John Russell, "Art: Twombly Writ on Whitney Walls," *The New York Times* (13 April 1979). See also references to orioles and butterflies in Myers, 52. "Twombly darts at his surface like an oriole constructing a hammock-nest in midair out of thread, straw, twigs, and down," says Myers. He also observes that "A picture by Twombly can disclose touches as light as butterfly wings." Another review of the Stable show views Twombly's paintings as displaying an "utter nihilism," and as embodying "a painful autobiography." See Alfred Frankfurter, "The Voyages of Dr. Caligari through Space and Time," *Art News* (Jan. 1957): 65. The critic Martica Sawin sees in Twombly's work "a seismographic record," and the paintings as being "material for the graphologist's examination." Yet but for "the effort expended and the sensitivity displayed," she sees "only the utmost

“blackboard”) paintings are the grand, eloquent testimonies one sees at the Menil

Collection in Houston or the Museum of Modern Art in New York City (**Fig. 3.6**).⁵³⁷

egotism which can conceive of this communication [Twombly's paintings] as being meaningful.” See Martica Sawin, “Cy Twombly,” *Arts Magazine* (Feb. 1957): 57. In Europe, however, Twombly's early white paintings seemed better received in Milan at an exhibition he had at Naviglio's, where all of his paintings were purchased. “this was the latest indication of a recent and growing trend toward including advanced examples of American art in private and public collections. In fact, nothing like it has been seen since Whistler won the first prize at the Venice Biennale,” says the critic Milton Gendel. See Milton Gendel, “Art News from Rome: Gentilini Burri,” *Art News* (Jan. 1959): 52. Of a show of his white paintings at Castelli, March 14-April 9, 1964, the artists and critic Donald Judd says “there isn't anything to the paintings.” Having not shown in a while, according to Judd, Twombly's earlier paintings are of more interest to Judd. He calls a poster for the show, based on the artist's earlier works, “easily the best thing present.” See Donald Judd, “Cy Twombly (Review of a Cy Twombly exhibition at Leo Castelli Gallery),” *Arts Magazine* (May-June 1964): 38. The critic Jane Gollin says that paintings of Twombly in a show at Castelli are “often undecipherable,” but that they “make sense in a world of atomic disturbance and Pop convention.” Gollin suggests “perhaps cars, perhaps rockets” in the artist's “whirling and exploding shapes.” See Jane Gollin, “Cy Twombly,” *Art News* (April 1966): 54. For a good revision of these early reviews see: Brooks Adams, “Expatriate Dreams,” *Art in America* (Feb. 1995): 63, 68. He cites Calvin Tomkins and Donald Judd as early critics, and I also think he misreads Frank O'Hara's early comments on Twombly's work. But he explains via Kirk Varnedoe's 1994 MoMA retrospective catalogue on Twombly that Judd was against all painting at this time as it was an outdated medium for making art. As Adams says, “All the criticism of Twombly should be taken with a grain of salt; the point is that he was showing, early and regularly, with the best galleries in New York.” Adams also sees Twombly's works from the early 50s as being “in close proximity to works of Dubuffet.”

⁵³⁷ For reviews of the gray paintings see: Daniel Robbins and Susan Platt, “Museum Notes: The Albert Pilavin Collection: Twentieth-Century American Art.” Exhibition held at the Museum of Art, Rhode Island School of Design. *Bulletin of the Rhode Island School of Design* 55 (May 1969): 42-45. This collection was on display at RISD October 7-November 23, 1969. Here Twombly's gray painting *Untitled* (1968) is referred to as “an enormous blackboard,” though the piece acknowledges that “the Twombly painting is not a blackboard, but a painting.” Keeping in line with the evaluation of Twombly's work from the 1960s, the essay sates that “for more than a decade [his work] has been frequently and correctly related to calligraphy, compared with both automatic writing and poetry.” Sawin describes a show of Twombly's work on display at Krasner, November 14-December 3, 1960 as “gracefully” and “genuinely” executed. Though he has been linked with graffiti art and scrawls, Twombly achieves what graffiti art attempts to do—“keeping [our] values from settling”—but “with delicacy that most.” See Martica Sawin, “Cy Twombly,” *Arts Magazine* (Nov. 60): 59. A review of a show at Castelli calls Twombly's paintings “bulletin boards of the imagination,” though it's not clear if these are in fact his gray paintings, or more of his white paintings. See Richard Hayes, “Cy Twombly's,” *Art News* (Dec. 1960): 15. This show also remarks on Twombly's great success in Rome, but also argues that “it would be difficult to find a more specifically American enterprise than one of these serene canvases.” The critic Lawrence Campbell calls paintings on view at Castelli less interesting than his “earlier works, also based on graffiti, scratches and chance marks.” It is not entirely clear if these, too, are the gray paintings, but Campbell refers to “canvases painted grey.” His attention to “pinkish scrawled areas.” Leaves some doubt. See Lawrence Campbell, “Cy Twombly,” *Art News* (May 1964): 13. Campbell also notes that these paintings, the artist living in Rome, are the first ones that Twombly has exhibited in New York “in three years.” See also Andrew Graham-Dixon, “The Blackboard Jungle,” *The Independent* (29 Sept. 1987). And even when the paintings are not referred to as blackboards, the use of white in them is often associated with “chalk.” See Richard Cork, “Euro bonds,” *Listener* [London] (22 Oct. 1987). See also Adams, 66-67. Adams indicates that Twombly's gray paintings, “don't really look like blackboards with random markings on them; they are, rather, carefully wrought field paintings that reenact the Abstract Sublime on a megalomaniacal scale.” See Varnedoe, Ed. “Cy Twombly: An Artist's Artist,” 168. Richard Serra says that the gray paintings have nothing to do with minimalism. “The way I read those paintings is that he deliberately set out to make a

These massive scribble paintings have sold for millions, and have required the construction of their own galleries with high walls uninterrupted by windows.⁵³⁸ The gray paintings typically consist of white currents on a gray and black ground. The swirls surface like exercises in cursive writing. Scholars have used the pedagogical system of the Palmer Method to describe his paintings' association with the redundancies of an elementary school writing lesson.⁵³⁹ They are also meditative in their repetition, visual

colored ground with washes that would then simulate what a blackboard would look like *if you erased it*...the illusion of a blackboard as a ground," he says." See David Sylvester, "Cy Twombly's Theatre of Operations," *7 Tate* (Winter 1995): 58. Sylvester attempts to make distinctions between Twombly's blackboards and Johns's maps, etc., but I'm not convinced he is successful. He also suggests Twombly "is no longer the body covertly scribbling erotica in an exercise book but the agent of authority beside the blackboard," a reading which I find unconvincing given Twombly's sense of humor and his own critique towards figures, systems or other representations of authority.

⁵³⁸ Charles Dee Mitchell, "Twombly's Tempio," *Art in America* (Feb. 1995): 47.

⁵³⁹ The critic Jerry Bowles specifically refers to Twombly's gray paintings as "practicing the Palmer method of handwriting." See Jerry Bowles, "Cy Twombly," *Arts Magazine* (Dec./Jan. 1969): 59. Bowles gives Twombly's work a favorable review calling it, "superbly crafted, intellectually stimulating, nostalgic, and curiously human."; Michael Kimmelman, "The Changing Seasons of Cy Twombly," *The New York Times* (23 Sept. 1994). See also Cindy Nemser, "Cy Twombly," *Arts Magazine* (Dec./Jan. 1968): 55. Nemser says that Twombly's art explores "the schoolroom," a space she sees as "that seedbed of contemporary western culture." She describes his gray paintings as "water-streaked, chalk-scribbled blackboards," and as reminiscent and nostalgic for objects like "schoolroom slates." "The teacher," she says "has temporarily stepped out." The critic Martin Last gives Twombly's paintings in an exhibition at Castelli mixed reviews. See Martin Last, "Cy Twombly," He says the paintings "continued the penmanship-exercise style of his last New York show." Twombly achieves, he says, "genuine loveliness," which "bland color," eluding the possibilities for "apparent ordinariness" and "the pedestrian quality." Yes while "the paintings seem to be getting at something," he observes, "their intention is elusive." Campbell gives Twombly a better review at a show at Castelli in 1967. His paintings suggest, "the messy chalk-marks and erasures which anonymous hands have left on them to greet the lecturer as he enters the hall." He also calls Twombly "a master of graffiti on walls of public places." He concludes by saying Twombly's paintings "have the accidental mystery and poetry which our lecturer can well do without, but which our viewer may well be able to enjoy for its own sake." See Lawrence Campbell, "Cy Twombly," *Art News* (Dec. 1967): 55-56. See also the work of the critic John Bernard Myers, who refers to Twombly's use of "the Palmer Method." John Bernard Myers, "Marks: Cy Twombly," *Artforum* (Apr. 1982): 53. Myers brings in Saussurean semiotics in his reading of Twombly's work, but it is not clear to what ends and it is not taken on throughout his article. The critic Patricia Bickers refers to Twombly's "Palmer" handwriting exercises." See Patricia Bickers, "Taking a Line for a Ride," *Art Monthly* (Nov. 1987). Bickers also draws out Twombly's oeuvre, from the Whitechapel show, as evolving from the white paintings of the mid- to late-1960s, into the red paintings of the early 1960s, into the "blackboard" paintings of the mid- to late-1960s, then into the green 'landscape' paintings of the 1970s and 1980s, which bookended his collages. But this chronology is not Bickers own, but one many scholars use to explain the inevitability of one movement arising after another as a reaction to the previous works. Rather, Bickers sees Twombly constantly returning "to modes and motifs from earlier works."

“ohms.”⁵⁴⁰ Twombly has undergone impressive feats to create them (even painting while riding on the shoulders of his assistant), and they are visions of an artist who thinks, imagines, and composes unencumbered by the impositions of human scale.⁵⁴¹

Though Twombly’s earliest white paintings (i.e. most untitled works from the 1950s) can be argued as extensions of such gestural works as De Kooning’s *Excavation* (1950), the gray paintings would bring that connection into question. Works such as *Untitled*, 1967 (now at the Cy Twombly Gallery, Menil Collection, Houston) are massive paintings that continued his interest in writing, in painting as doodle. But they also began to resemble something other than paintings, most obviously blackboards, less obviously American flags. While one can be confident in identifying imagery with Johns and Rauschenberg—there is a penis, a raptor, a can of paint brushes—Twombly’s recognizable imagery was often more elusive during the 1950s and 1960s. But his *Natural History Part I Mushrooms* neatly combined the meandering but determined line of the pencil or crayon with the representation of a definite thing, a mushroom. This defies the assertion that Twombly was the last of the gestural artists, or a bridge between them and

⁵⁴⁰ The critic Stuart Morgan has said that “that essence of [Twombly’s] activity was repetition.” Morgan also uses the term “blackboards,” although it seems less specifically associated with the gray paintings, only seeing them as a culmination of that motif. While I associate the prints in Twombly’s mushroom guide books, Morgan provides a compelling association of his works with diaries. “He was writing himself into history, not in a self-aggrandising or confessional way but rather in a ritualized, mundane one, diaristic like those diaries which read ‘8.00 Got up. 8.15 Had breakfast’... Twombly has reveled in the openness of his project and his method. In future that esoteric information encoded in his drawings and paintings may be read as great diaries are read, as the unedited reactions of a representative intellect, locating itself—thoughtfully—in space and time.” See Stuart Morgan, “ART: Cy Twombly,” *Vogue* [London] (Oct. 1987).

⁵⁴¹ Adams, 67. Adams suggests such working processes and the overall sense of “perfectly calibrated [painting] to give the effect of happenstance,” suggests an “implicit athleticism” on the part of Twombly. This effect has also been discussed in a piece by David Sylvester on an exhibition of Twombly’s sculpture at the Basel Kunstmuseum. “The reductiveness is not didactic, as it is with John Cage when he induces us to look at nuances that are usually overlooked. It is more like the economy of effort of an athlete, an economy partly instinctive, partly learned—the economy of the tennis or squash player who turns to his own advantage the speed his opponent has imparted to the ball,” Sylvester says. See David Sylvester, “The White Originals,” *Art in America* (July 2000): 73-74.

such graffiti artists of the 1980s as Jean-Michel Basquiat.⁵⁴² Or this portfolio might represent a divergence from what scholars often represent as a homogenous and cohesive career—one that explored in a non-objective fashion, painting as writing. Twombly's later work has not been received nearly as well, though he continues to show with great frequency at galleries and museums throughout the world.⁵⁴³ Scholars often present Twombly as a heady, cerebral thinker who produces undecipherable paintings. Perhaps taking images of mushrooms from a naturalist guidebook proves too pedantic and differs too greatly from his earlier work for scholars have deemed it worthy of discussion.

Art historians have paid little critical attention to Twombly's mushrooms, but they have not shied away from the dialectic of image and word at the center of most scholarship on the artist. Indeed, scholars have long addressed his inscriptions of names and places—from Apollo to Roma—in his works.⁵⁴⁴ The French literary critic Roland

⁵⁴² The critic Eric Gibson says he does not “buy” the reading of Twombly as a bridge between “Jackson Pollock’s gestural expressionism and the graffiti artists of the 1980s.” Though I did not arrive at my own conclusion based on his piece, which is largely hollow, glibly calling Twombly’s “blackboard” paintings “domestications[s] of Abstract Expressionism...a draining-out of its energy that leaves us with something tame, decorative and dead.” Gibson’s piece, a review of the 1994 retrospective at MoMA, criticizes Twombly’s work as being “empty, repetitive, and boring.” Finally, Gibson says Twombly’s paintings “don’t engage the viewer.” They tell us nothing more than that Twombly likes certain subjects. “These paintings are mere asides; they are not the meditations, even the calls to arms, that they aspire to be,” he concludes. See Eric Gibson, “Exhibition Notes,” Review of the exhibition *Cy Twombly: A Retrospective* at the Museum of Modern Art, New York City. *The New Criterion* 33 (Nov. 1994): 44.

⁵⁴³ The critic Matthew Collings summarizes well the general sense of critical downturn in works of Twombly’s, particularly from the 1980s. Giving an unusually good review to a show of his at the Tate, Collings says, “I was staggered by the Twomblys, especially since he can be so boring. But this Twombly exhibition was well selected with hardly anything boring in it, and some of it was even from the ‘80s, the height of his period of decline, if a decline can have a height.” See Matthew Collings, “The Origin of the World,” *Modern Painters* 12 No. 3 (Autumn 1999): 87.

⁵⁴⁴ Delehanty, “The Alchemy of Mind and Hand,” in Nicola Del Roscio, Ed., *Writings on Cy Twombly*, 64. This inclusion of classical allusions has caused many critics to call Twombly’s work as being made “for those all-knowing intellectually-oriented art cognoscenti,” as the critic Nessa Forman has said. See Nessa Forman, “Cy Twombly’s Inner Circle: Do We Miss the Meaning if We Miss the Myth?,” *The Sunday Bulletin* [Philadelphia] (30 March 1975): Section 4, page 12. Forman also calls Delehanty’s piece “the best place to do your catching up [on Twombly’s oeuvre].” See also Marina Vaizey, “The Marks of a Major Stylist,” *Sunday Times* (27 Sept. 1987). Vaizey says: “He does not suggest anything directly representational of the observed, exterior world, but rather the inner world. But it is such an essential part for so many of us to ‘read’ that most people will find it unavoidable from time to time to recognize a pattern, some kind of creature of flower, and, in the sculpture particularly, music pipes, houses, boats. But

Barthes wrote two essays on Twombly and his work in the 1970s: “*Non Multa Sed Multum*” and “The Wisdom of Art.” These are arguably the most famous pieces on Twombly and his oeuvre, and have spurred inquiry into the meaning of Twombly’s words and scrawls.⁵⁴⁵ In the first essay Barthes argues that Twombly’s work performs the gesture of writing. In the second essay he suggests that the words in Twombly’s paintings are not analogous to people, places or things in our empirical world.⁵⁴⁶ Art historian Rosalind Krauss took up Barthes’s essays in a 1994 *Artforum* article on the eve of the Twombly retrospective at the Museum of Modern Art in New York. Krauss pits Barthes and herself against “all the others who’ve written about [the artist].”⁵⁴⁷ She views “[as] a massive misunderstanding” the scholarly interpretation of Twombly’s work as having

what we mostly recognizes is a kind of writing, occasionally resolving into real worlds.” This argument was made on the occasion of Twombly’s large-scale exhibition at the Whitechapel Gallery, London.

⁵⁴⁵ Varnedoe, Ed., “Cy Twombly: An Artist’s Artist,” 173. Varnedoe has said, “The basic dichotomy that you get in the critical writing on Twombly [is] on the one hand, you hear that the work is too elegant, too effete, too refined; and on the other hand, that it is too messy, too disordered, too transgressive, et. cetera; that it is beneath culture on the one hand; that it is too cultured and too refined, on the other.”

⁵⁴⁶ Barthes, “The Wisdom of Art,” in Nicola Del Roscio, Ed. *Writings on Cy*, 106-107.

⁵⁴⁷ Rosalind E. Krauss, “Cy’s Up.” *Artforum* 33 (Sept. 1994): 71. This article was one of *Artforum*’s classic two-critic response to a work, where two articles appear next to each other on the same exhibition, topic, artist, etc. Krauss’ piece here appears woven together with Peter Schjeldahl, “Size Down,” *Artforum* (Sept. 1994): 71-74. Schjeldahl’s article takes a decidedly different turn, bemoaning the high prices of Twombly’s art, their consumption by an elite still hungry for pre-1960s avant-garde, Twombly their “boss abstract painter after the New York School.” He concedes that “Twombly as an artist is plenty soulful and incredibly seductive. Also serious,” but he also says: “The most honest and forward-looking ideas in these last forty years of painting, not to speak of more robust art mediums, leaving Twombly at their margins. His current prestige gives evidence for historical backwardness... If our art culture were healthy... it would be the turn of somebody other than Twombly to be lionized, somebody more predictive of the present.” He aligns Twombly’s works with “bric-a-brac,” distinguishing this monied art from the “truth-telling” “living art.” He reads the continued attention to Twombly as emblematic of an increasing gap between the old and the new, the historical avant-garde and the new avant-garde, and of course the rich establishment and the struggling, up and coming artist. For a response to Krauss’ analysis of Twombly see: Barry Schwabsky, “Cy Twombly: *Et in Arcadia Ego?*” *Art Press* (Dec. 1994): 20-23. Schwabsky says that while Krauss is in tune with Barthes’ work on Twombly, she is more interested in “the ‘nominalist,’ linguistic side of Twombly than Barthes. He also acknowledges, in contradistinction to Krauss’ argument that “Twombly’s art encourages the semiotic drift that both verbal and pictorial associations and analogies favor. Such reverie is the very means by which the paintings work, and it is the effect they provoke in turn.”

“proclivities toward representation.”⁵⁴⁸ Citing the work of the critic Robert Smith as one of many scholars who misinterpret Twombly’s work through analogy—something she says Twombly himself eschews—Krauss asks rather bombastically:

Who’s Right? So who’s right, do you think? Roland Barthes, or all the others who’ve written about Cy Twombly—all those for whom Latin is serious, to be taken at face value, consumed as erudition, as classical humanism somehow magically surviving amidst the barbarism of the late 20th century, a talismanic flower sprouting from a decaying Roman wall?⁵⁴⁹

Krauss takes on many misreadings of Twombly’s work in her piece, including, as we see here, the “the most sick-making, obsequious form” of neo-humanism conceived by “Twombly’s assiduous art-historical amanuensis Heiner Bastian. Still, she attacks most vociferously Smith and others for reading words and titles of Twombly’s paintings at face value. She views Twombly’s work, rather, as performative, and reads his paintings as Harold-Bloom “misreadings” of Jackson Pollock’s drip paintings.⁵⁵⁰ But my problem

⁵⁴⁸ Krauss, “Cy’s Up,” 118.

⁵⁴⁹ Krauss, 71, 74. The angry tone of Krauss’ essay continues throughout her piece, with her ending on page 118: “I have no idea which Twombly the Museum of Modern Art’s upcoming retrospective [the 1994 Kirk Varnedoe retrospective] will celebrate. Twombly’s? Its own? A combination of the two? That is will be mine or Barthes’ is the least likely. But one can always hope.” For the article Krauss cites see Robert Smith, “The Great Mediator,” in Harald Szeemann, ed., *Cy Twombly* (Munich: Prestel-Verlag, 1987): 20.

⁵⁵⁰ Krauss, 118. As Krauss says: “Twombly took up graffiti as a way of *interpreting* the meaning of the Action Painting’s mark, and most particularly that of Pollock’s radically innovative dripped line.” Graffiti, she says, has three characteristics: “First, it is performative, suspending representation in favor of action: I mark you, I cancel you, I dirty you. Second, it is violent: always an invasion of a space that is not the marker’s own, it takes illegitimate advantage of the surface of inscription, violating it, mauling it, scarring it. Third, it converts the present tense of the performative into the past tense of the index: it is the trace of an event, torn away from the present of the marker... Twombly’s work announces a connection with Pollock... But this connection is not an ‘influence,’ it is a ‘reading,’ or, rather, what Harold Bloom would call a strong misreading, and thus a way of declaring how Pollock’s work *should* be read, at least in Twombly’s eyes. Twombly ‘misreads’ Pollock’s mark as graffiti as violent, as a type of antiform.” Krauss’ objections to readings of Twombly’s work come to the surface again in Hal Foster, et. al., “The Politics of the Signifier II: A Conversation on the ‘Informe’ and the Abject,” 67 *October* (Winter 1994): 3-21. This publication is a transcript of a discussion with Foster, Benjamin Buchloh, Rosalind Krauss, Yve-Alain Bois, Denis Hollier, and Helen Molesworth. On page 10, Bois begins with a reading of Twombly’s work: “When you look at Twombly’s early development, before the graffiti pieces, you see a step-by-step imitation of different Abstract Expressionists. He tries to emulate them but cannot; he realizes that for him it’s a fraud. So he gradually moves to a position of parody and dismissal. He then thinks: How can I debase, smear, erase that thing? Yet when Twombly started, he wasn’t trying to imitate Pollock. It was Kline, de

with her criticism of analogical readings in Twombly's work is that she assumes critics and viewers alike will somehow "rush to fill in—in their imaginations, but also on the canvas onto which they project them [names, etc.]—the places where they know Twombly has stayed," etc.⁵⁵¹ But clearly this is a highly deterministic view of imagination, and assumes that analogy operates as a one-to-one correspondence, rather than offering any nuance.⁵⁵² She assumes that Smith and others have narrowed in on a formula for reading Twombly, and one that excludes her "misreading," and sympathetically Barthian reading. That said, Krauss herself does not really offer a way to read difference in Twombly, how to distinguish the mark of the line from the mark of a mushroom; she assumes all marks are the same, all performative, and all void of analogical readings.

Kooning, Motherwell. He gradually moved to Pollock as he becomes involved in graffiti." On page 12 Foster then accuses Bois and Krauss' readings as being "claustrophobic, as hermetic, as the old narrative." Buchloh, in response to an earlier comment by Krauss, says she attributes too much to Greenberg. "I don't think Twombly—or Johns or Rauschenberg—cared much about Greenberg then. A different motivation generated that work; it was not about criticizing the reception of Pollock. I don't think artists are that interested in criticizing such receptions, let alone in criticizing critics," says Buchloh. Krauss counters in response saying, "I think Twombly, Rauschenberg, and Johns were *obsessed* with where they were entering the artistic discourse, with the problem of who was blocking their aesthetic space, or whether they could join that discourse or had to discredit it or redeem it. To ignore that is to underrate the artists." Delving into Krauss' abhorrence of analogy and metaphor, or the literal, Foster asks, "And yet for you literalization tells nothing. I am really interested in this horror of literalization." "Yes, I have that horror. The 'body'—as it has increasingly surfaced in current theoretical work—is rapidly becoming my phobic object," she says. In response, an analysis to which I am far more sympathetic than the views of Krauss, Foster says (continued on page 13): "In its literalness? But is the body the literal? One reason the body is an obsessional site of critical discourse and artistic practice is its ambiguous status—both constructed and natural, semiotic and referential. And this ambiguity is always treated in different ways. I think we need to be able to think those differences, and I am not sure that either a structuralist account of the *informe* or a naturalist reading of the abject is much help here."

⁵⁵¹ Krauss, 73.

⁵⁵² The critic Philip Hensher says that the subject of Twombly's works "is memory and imagination itself." See Philip Hensher, "Twombly's Mysteries," *Modern Painters* 8 No 4 (Winter 1995): 16.

What then are we to make of Twombly's incorporation in his mushroom prints of representational elements, from photographs to naturalist guidebooks?⁵⁵³ The artist's prints and collages of morels and other species of fungi do not fit tidily into his larger opus of scrawls and scribbles.⁵⁵⁴ And yet, there they are in the lithographs—*Lactarius vellereus*, *Clavaria botrytis*, *Lactarius torminosus*, *Phlegmacium praestans*, *Lactarius sanguifluus*, *Morchella conica*, *Gyrocephalus rufus*, *Russula rubra*, *Helvella crispa*, *Russula cyanoxantha*, *Helvella infula*, *Craterellus cornucopioides*. Their Latin binomials compel us to assert their earthly existence through their respective nomenclatures. That they are more than mere gestures cannot be denied. And as Twombly himself has said:

A lot of people have no knowledge of plants, trees, botany and things. I knew a poet who was totally ignorant about botany. And I said: you can't be a poet without knowing any botany or plants and things like that; it's impossible, that's the first thing you should know.⁵⁵⁵

Culling the taxonomic systems of a naturalist, Twombly himself becomes as much a naturalist as an artist in these prints. Though he lives in Italy he remains a Virginian and southerner, an identity that connects him to unique traditions and cultural habits, particularly those of the southern gentleman, whose many preoccupations include those of the naturalist and outdoorsman.⁵⁵⁶ Famous explorers and naturalists have long set out

⁵⁵³ See Susan C. Larsen, "Cy Twombly: Works on Paper, 1954-1976," in Nicola Del Roscio, Ed. *Writings on Cy Twombly* (Munich: Schirmer/Mosel, 2002 [1981]), 118. Larsen says it was "[Twombly] who took the complex path and forged significant bridges between the old world and new. He has maintained that imagery is still viable, indeed, a vital, part of the Western tradition in art."

⁵⁵⁴ Larsen, "Cy Twombly: Works on Paper, 1954-1976," 122. Larsen notes that Twombly is fond of "the beautifully printed pages of flowers, fruits, and vegetables found in old volumes of natural history."

⁵⁵⁵ David Sylvester, interview with Cy Twombly, in David Sylvester, *Interviews with American Artists* (London: Chatto & Windus, 2001): 173.

⁵⁵⁶ For a contribution to Twombly's southern-ness, see Jeff Rian, "Cy Twombly: Piss-Elegant," *Flash Art* (Jan.-Feb. 1995): 61-64. Rian Lexington, VA, where Twombly grew up, was a place, Rian argues: "Where, in Twombly's boyhood, women still wore gloves and never smoked on the street, men wore hats, and gentility was an ingredient of a southerner's postwar (i.e. post-Civil War) self-identity, which, since 1965, had evolved into a paradoxical mix of self-effacement and grandiosity (a.k.a. the neurasthenic sensibility). Southern life is still somewhat slow by psychologically complex. Politeness is its greatest virtue, although it has been cultivated to the point where it can be used as a weapon (psychologists

from the Shenandoah Valley and other southern states. In the eighteenth century Thomas Jefferson imagined from his home in Monticello, Virginia, the Corps of Discovery, on which Meriwether Lewis and William Clark would embark on a journey with a keen eye toward natural history investigation. The English naturalist Mark Catesby also spent time in Virginia and the Carolinas, recording the local flora and fauna. And in the nineteenth century, John James Audubon settled in Kentucky and spent time traveling the Mississippi in search of specimens for his 1840 *Birds of America*. Twombly's mushroom works mark the work of yet another southern son turned naturalist, albeit of a different century and breed. I am not suggesting a causal relationship here between Twombly's Virginian roots and his forays into natural history. Rather I would offer that growing up in Virginia brings to the fore for many, certain historical precedents about the Colonial South that include, undoubtedly, natural history as a suitable activity for gentlemen.

Twombly's work has been passed to contemporary interpreters through the terms established by Roland Barthes, Rosalind Krauss (and others), as a series of essentially gestural events. But this approach strikes me as unduly simplistic, even when some of their promoters expertly weave their arguments with the finesse of archaeologists removing delicate pottery shards from an ancient site. But to be fair to these readings, which I do not want to dismiss as irrelevant or unimportant, I would argue that the

call this passive aggression). If you're from there and haven't been home for awhile, you become the topic of local discussion, but are treated as if you'd never left. So no matter who you are, you never escape your birthplace and its dominion over you...Twombly infused his artistic 'messes' with an air of elegance and grad style that also bespeaks of southern styled gentility and nobility. This is not to say that an aesthetic founded on a Phoenix like recovery of detritus is Southern. It was universally modern. But Twombly did it in a way that no Beat poet or New York formalist did...In the end, maybe Twombly was simply a good ol' boy with an air of nobility who rose out of his small town world to become an art world grandee." See also Adams, 62; Varnedoe, Ed., "Cy Twombly: An Artist's Artist," 179; and Varnedoe's 1994 MoMA catalogue of their Twombly retrospective. And David Sylvester, interview with Cy Twombly, in David Sylvester, *Interviews with American Artists*, 173-76. See also Edmund White, *Arts and Letters* (San Francisco, CA: Cleir Press, Inc., 2004).

scholars themselves have perpetuated the myth of Twombly as a graffitist, scribbler and scratcher. Most recently, art historian and critic Jon Bird has considered previous readings of Twombly through a historiography of the artist's project as related to "indeterminacy and (dis)order" as well as "catastrophe."⁵⁵⁷ Bird's essay provides an excellent historiography of Twombly scholarship, which is no small task. But his conclusion winds its way back to the line on which Barthes and Krauss themselves stand. There is neither discussion of new works, including his portfolio of prints from the seventies. Bird characterizes Twombly's paintings as evincing an "elegiac, visceral...flow" giving way to a Dionysiac state followed by a "draining away" that culminates in a necessary "reckoning."⁵⁵⁸ This analysis suggests gestures that culminate in an end point, more a fixed state of being than the continual field of becoming that would provide a more proper portrayal of Twombly's work. I would argue instead that Twombly's work offers less a site of reckoning, than a rumination, a sustained contemplation that guides us through visual, textual and numerical passages, rather than bringing us to any definitive moment of vision and thought.

In contrast to the spontaneity evinced in his early white paintings, and the greater control exerted in the meditative ohms of his gray or blackboard paintings of the 1960s, the mushroom prints offer themselves up as records of and vehicles for contemplation. As prints, their process is less direct and immediate than putting pencil to canvas. Twombly first draws with a lithographic crayon on a rock, then presses paper to lift the image out of the stone like a paleontologist's plaster cast of a fossil. Except, of course, Twombly

⁵⁵⁷ Though the critic Dore Ashton does not use the word "catastrophe" to describe Twombly's early paintings, Ashton does use "potential violence and eruption" in describing Twombly's works from the mid-1960s. It is this kind of rhetorical move from which Bird's own article draws. See Dore Ashton, "The Artist as Dissenter: New York Commentary," *Studio* (April 1966): 165.

⁵⁵⁸ Bird, 504.

works in two dimensions. Unlike the large white paintings on which the artist could work directly and quickly, the prints emerge more slowly over a longer period of time. There is a template for each edition, and yet the marks on top can vary from print to print, even if ever so slightly. Through a process of layering collage and drawing on top of the print, the artist here becomes the stratigrapher. He extends the geological allusion to print *No. X*, in the formation of a rock outcropping (**Fig. 3.7**). Trading mushrooms for a mountain of rocks, Twombly registers the diverse umbrella of natural history, a subject of study that included botany and zoology as much as geology.⁵⁵⁹ Like his hybrid print-collage-drawings, natural history, too, marked itself as a hybrid method of inquiry in the age before specialization.

Twombly's rock print best expresses the way the artist so effectively connects the sign posts of printmaking—stones and Pantone color charts—to the world of mushrooms and art, drawing associations rather than distinctions between a history of nature and a history of culture. One finds elements from the mechanized world interspersed among the mushrooms of his prints, such as fluorescent tubing, graph paper, and color charts.⁵⁶⁰ Though I assumed Twombly's color tables were representative of the Pantone color charts of printers, I also discovered that mushroomers use similar looking chromatic devices to identify species in the field. While mushroom novices remain most familiar with the white button mushrooms and the brown Crimini or Portabellas found in most

⁵⁵⁹ For a history of the disciplines that have been included under the rubric of natural history, see Prince. She notes that the focus of her exhibition is on living history, organisms. However, early natural history included the sciences of the sky and earth, as well. This latter designation would include mineralogy and astronomy, for instance. The mammoth rock formations in one of the mushroom prints might allow for reading such geological imagery as natural history.

⁵⁶⁰ Artists' use of such mass-produced technologies as color charts has been of interest to the curator Ann Temkin, whose show *Color Chart*, opened on March 2, 2008 at the Museum of Modern Art, New York City. The show, sponsored in part by Benjamin Moore Paints, illuminates the crossovers between mass production and biological reproduction.

grocery stores, wild fungi take on the colors of the rainbow. This chromatic variety was not lost on one of America's great writer-naturalists, Henry David Thoreau, who thought fungi one of the most effective tools for learning colors:

When colors come to be taught in the schools, as they should be, both the prism (or the rainbow) and these fungi should be used by way of illustration, and if the pupil does not learn colors, he may learn fungi, which perhaps is better. You almost envy the wood frogs and the toads that hop amid such gems,—some pure and bright enough for a breast-pin. Out of every crevice between the dead leaves oozes some vehicle of color, the unspent wealth of the year.⁵⁶¹

Of course Twombly's mushrooms are hybrids of culture and nature, reproductions of the caps that push their way through the grasses and the dead leaves, which are scribbled on with bold red crayons, as if to both cancel out the significance of the field guide mushroom and illuminate them with a trace of their former bejeweled selves.

In his layering of the material world Twombly illuminates the space where the single fungi and a rock outcropping stand in for the whole of the mushrooming world of life and the crustal formations of entire mountain chains. This strategy, as Solnit explains, could be found in landscape photography of the 1970s, in which photographs no longer functioned as windows onto the world, but as instead samples, "in which foliage, or rubble, or lava, or dirt crowds the foreground of an image, producing nature without landscape, without scenery, without liberating prospects, vistas, views, or distances—nature in your face."⁵⁶² This sample, "nature in your face," serves as its own specimen. In his displacement of landscape with the land specimen, of human history with natural history, Twombly reminds us that we are part of something much bigger than ourselves. By looking up close we are relieved of the cultural confines of pictorial traditions of

⁵⁶¹ Henry David Thoreau, *Journal*, (1 Sept. 1856), as quoted in *Fungophiles*, 1963, JCMC.

⁵⁶² Rebecca Solnit, *As Eve Said to the Serpent: On Landscape, Gender, and Art* (Athens, GA: The University of Georgia Press, 2001), 59.

landscape and aesthetic controls of nature. The microcosmic can only conveniently, but not meaningfully, be separated out from the macrocosmic. This is something the naturalist Charles Darwin observed while digging fossils with his friend and mentor, the geologist Adam Sedgwick (1785-1873):

We spent many hours in Cwm Idwal [North Wales], examining all the rocks with extreme care, as Sedgwick was anxious to find fossils in them; but neither of us saw a trace of the wonderful glacial phenomena all around us; we did not notice the plainly scored rocks, the perched boulders, the lateral and terminal moraines. Yet these phenomena are so conspicuous that...a house burnt down by fire did not tell its story more plainly than did this valley.⁵⁶³

What Darwin noticed while hunting fossils with his friend Sedgwick was that, for all their looking for the discrete, they missed the big picture; Darwin realized that within that larger realm lay contexts for the zoological and biological traces. Twombly's print portfolio registers the need to look just as widely as one looks closely, his visual cues standing in for a range of phenomena in the realm of art and science, nature and culture.

Twombly has not been alone in his identification of the mushroom as an organismal body with the potential to traverse a range of experiences. John Cage (1912-1992), the avant-garde composer, also contemplated fungi throughout the course of his musical career. Those who travel in mushroom circles know that the composer was an avid amateur mycologist, and the founder of the New York Mycological Society.⁵⁶⁴ He dedicated musical variations to mushrooms, and organized forays.⁵⁶⁵ In 1960 he taught

⁵⁶³ Charles Darwin, *The Autobiography of Charles Darwin*, Francis Darwin, ed. in *The Darwin Compendium* Intro. Brian Regal (New York: Barnes and Noble, 2005 [1892]), 1599.

⁵⁶⁴ Cage left his mycological materials to The University of California at Santa Cruz in 1972. Cage's partner, Merce Cunningham, was also active with Cage in mycological realms and also, more widely interested, in natural history. In 2002 Aperture published his book *Other Animals: Drawings and Journals*.

⁵⁶⁵ In 1958, for instance, he wrote the Palisades Interstate Park Commission of New York asking permission to collect mushrooms along the Parkway. John Cage, letter to A.K. Organ [general manager, Palisades Interstate Park Commission] (21 Jan. 1958), JCMC.

his first mushrooms identification course at the New School for Social Research.⁵⁶⁶ In 1961 Cage became the Eastern-Vice chairman of The-People-To-People Program Sub-Committee on Fungi, an organization “dedicated to the promotion of peace through mutual understanding [of mushrooms].” The fungi group endeavored to “help each other as well as to correspond with folks of like interests in foreign countries,” to dissolve political boundaries and to ride the fungi craze transnationally.⁵⁶⁷ And in 1972, Cage, textile designer Lois Long, and University of Michigan botanist Alexander H. Smith composed *Mushroom Book*, an illustrated poetry volume dedicated to fungi.⁵⁶⁸ The composer spent much of his free time attending mycology conferences throughout the world, and searching out fungi-rich environments for hunting and gathering mushrooms. At a meeting of the Mid-Atlantic Mycological Association in 2006 at Penn State, two professors related to me their mushroom hunting adventures with Cage. At conferences in

⁵⁶⁶ Ernst Lustig, letter to John Cage, (23 June 1960), JCMC; “Robert Morris, married to Simone Morris, living at 452 Amsterdam NYC 24” on list of Fall 1961 mushroom class held at the New School, JCMC. The minimalist and conceptual artist Morris was a student of mushrooms, and enrolled in John Cage’s course on mushrooms at the New School in New York City in the fall of 1961, along with his wife, the dancer Simone Morris (née Forti).

⁵⁶⁷ In an outreach letter to the committee’s Friends, head Harry Knighton asked “How can anyone have ill-will toward a person that shares a mutual hobby with him??” Harry Knighton wrote in a letter to Cage on August 24, 1961 that Lois Long recommended him for the position. Knighton also noted that he would “appoint Long as Assistant to the Chairman,” JCMC. Cage was connected with Long as early as Sept. 25, 1959 when he was carbon copied at his Stony Brook residence on a letter from Clark T. Rogerson, curator, Cryptogamic Herbarium, to Lois Long and her husband John Long regarding specimens Long had recently collected, JCMC. Knighton acknowledged Cage’s letter of acceptance (Knighton notes it dated as Sept. 9, 1961) in his own letter to the composer on Sept. 14, 1961.

⁵⁶⁸ Harry S. Knighton of The-People-To-People Program Sub-Committee on Fungi wrote to Cage as early as May 10, 1960 expressing desire that both Knighton and Cage have the chance to meet Smith, JCMC. Smith wrote to Cage on June 8, 1960 to thank him for the specimens and send him all his reprints. On June 13, 1961 Smith wrote to the composer to inform him that he may “register as a part-time investigator...to insure [him] of a place to sleep and work. Right around the middle of July would be the best time to come, and you could adjust the length of your stay to the season and time free of other duties.” Cage wrote Alex Smith on October 28, 1971, saying, “Lois Long is making a series of lithographs: ten illustrations of mushrooms, And I am making texts (as strange as some of my music) to be published with them. Over each illustration will be a Japanese tissue (not a fancy one) on which we would like to print your naming of the mushroom(s) together with any remarks about the species you’d be willing to make. My texts attempt to touch upon the many varied interests I have and are handwritten in 5 different lithographic crayon intensities (and these are superimpositions, making much more readable). They will therefore be printed also on the tissue overlay, enabling the reader, if he’s so inclined to go hunting in my handwritten page.”

northern California and Mountain Lake, Virginia, the affable composer remained very serious about his morels, chanterelles and boletes. At the Mountain Lake conference, he completed the hunt by cooking for the entire group a dinner of their gathered fungi.⁵⁶⁹

Cage understood the challenge of observing and identifying mushrooms, and the dangers inherent in faulty observation; he “nearly died” when he mistook a poisonous hellebore with skunk cabbage. Cage said of mushrooms, “The more you know them, the less sure you feel about identifying them. Each one is itself. Each mushroom is what it is—its own center. It’s useless to pretend to know mushrooms. They escape erudition.”⁵⁷⁰ His confessed misidentification of a hellebore speaks to the difficulties inherent in taxonomy and the precision it requires—from hunting, gathering, and classification, to proper culinary preparation.⁵⁷¹

Cage and Twombly would have known one another through their respective tenures at Black Mountain College in North Carolina where, during the summer of 1952, Cage was a teacher and Twombly a student.⁵⁷² During their tenure Cage conducted his

⁵⁶⁹ Cage claims he was interested in identifying and collecting mushrooms for eating, and not at all in mushrooms for their hallucinogenic properties.

⁵⁷⁰ John Cage, *For the Birds*, in conversation with Daniel Charles (Boston: Marion Boyars, 1976), 188.

⁵⁷¹ Cage professed little interest in the hallucinogenic properties of mushrooms, and his papers suggest that he was every bit concerned with the identification of poisonous varieties that should be avoided, and informing others of avoiding such dangers; psychoactive fungi were among those he deemed toxic.

⁵⁷² For the timeline of Cage and Twombly’s residency at Black Mountain College see Mervin Lane, ed. *Black Mountain College Sprouted Seeds: An Anthology of Personal Accounts* (Knoxville: The University of Tennessee Press, 1990), 265. This book also explains how close Cage was with Robert Rauschenberg, and inevitably then Twombly as well, as Rauschenberg and Twombly arrived at the school together in the summer of 1951.; Mary Emma Harris, *The Arts at Black Mountain College* (Cambridge, MA: The MIT Press, 1987), 183, 204, 221-2, 228; Vincent Katz, ed. *Black Mountain College: Experiment in Art* (Cambridge, MA: The MIT Press, 2002), 156, 159, 256; and Marcelin Pleyne, “Designs in Letters, Numbers, and Words or Painting by Ear,” in Nicola Del Roscio, Ed., *Writings on Cy Twombly* (Munich: Schirmer/Mosel, 1976), 77. See also Adams, 62. Adams also draws a connection between Twombly’s work and that of cage: “A certain Cagean sense of flux, together with a kind of *I Ching*-influenced orientalism, would remain an undercurrent in Twombly’s work, distancing it from the more purposeful and willfully heroic strokes of the Abstract Expressionists.” See also Varnedoe, Ed. “Cy Twombly: An Artist’s Artist,”

first Happening, which involved not only artists, but theoreticians and architects like Buckminster Fuller, famous for his own mushroom, if an industrially produced one, the Dymaxion House. Cage's mycological activities provide Twombly's mushroom portfolio with new associations and understandings. They provide a critical foil against which Twombly's mushrooms become modernist tropes, allowing us to cast his *Natural History Part I, Mushrooms* as more than mere gestural performances. Twombly's use of the mushroom to explore empiricism's claims to truth is matched by Cage's zeal for mycology as a subject that requires many of the same acute skills of perception as does music.⁵⁷³ When Cage observed that mushrooms were making sounds, and that we should be listening to them, he meant this literally, as in the mushrooms sporing, but also metaphorically. The composer saw in mushrooming the need for not only keen vision, but also acute listening, as required in music. Cage envisioned mushrooms as having something significant to say about humans' perceptive abilities, and he thought we needed to pay careful attention to them. His remark also demonstrated that vision alone does not adequately tend to observation; mushroomers and artists alike do not just observe with our eyes, but with other senses as well. While Cage spent his musical career trying to understand what it means to listen, to hear, Twombly has spent a good deal of his trying to figure out what it means to look, and to refine one's observations, skills of required for artists and art historian alike. This accounts, at least in part, for Twombly's preoccupation with mushrooms.

169. As Richard Serra said of Twombly, "This is a person that has been very influenced, I think all of that generation was, by [John] Cage."

⁵⁷³ The critic Matthew Licht says that "Twombly controls and balances [his] compositions with an almost Zen strength of perception." See Matthew Licht, "Cy Twombly." Review of the exhibition *Cy Twombly May 1982*, Blum Helman. Sept. *Arts Magazine* LVII (Nov. 1982): 51.

Whether undertaken by an artist, composer or mycologist, hunting fungi requires one to have knowledge of mushroom morphology and to be able to situate one's observations within standardized schemes of taxonomy. A successful mushroom hunt also benefits from patience and a little luck. The protagonist in John Lanchester's novel *The Debt to Pleasure* provides us a view of just such an event:

Mushroom hunting is an agreeable mixture of the active and the contemplative: on the one hand is the fresh air, the promise of the early day, the walk, the sudden bends and stoops; on the other the intellectual activity of identification and of what military strategists...call 'target acquisition'...it involves an anxious concentration on one's own performance, a determination to come back with one's mushroom or on it, a silent free-floating mixture of boredom and anxiety of the sort familiar to hunters and psychoanalysts. So much looking down can induce a vertigo when one finally looks up and realizes where one is, who one is.⁵⁷⁴

Barthes once connected the automatic nature of Twombly's gestures to the drawings the artist made while working in the dark as a code cipher for the Army. While in the service, Twombly developed an eye for details, for distinguishing the relevant from the extraneous. As the curator and museum director Suzanne Delehanty once wrote, "The arcadian wanderings of the mushroom hunt demand intuitive and exacting knowledge, reason and passion."⁵⁷⁵ With his acute vision, Twombly transports us into an age of morphological taxonomy; that is, when species were identified by their external physical

⁵⁷⁴ John Lanchester, *The Debt to Pleasure: A Novel* (New York: Henry Holt and Company, 1997), 234.

⁵⁷⁵ Delehanty, "The Alchemy of Mind and Hand," in Nicola Del Roscio, Ed. *Writings on Cy Twombly*, 72. Delehanty argues for an open reading of Twombly's mushroom portfolio saying: "Both diagram and plan, fictions of plant and building, question the conceptualized measurements and two-dimensional presentation. Convened without focus, this compendium of inseparable polarities of meaning and form evade an exact reading. Throughout his works these external elements and odd links to tradition, such as Leonardo, Duchamp, Poussin, mythology and poetry, are merely points of reference animating Twombly's inner vision and the mysterious private actuality of his art which expands to offer us a fresh window for self discovery." I would argue that Twombly's work is more choreographed and exacting than Delehanty argues, but exacting in its determined contemplation. I would also say that the personal in Twombly is also made highly public in the space of the museum and gallery, where any private contemplations the artist's prints evoke spur us to a ground of directed, highly tuned observation and awareness.

characteristics, not by the internal arrangement of their DNA. Like our cipher-artist Twombly, Lanchester's protagonist registers the focus needed in mushrooming, not unlike that required by a soldier or a hunter. And indeed this protagonist is himself a homicidal inn keeper, who in a chapter called "The Omelet," forages for mushrooms, adds them to a omelet he cooks at his bed and breakfast for a newly married couple, and then sends them on their way knowing their death has already begun—a slow poisoning from a lethal variety.

When we find ourselves surveying the earth, the ground on which we daily traverse, in search of mushrooms or something else, we find ourselves as many times faced with death and decay as the vibrancy of life. In print *No. VII* Twombly offers a more somber contemplation, a visual thanatopsis (**Fig. 3.8**). Most of the prints in the artist's portfolio offer meditations on the living and the biologically reproducible—gestures in crayon, the name of a protected nature park, and numerous phallic forms. And while some of these features persist in print *No. VII*, the large photographic print of a funeral at the top turns this particular mycological incarnation into a meditation on death. Twombly presents us with a sketch of a mushroom form on graph paper at center. To the left of this he affixes the image of a species from a mycological guidebook. In the upper right portion of the print appears another guidebook mushroom, and to the left of that, the funeral scene. Two women stand over a coffin covered in flowers. With two other groups of mourners in the background of the image these women are the last to say their goodbyes. Soon the body will be lowered into the ground, and will become decomposed, in part, by fungi. But as in all of Twombly's prints, death here is not an endgame. In the

repetition of mushroom forms, in the format of the reproducible print, the mushroom signifies the place of simultaneous decay and regeneration.

In Twombly's prints, so often, one thing leads us to another, a mushroom leads us to a work of art, a work of art to death, and decay into spores, copulation and the possibilities of life. The artist's forms and gestures guide us through the space of imagined possibilities, a strategy I saw at work in an unlikely, but equally relevant and illuminating place. While at the University of California-Santa Cruz in August 2006, reading through papers at the John Cage Mycology Collection, I came across a letter from the artist Alison Higgins (b. 1933) addressed to Cage.⁵⁷⁶ Higgins, the wife of the composer and artist Dick Higgins (1938-1998), was born Alison Knowles, and was known for her contributions to performance, book art, sculptures, prints and sound in art, and particularly her fine chopping of lettuce and other garden vegetables. At the time she wrote to Cage, she was connected to the avant-garde movement Fluxus, which proclaimed the death of the author, the end of the art work, and the incongruity of just about everything. Many Fluxus artists created kits that contained random and often nonsensical arrangements of objects paired with commands that were either silly or impossible to complete. In one piece, Fluxus artist Yoko Ono printed the word "fly" on a piece of paper, an illogical instructive that leaves the participant feeling inadequate, duped or the object of an inside joke. Many artists participated in this 1960s art movement, which embraced tenets of Dada, conceptualism and happenings. In her letter to Cage, Knowles details her performance of a Fluxus piece by artist Nam June Paik in Paris:

⁵⁷⁶ It was dated Saturday, December 12, but no year was provided.

This one involved climbing to the top of the Eiffel tower, cutting a lock of my hair off and watching it blow away. Dick Higgins wasn't too interested in the piece and decided to wait for Paik and me below. So I cut some hair and we watched it blow, and took the elevator down. Dick suggested that we could find the hair in a grassy area where the wind might well have taken it. We had nothing better to do that fine afternoon and we three started stalking this lock of hair. We found instead a small one and a large bed of *Pluteus cervinus* [The Deer Mushroom]! 1. So, other things led us into mushrooms; And mushrooms, even in their absence, lead us into other things.

This account of the Knowles-Higgins-Paik follicle-fungi foray describes a singular event that offered a structure for thought and action, where the players moved physically from the Champs de Mars, through the various levels of the Eiffel tower and back down again via the elevator. The Fluxus commands Paik administered in writing became the impetus for movement, but also one of the “other things” that led the trio to Deer mushrooms. As Knowles notes, however, it was not merely the finding of the mushrooms that completed the piece; even in the searching for more mushrooms the artists were led to “other things.” One can only imagine in Knowles’s description of her Paik performance that the “other things” could be found somewhere in the dispersed space of the Eiffel Tower’s top floor observatory, the elevator and the grassy area surrounding the iron beacon.

Knowles’s performance of the Paik piece illuminates a space in-between—between the natural and built environments, the imperative and the action, between the sporing and the cogitating. In the process of cutting a lock of hair, dropping it from the top of the Eiffel Tower and descending in an attempt to retrieve it, Knowles embarked on a hunt that left her stumbling upon mushrooms in the process of the piece’s enactment; in her accidental foray, Knowles experienced the space as both nothing and everything, a nexus of images and actions freely composed in the absence of directives written into Paik’s Fluxus directives. In her performance of the piece, and in Paik’s construction of it,

thoughts and actions emerged between the lines of his text and the theatrical sequence of events. The action led them to the mushrooms and the mushrooms to other things. Cage would have been particularly eager to learn of the Knowles-Higgins-Paik Paris intermedia piece. Cage remains one of the foremost thinkers on indeterminacy and chance, and he frequently arranged his own works as ways to precipitate the unexpected and allow the self to wander through stanzas and silences. In the distance from one mushroom path to another, from the sound of a keynote to the interruption of a cough, lies the space of closely and thoughtfully considering—of contemplation. Twombly's oeuvre likewise searches the space that has yet to be written, not engendering a mere performance, but the spaces in between and through the gestures and the mushrooms.⁵⁷⁷

⁵⁷⁷ The critic Demosthenes Davvetas provides a reading of Twombly's work that is in many ways sympathetic to the interpretations of Rosalind Krauss, that read Twombly's art as something that "does not love making pictures; it does not love to re-present." And while I am not sure an artist has the ability to control whether or not that letters on a page form a word or not, whether a picture is just a set of lines, shapes and colors, or whether or not the end result is a two-dimensional illusion of a three-dimensional form, I would agree with many of Davvetas' analysis of Twombly as, "likened to a permanently open door, where the door itself is a passageway, but where the art and artist stand permanently "in between." This passage, of course, brings to mind Marcel Duchamp's *Door: 11 rue Larrey* (1927), an installation of a door that can always be seen as both open and closed and neither open and close, the door itself hung between a stairway and two open rooms. One passage by Davvetas summarizes Twombly's project particularly well: "Twombly...rearticulates the 'well known' as the 'less well known,' etc., to the point where it is barely 'known' at all, until it could not possibly become something 'known,' even something 'recognizable' in the history of civilization... Twombly's construction of time, then, is not linear, but multiple and metamorphic." See Demosthenes Davvetas, "The Erography of Cy Twombly," *Artforum* (Apr. 1989): 131-32. Scott Watson, "Cy Twombly: Prints," brochure for an exhibition at The Vancouver Art Gallery, December 11, 1982-January 30, 1983. This show included all ten prints in *Natural History Part I Mushrooms* (1974). Of the portfolio the curator Scott Watson said: "Using, yet abandoning, the model of the taxonomy of a natural history book, he confronts the strange with the familiar to make a natural history, not from science but from the poetic imagination... form is allowed to suggest form with erotic playfulness. On one level the series is about the delightful shapes of mushrooms." It is not clear on what other level Watson finds Twombly's portfolio operating. And I would say that this is certainly about imagination, but one infused by science, rather than distinct from it. "If Twombly's images do not give us empirical knowledge they give us a world we've lost, when myth and poetry accounted for the things of the world and its transformation," argues Watson. I would argue Twombly is far more optimistic and filled with a humor for life than to offer up so grim a final note. The pieces offer, instead, the possibility of viewing empirical and poetic knowledge not as distinct space, but as categories of knowing that overlap, inform and inflect one another. They seem less about loss than origins on the verge or being realized. For a shift in reading Twombly's markings as cancellations see Lynne Cooke, "Cy Twombly: New York and Houston," Review of the exhibition *Cy Twombly: Retrospective*. *The Burlington Magazine* 137 (Feb. 1995): 135. "And those calligraphic gestures that formerly registered as defacement and cancellation, now give way to a method of overlaying strokes that, far from imploding, begin to construct protean forms, albeit in a

Accounts of mushroom hunting I have read, from those of Cage to those of the ethnomycologists R. Gordon Wasson and Valentina Pavlovna Wasson, seem to value the journey of the foray over the end result, and emphasize the pleasure of looking along the way. For these mushroom hunters, the hunt itself becomes as central and important as what they end up having identified and collected. John Cage provided various accounts his own adventures mushroom hunting in his lengthy ode to fungi in his *Mushroom Book* (1972). In one foray:

Guy Nearing told
us it's a good idea when hunting
mushrooms to have a pleasant goal, a
waterfall for instance, and, having reached
it, to return
another way. When, however, we're obliged
to go and come back by the same path,
returning we notice
mushrooms we hadn't noticed going out.⁵⁷⁸

The goal for Cage was a rather general one, a kind of diversion on the road to hunting mushrooms. And yet even by repeating the experiment of the walk in reverse, Cage notices mushrooms he had not noticed on the first leg of his trip (likely a combination of chance and looking a little more closely on his return). But just as often in Cage's journeys, upon setting his sites on such forms as a waterfall, he came into contact with mushrooms; one thing led to something else. For many mushroom hunters, the journey is as important as the proposed end game.

rudimentary fashion," says Cooke. She also notes that Barthes is "still arguably [Twombly's] most acute interpreter." See also Octavio Paz, "The Cy Twombly Gallery at the Menil Collection: A Conversation," *Res* 28 (Autumn 1995): 182-83. "[Twombly] tries to recover life in its appearance, its movement, its chance...Cy Twombly wants to be able to see *through* the image in some ways" says Paz. This piece also provides some insight into the structure of Renzo Piano's Twombly Gallery at the Menil Collection, Houston, Texas, as space the architect attempted to create using the metaphor of "a butterfly alighting on a wall."

⁵⁷⁸ John Cage, *Mushroom Book*, in *M: Writings '67-'72* (Middletown, CT: Wesleyan University Press, 1969), 137 (Also published by Hollanders Workshop in 1972, with illustrations by Lois Long).

But mushroom hunters also like to recount their forays, taking stock of their fungal bounty, sorting, cleaning, counting and preparing. They take pleasure in looking after the hunt, envisioning the walk just past as productive of new observations.⁵⁷⁹ In his autobiography *Speak, Memory*, Vladimir Nabokov eloquently described his mother returning from what Russians call a *hodit' po gribi*, “looking for mushrooms:”⁵⁸⁰

Toward dinnertime, she could be seen emerging from the nebulous depths...Near a white garden bench, on a round garden table of iron, she would lay out her boletes in concentric circles to count and sort them. Old ones, with spongy, dingy flesh, would be eliminated, leaving the young and the crisp...she would stand there admiring them, in a glow of quiet contentment. As often happened at the end of a rainy day, the sun might case a lurid gleam just before setting, and there, on the damp round table, her mushrooms would lie, very colorful, some bearing traces of extraneous vegetation—a grass blade sticking to a viscid fawn cap, or moss still clothing the bulbous base of a dark-stippled stem. And a tiny looper caterpillar, would be there, too, measuring, like a child’s finger and thumb, the rim of the table, and every now and then stretching upward to grope, in vain, for the shrub from which it had been dislodged.⁵⁸¹

Nabokov’s description recalls Knowles’s proclamation that on the way to other things there were mushrooms and in even the very absence of mushrooms, there were other things. Cage would have suggested the same. He sometimes clarified his statement on the importance of listening to mushrooms, saying that we should indeed be listening to them, but only in as much as we should tune ourselves in to everything else we perceive as well. Twombly, the recluse who hardly every speaks a word about his own paintings, offers his prints and paintings as a continuous body of ruminations. The earlier white

⁵⁷⁹ Richard Kalina, “Cy Twombly,” Review of the exhibition *Cy Twombly: Poems to the Sea*, Dia Art Foundation, Bridgehampton. *Arts Magazine* LXII (Oct. 1988): 83. Kalina discusses observation in relation to Twombly’s work. “In many ways the harder we look the less we know what we’re looking at: observation continually transforms the observed.” This subjectivity suggests an inability to lock onto fixed, known facts or conditions. This lack of knowing is constantly at work in Twombly’s oeuvre and something I discuss even more in my own article in *Shenandoah* on Twombly. As Kalina says Twombly’s works we see “the unstoppable force meeting the unknowable object.”

⁵⁸⁰ Vladimir Vladimirovich Nabokov, *Speak, Memory: An Autobiography Revisited* Intro. Brian Boyd (London: David Campbell Publishers Ltd., 1999 [1966]), 28.

⁵⁸¹ Nabokov, *Speak, Memory: An Autobiography Revisited*, 29.

paintings evidence states of greater urgency, even chaos, but by the 1960s his blackboard pieces began to draw greater control into his gestural finesse. Although I do not want to suggest a progressive linear development for his body of work, I think it is important to at least revisit his work for the very reason that his mushroom prints have been so overtly left out.

Twombly's mushroom prints offer a way into sensation through something more easily recognized, operating not unlike his classical and mythological references—words “Mars” and “Apollo”—that consume his other earlier and later paintings. Here, the artist achieves sensation through a natural history, a complement to the history of humankind located in his earlier and later paintings. In a paper delivered to the public at the National Institute on October 6, 1798, the naturalist and comparative anatomist Georges Cuvier suggested a metaphor between human history and natural history that had been used since the seventeenth century in the works of the naturalist Georges-Louis Leclerc, Comte de Buffon (1707-1778):⁵⁸²

Henceforth it will therefore be necessary to add, to the [natural] history of the animals that exist at present in each country, that of animals that have lived or been transported there in the past. For this it will be necessary for physicists [*physiciens*]⁵⁸³ to do for the history of nature what antiquarians do for the history and techniques and customs of the peoples; the former will have to go and search among the ruins of the globe for the remains of organisms that lived at its surface, just as the latter dig in the ruins of cities in order to unearth the monuments of the taste, the genius, and the customs of the men who lived there. These antiquities of nature, if they may be so termed, will provide the physical history of the globe with monuments as

⁵⁸² Martin J.S. Rudwick, *Georges Cuvier, Fossil Bones, and Geological Catastrophes: New Translations & Interpretations of the Primary Texts* (Chicago: The University of Chicago Press, 1997), 35 f.n. 2.

⁵⁸³ Rudwick, *Georges Cuvier, Fossil Bones, and Geological Catastrophes: New Translations & Interpretations of the Primary Texts*, 35 f.n. 1. Here Rudwick explains that physicist here “retained its older meaning, as a systematic study of the *causes* of any phenomena in the natural world... anyone who studied the causes of (say) electricity or digestion or mountains: in effect, anyone who might be eligible to belong to the First Class of the Institute!”

useful and as reliable as ordinary antiquities provide for the political and moral history of nations.⁵⁸⁴

While Cuvier's associations here lie with animals and his work on fossils, the emphasis he places on a connection between the history of the natural world and the history of the human world is significant. For Cuvier, these respective histories operate as essential points along a temporal continuum; less dialectical than complementary in their relationship to one another. Speaking in Year VII of post-Revolutionary France, Cuvier's articulation illuminates a plausible answer as to why Twombly engaged natural history in his print portfolio. And yet for an artist so attuned to the classical world, from poets such as Virgil to the great gods of Greek and Roman mythology such as Apollo, Twombly's attention to the natural world is hardly surprising at all. Virgil and Apollo, not unlike natural specimens, serve as keynotes in the Western cultural canon. In the case of Apollo these origins lie in a pre-Christian tradition of gods and goddesses who once affected human actions and events, while Virgil stands as a cornerstone of Western writers, the scripters of our poetry and literature, as well as our histories. And in the case of the mushrooms the artist references, the artist visually recalls that other history, not of culture, but of nature. And for Twombly, as for Cuvier, nature hardly stands as the other, but rather another, a venture in a life of works that have otherwise traveled, as scholars have long noted, human and aesthetic history.

For me, the mushroom prints ultimately occupy a space where the pleasure of a contemplation is sustained, even choreographed. One brief introduction to the mushroom works notes that, "The image of the mushroom serves itself only as the thematic pretext for an accumulation, not often with Twombly, of other highly diverse images, colors,

⁵⁸⁴ Rudwick, *Georges Cuvier, Fossil Bones, and Geological Catastrophes: New Translations & Interpretations of the Primary Texts*, 35.

materials and drawings/writings/scribbles.”⁵⁸⁵ This accumulation marks a point of correspondence between the mushroom works. With Tomaselli we see the cut-up collection, the fissured whole of flowers and bees, trees and fungi. With Paine we have the sheer abundance of his 2200 mushrooms, the accumulation less a case of a botanical/mycological/corporeal bricolage than an expression of fungal fruitfulness. Twombly’s mushrooms, in contrast, art at once fastidious and fecund, ephemeral and fleeting, a filling up and a void. They park the specificity of place and its very transience all at once. They mark natural history and human history and the very illusion of either at all— they are both mythologies, after all.⁵⁸⁶ We note their forms, their bodies, their gestures, shifting visions from one print to the next. Our own bodies, fragmented, breaking down living in the “gaps of the self.”⁵⁸⁷ Twombly’s mushrooms are things, organisms, material evidence of life and death. But then they morph as quickly into something else, a gesture, an action, an event, a passing thought. We sit and look, move around the room and look again, contemplating our next move. We pleasure in the lingering, toiling as if immersed in the richness of fertile soil. Twombly’s visual accretions (our visual accretions), rise through the collaged papers and saturated scribbles of his prints, unexpectedly, yet elegantly like mushrooms rising through soil after a rain.

⁵⁸⁵ Cy Twombly: *Catalogue Raisonné des Oeuvres sur Papier* Volume VI, 1973-76, with a text by Roland Barthes (Milan: Multhipla Edizioni, 1979).

⁵⁸⁶ Henry David Thoreau, “Walking,” in *The Portable Thoreau*, edited by Carl Bode (New York: Penguin, 1962 [1862]), 600. “You may name it America, but it is not America; neither Americus Vespucius, nor Columbus, nor the rest were the discoverers of it. There is a truer account of it in mythology than in any history of America, so called, that I have seen.”

⁵⁸⁷ Vardeoe, Ed. “Cy Twombly: An Artist’s Artist,” 170. The artist Francesco Clemente says that Twombly exhibits “the acceptance of the fragmentation of the self, that you don’t have to have this sort of male identity presence in the world. You can be more passive. You can let everything break down. You can live not in the continuity of the self but in the gaps of the self.”

Conclusion

Natural History—Concluded: Transforming the Specimens

Shall I not have intelligence with the earth? Am I not partly leaves and vegetable mould myself?⁵⁸⁸

--Henry David Thoreau

If I am my own collection why am I scattered outside my body?⁵⁸⁹

--Jonathan Lethem

I. Taxonomy

Taxonomy: 1. The science of classifying organisms. 2. The conceptualization of the cosmos into discrete categories.⁵⁹⁰

II. Unloading the Hold

Naturalists, archaeologists, and other field scientists spend a great deal of time in the laboratory or study after their field work, categorizing, classifying and conducting analysis of their specimens, artifacts and samples. A dissertation that has collected a number of art-work specimens and has made various assertions about the state and fate of natural history certainly requires an evaluation and summation. My central argument is that the visual traditions and theoretical formulations of natural history have operated as a nexus for many artists in the contemporary era, who have turned to supposedly antiquated modes of looking to explore longstanding and reductive nature-culture bifurcations and begin new dialogues about emerging paradigms, in which plants, animals and fungi

⁵⁸⁸ Henry David Thoreau, *Walden* (Philadelphia, PA: Courage Books, 1987 [1854]), 87.

⁵⁸⁹ Jonathan Lethem, "The Collector," in *Fred Tomaselli: Monsters of Paradise* (Edinburgh: The Fruitmarket Gallery, 2004), 73.

⁵⁹⁰ *Natural History and Other Fictions: An Exhibition by Mark Dion* (Birmingham, England: Ikon gallery, 1997), 73.

engage in symbiotic, ecologically-conscious dialogues. Using motifs such as curiosity cabinets and systems of taxonomy, the artists featured in this dissertation—Fred Tomaselli, Mark Dion, Roxy Paine, Walton Ford, and Cy Twombly—demonstrate how contemporary artists have expressed a growing interest in the paradigms of natural history. I have illuminated the projects of the central artists here with reference to works by Robert Morris, Robert Smithson, Pipilotti Rist, Jean Dubuffet, John Gould and John James Audubon, in an attempt to understand just where Tomaselli, Dion, Paine, Ford, and Twombly have come from and to address some of the contemporary projects relevant to their sensibilities.

While I have made many assertions throughout the dissertation, three points resonate as commonalities among these artists:

First, all of these artists are concerned with taxonomical borders. Walton Ford amplifies the work of John James Audubon, in the process of rendering his species-specific birds and mammals. He brings Audubon into the arena of contemporary art consumption, providing the best illustration of the five artists of adhering to a correspondence of an animal's binominal and his image. Mark Dion brings into his work the concept of the Great Chain of Being, Mickey Mouse near the top of his *scala naturae*. His projects, including his arthropods, repeatedly question the association of an organism and its name, as well as the assumption that the living world fits within the space of a hierarchical ladder or scale, with humans (and God) at the top. Tomaselli's paintings build from imagery in naturalist guidebooks and popular magazines and catalogs, making new animal representations that either obscure or mingle species specificity. His "maximalist" paintings draw from his ornithological prints, which more clearly mark out

the distinctions between one species and another. Roxy Paine's poppies and mushrooms give three-dimensional presence to representations of specific species. He culls his conception of their taxonomical identities into his own artistic rendering of each flower or mushroom, labeling them clearly in his titles. Cy Twombly provides images directly from mycological guidebooks in his print portfolio of mushrooms. But he also writes over and covers their binomials with collage material, subverting their proper scientific identity.

These operations are in large part simple ones of acknowledgement, adherence to or a subversion of naturalist taxonomy. More important, however, is the way these artists have used this scientific system of classification, that applies names to organisms—"species"—to question and undermine the very nature of culturally-constructed categories. They ask us to consider why we put certain things and organisms within certain conceptual frameworks and boxes, both physical and imagined. Ultimately, their critiques are concerned with the very categorization of knowledge itself, and the categorical schema that effect how and why we acquire information the way we do.

Second, these artists demonstrate a sustained engagement with organismal bodies, attending to plants, non-human animals and fungi in ways that extend the subversion of taxonomical systems, including how they have more broadly applied to our wider culture and to the human body. Applying their suspicion over the origins and stability of knowledge systems, these artists' works delve into ontology. They provide a space where one may come to terms with, and at the same time envision, just what it is to be a human being, in a body, in the late twentieth and twenty-first centuries. In chapter one on plants, I began with Dion and Morris, an investigation into the body that reckons with the

classification of “I.” In a nod to Linnaeus and Morris, Dion leaves his “I” outside the box, freeing up the human body to walk away. In chapter two on animals, we found ourselves becoming mice-men, butterfly-men and fox-men, in essence, taking the shape of the animal other, becoming animal, or at the very least a hybrid cross. In chapter three, the animal other dissolves into a decomposing fungal soil, a complete dissolution of the self; not destruction, but one that can thrive on the richness of decay, and embrace new possibilities for being.

My third point is one at which the first two converge. In an attempt to resolve a historical past in the present, Dion, Tomaselli, Paine, Ford and Twombly use natural history to explore and negotiate memory and mythology in the process of their retreat into a science long past and thought to be obsolete. By referencing the natural history of the eighteenth and nineteenth centuries, its golden age, these artists marshal bifurcated world views of the past, in which humans occupied a conceptual sphere largely separate from other living organisms, where naturalist endeavors were often concomitant with colonialist enterprises, and where observation and research into the intricacies of nature was not necessarily accompanied by ecological awareness or environmental protection. At the same time, this naturalist historical past was also marked by a burgeoning field of science that ultimately produced Darwin’s pivotal theory of evolution by the mechanism of natural selection. The golden age of natural history was more open from an interdisciplinary perspective, in many ways, than our own period, which is often compromised by disciplinary specialization and competition between fields within institutions of higher learning.

In mining this often dialectical past, by bringing it into a present moment, these artists have caught in natural history, as Aby Warburg himself would have said of his serpent or nymph, a kind of resolution of memory and trauma. “Memory” (in the Warburgian sense) is the past conceptualized in the present. In turn, trauma becomes complex and subtle. I would argue that it does scatter across a field of colonialism, ecological destruction, and reductive nature-culture bifurcations, but I would also say that it exists in, among many things, the consolidation of living beings into the arguably homogenous category of “life,” the relegation of the field of nature to the laboratory of science, and, finally, the extinguishing of distance.⁵⁹¹ These artists beckon us with a Visionary Natural History: Through the space of their own serpents and nymphs—“traditional” natural history—they arrive at a present space of awareness that acknowledges this past, both violent and full of promise, to reap the wisdom it offers, and to use it to contemplate new possibilities for being.

I hope that this dissertation will help to raise future questions about the nature and role of natural history in contemporary art, and our wider society. Natural history remains, as the artist Mark Dion has said, “a confounding paradoxical term.” As a large umbrella discipline, subject and tool for inquiry that incorporates many specialized

⁵⁹¹ Michael Foucault, *The Order of Things: An Archaeology of the Human Sciences*, 66, 127-29, 150, 160, 209, 217, 232, 238, 244, 252, 256-57, 265, 268-69, 272-73. A great number of passages illuminate Foucault’s distinction between living beings and life, which parallels his distinction between natural history and biology. But two passages in particular make this distinction directly and can be found on pages 127-28 and 160, respectively. “Historians want to write histories of biology in the eighteenth century; but they do not realize that biology did not exist then, and that the pattern of knowledge that has been familiar to use for a hundred and fifty years is not valid for that previous period. And that, if biology was unknown, there was a very simple reason for it: that life itself did not exist. All that existed was living beings, which were viewed through a grid of knowledge constituted by *natural history*,” and “This, no doubt, is why natural history, in the Classical period, cannot be established as biology. Up to the end of the eighteenth century, in fact, life does not exist: only living beings.” The Foucault passage from pages 127-28 is also quoted and expanded upon in Richard Doyle, *On Beyond Living: Rhetorical Transformations of the Life Sciences* (Stanford: Stanford University Press, 1997), 10-13. Doyle argues that it was the reorganization of living beings within the object matrix of the life sciences that allowed for such modern fields of study as molecular biology.

disciplines in its purview, and that can be seen at work in the contemporary era as much as in the eighteenth century, natural history will continue to require the attention of scholars from many disciplines of study. I also hope that natural history will continue, if not increasingly so, to be thought of as a vital field of knowledge. In our post-postcolonial (in some areas of the world) milieu, we might just be able to claim the best of what the subject has to offer, allowing ourselves to be pulled away from the microscope even for a moment, so we can remember just what it is that we are looking at. For art historians, we can no doubt benefit from balancing our discrete studies with a wide-angled lens, research and writing, observation and practice in the field.

Afterword

I. Wildness

“In wildness is the preservation of the world,” said Thoreau.⁵⁹² From his famous essay “Walking,” the writer’s statement has been among those most quoted, particularly among nature enthusiasts. There no doubt exists a conservationist, if not preservationist impulse in his assertion about human-nature relations and the disappearing “frontier” in American, in particular. But I also wonder to what extent we extend Thoreau’s observation to new frontiers; places like outer space and the oceans, but also frontiers of the self and cosmological conceptions of time-space continua. Thoreau’s essay is its own exercise in wildness—asserting a place for nature amidst a quickly developing countryside and in the next breath waxing prolific about the virtues of the yeoman farmer. It hardly ever settles down into one place, as if the writer himself was searching out in his descriptions just where it was that he was going, and just what constituted wildness. Though many have equated “The West” with “the Wild,” such a reading provides a rather limited reel to a writer otherwise known for universal ideals and transcendental transformations.

Richard Preston’s recent book *The Wild Trees* (2007) spurred my thinking more actively about Thoreau’s essay. Just after his famous sentence about wildness, Thoreau writes, “Every tree sends its fibers forth in search of the Wild.” Granted the tree serves as a metaphor for the Westward explorer, the yeoman farmer, but sometimes a tree is just a tree; a great, magnificent wild tree. In his research on people who climb the world’s largest trees, Preston often found himself climbing among the canopies with arborists and

⁵⁹² Henry David Thoreau, “Walking,” in Carl Bode, Ed., *The Portable Thoreau*, 592-630 (New York: Penguin Books, 1982): 609.

botanists. In an expanse of giant redwoods in an area known as the Atlas Grove, Preston and canopy botanist Steve Sillett paused before their final descent towards the ground. “There’s always a moment during a climb when you lose yourself. You don’t have a name anymore...you become open to what’s around you. You start feeling the limits of your perceptions as a human being. You perceive time more clearly in the redwoods, and you see time’s illusory qualities,” Sillett observed.⁵⁹³ Thoreau’s wildness had as much if not more to do with a wildness of spirit, an expansion of the frontiers of self than it did with any territorial claims over land. The wild for Thoreau, as it is for Sillett, is defined as a place of freedom, where the mind has room to move, where the senses open up in such a way to magnify one’s perceptive abilities. It is a place free of commerce and the clock, a repose for the soul. Wildness is within more than it is without, though the latter, as Sillett noted, encourages the former.

Sillett’s redwoods also mark a space where “you don’t have a name anymore.” It seems a curious turn for a canopy botanist whose role it is to identify, name and classify entire ecosystems of organisms that we never knew existed, at least not in the wild trees. But Preston’s account of Sillett’s treetop activities indicates naming as a consequence of something more central to his mission—description:

Sillett’s first task in trying to understand the redwood canopy would be to describe the things that live there. Putting together a basic picture of an ecosystem or habitat and what lives in it is called descriptive natural history. Descriptive natural history is something that the great explorers of nature did—John James Audubon did it when he traveled through North America collecting and drawing birds, and Charles Darwin did it as a young man sailing on the H.M.S. *Beagle* to, among other places, the Galapagos Islands.⁵⁹⁴

⁵⁹³ Richard Preston, *The Wild Trees: A Story of Passion and Daring* (New York: Random House, 2007), 276-77.

⁵⁹⁴ Preston, 147.

Preston's focus on description rather than naming as Sillett's primary task strikes one as a rather keen distinction to have made. A description provides a full text of a species, the name only the shorthand abbreviation. The name can only suggest a state, a wild state, but not features of an organism in its entirety. Preston also adds the adjective "descriptive" to the subject of natural history. To characterize the umbrella discipline as such reminds us that natural history largely operates as a narrative, both textual and visual, in the morphological descriptions of a species and the elephant folios of John James Audubon. That Sillett finds himself still engaged in an activity so closely associated here with the nineteenth century is itself notable.

In a piece on forgetting and lost knowledge, biologist David Ehrenfeld explains the ways that shifts in science have opened new areas of research but also dangerously thrown the cover over decades of knowledge about the natural world, much of which was accumulated by many such nineteenth-century naturalists as Audubon and Darwin:

We are on the verge of losing our ability to tell one plant or animal from another and of forgetting how species interact with one another and with their environments. In our universities, certain subjects no longer have anyone to teach them, or they are taught on a piecemeal basis by people from the periphery of the university or outside it altogether. "Classification of Higher Plants," "Marine Invertebrates," "Ornithology," "Mammology," "Cryptogams" (ferns and mosses), "Biogeography," "Comparative Physiology," "Entomology"—you may find some of them in course catalogues, but too often with the notation alongside, "Not offered in 1996-97." The following year, and the year after, they will still not be offered...New students who are attracted to the study of whole plants and animals still exist, but they find themselves in a learning environment that is hostile to their kind of biology, and, not surprisingly, their numbers are dwindling...there is now just one actively working scientist who is familiar with the taxonomy of North American earthworms. He is at a small private university in Iowa. Another earthworm taxonomist, trained by his mother, has been working at a post office in Oregon. There are no graduate students studying earthworm taxonomy in the United States and Canada. Fifty years ago, at least five American scientists, plus their students, were at work in this field...I fear

for us when there is no one left in our places of learning who can tell one moth from another, no one who knows the habits of hornbills, no one to puzzle over the diversity of hawthorns, no one even to know that this knowledge is needed and is gone.⁵⁹⁵

Ehrenfeld's essay evokes, as does Thoreau's "Walking," a call to action, to gather up the descriptions that we might lose, and ultimately the ability to tie those descriptions to material beings, organisms, and to appreciate their interconnections. As an ecologist Ehrenfeld's work centers on entire systems of organisms and requires extensive time in the field. In our fast-paced world where most people spend ninety percent of their days indoors and read more blogs than books, Ehrenfeld's alarm over our inability to converse knowledgably about the natural world is warranted. Caught up in laboratories with high-tech equipment scientists have often forgotten, or at least been distance from, the value of descriptive natural history and the naked eye.

But I do not want to slough off this burden onto scientists alone. There is something in Preston's "descriptive natural history" that strikes me as rather central to the project of the art historian. Art history as a discipline presently finds the methodological pendulum swinging back toward formal analysis and the kind of description it offers, as a means of knowing. There is no doubt much to be gained in this move, but not if the pendulum swings too completely in this direction. The anthropologist Clifford Geertz characterized his work as "thick description," which he conceived as a process that could illuminate the context of a given behavior or occurrence or set of circumstances to an outsider. New historicists and social and cultural art historians took up Geertz's method as a way to broaden the scope of their work and give it greater relevance among those both within and outside of the discipline. A painting became as much about the

⁵⁹⁵ David Ehrenfeld, "Vanishing Knowledge," *Harper's Magazine* (1 March 1996): 15-17.

circumstances of its making, as about the way it looked. New Formalism picks up on what Geertz called “thin description,” which describes the object almost exclusively on its own terms.⁵⁹⁶ The possibilities for “thin description,” return us to what Ehrenfeld fears we will lose—the ability to tell “one moth from another.” Let me state clearly that this is not a direct return to connoisseurship, that often suspect method of classifying art, a practice bound up in one’s social class and specific notions of taste that has Pierre Bourdieu turning over in his grave. New Formalism attempts to awaken an individual’s ability to look and describe, to articulate the spirit of the Wild Trees within the context of the Atlas Grove. We (and I mean art historians and scientists alike) must find a space between the “thick” and the “thin,” between the wild trees and the wonders of technology, between the description and the name.

This space of the in-between requires a freedom to wander but also an acceptance of certain artificial systems of organization (i.e. taxonomy). Natural historians and art historians alike characterize and identify organisms and oeuvres, placing them into some kind of categorical schema based on their perceived morphologies. I have often wondered, outside the practical purposes of data organization, if we gain anything as scholars, as people from the processes of observation and description and if so what. The art historian Jonathan Weinberg, who has written on the neo-Dada artists Jasper Johns and the late Robert Rauschenberg has considered our society’s “obsession with ‘matter in the wrong place.’ It could be argued that culture is nothing more than an elaborate set of systems for putting experiences and people into their proper categories and functions,” he

⁵⁹⁶ Clifford Geertz, "Thick Description: Toward an Interpretive Theory of Culture." In *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973): 3-30.

says.⁵⁹⁷ Weinberg's comment suggests a Western culture embedded in codified clarity and structure that extends from materiality to the experiential, something which could easily be extended to systems of communication, whether visual or aural, written, gestured or spoken. This order lies at the heart of the naturalist project where words affixed themselves to images and images affix themselves to bodies.

In this structural system of words and images, names and descriptions, ordering and knowledge remain intimately tied together. Their entwinement insures a system of correspondences that secures that which have learned and understood. But the system is not perfect, and it is after all merely a system, something that requires us to suspend our disbelief in order for us to communicate effectively with one another about the words and images it contains. From this structure of knowledge at least two important paths emerge: one that creates a space for enlightenment and another that contains a space of perimeters and control. "The desire to know is as often motivated by love as by hate," says Eco-writer Rebecca Solnit.⁵⁹⁸ Both states are moved by curiosity, she explains, but love drives a desire to understand the universe, while hate promotes the control of it. In America, this second manifestation of the desire to know became tied to doctrines of progress, manifest destinies and "the advancement of power," she explains.⁵⁹⁹ This view no doubt brings to mind the work of Michel Foucault, who has delineated the relationships between power and knowledge in many texts. In one, however, he suggests a space where this love and hate become commingled. In the positivist milieu of nineteenth-century science—a place often infested with the power structures of

⁵⁹⁷ Jonathan Weinberg, "It's in the Can: Jasper Johns and the Anal Society." *Genders* no. 1 (Spring 1988): 174.

⁵⁹⁸ Rebecca Solnit, *As Eve Said to the Serpent: On Landscape, Gender and Art* (Athens: The University of Georgia Press, 2001), 21.

⁵⁹⁹ Solnit, 21.

colonialist politics—Foucault offers the possibility that the scientific solicitation of truth produced a kind of *ars erotica*:

Perhaps this production of truth, intimidated though it was by the scientific model, multiplied, intensified, and even created its own intrinsic pleasures. It is often said that we have been incapable of imagining any new pleasures. We have at least invented a different kind of pleasure: pleasure in the truth of pleasure, the pleasure of knowing the truth, of discovering and exposing it, the fascination of seeing it and telling it, of captivating and capturing it, of confiding it in secret, of luring it out in the open—the specific pleasure of the true discourse of pleasure.⁶⁰⁰

Even within the confines of an academic discipline or the specific power structures of a field of knowledge acquisition and production (such as natural history, art history or science) lies the possibilities for an erotic pleasure, a kind of pleasure which transcends the hungers of the curious and the power seekers; Foucault's academic pleasures move into the realm of the erotically enlightened, or at the very least, imbue learning itself with a certain eroticization of the cerebral cortex. This possibility for pleasure that Foucault discovers in science has long been associated with the arts. It comes as no surprise that the word "beauty" in Greek means "order," a philological fact Thoreau himself points out in "Walking."⁶⁰¹ The visual arts elicit a kind of ordering through their display of beauty, however constituted. While the ancient Greeks sought a beauty in symmetry, rationality and order, I suspect there lingers more in the space between, amidst knowledge we have lost or truths we have yet to ascertain, among the things we know and those that escape taxonomical signification, in our own reach for wonder, even among the canopies of wild trees.

⁶⁰⁰ Michel Foucault, *The History of Sexuality: An Introduction*, translated by Robert Hurley (New York: Vintage Books, 1978), 71.

⁶⁰¹ Thoreau, "Walking," in Carl Bode, Ed. *The Portable Thoreau*, 625.

II. *Specimen Case*

The artists I have included in this dissertation constitute only a few of the many contemporary artists who have engaged natural history and evolutionary theory. Since I began this project numerous artists have emerged to engage natural history. The artist Rachel Berwick, for instance, has alluded to Darwin with her giant Galapagos turtles in *Lonesome George* (2005) and referenced species extinction with her sculptures of passenger pigeons in *A Vanishing; Martha* (2003-05). David Beck's *MVSEVM* (2006) brings the curiosity cabinet into the modern era as a museum of wonders in miniature. While their work does not wholly focus on natural history, artists like Fred Wilson and Renee Green often address issues related to classification, categorization and institutional purview. And then there are artists like Robert Rauschenberg who have overtly referenced natural history in a few works. As remains the case with Robert Smithson, the larger role of such a field of inquiry remains to be fully explored in Rauschenberg's oeuvre. And that of course leaves Smithson himself, whose work engages some aspect of natural history at almost every turn. That, however, is something that must be reserved for my next study on the geological impulse in natural history, *Formations in Art*. These artists comprise but a few of those who have readily engaged natural history in the post war and contemporary eras. There are of course many more who have taken up natural history for different reasons, different purposes, who do not necessarily comprise a movement of contemporary naturalists as such, but who have found the discipline ripe with metaphors, intellectual nuance and engaging visual material. Any failure to address these artists in this dissertation remains my own.

What becomes clear in any investigation of natural history in the contemporary era is the multiplicity with which it is attended. From one artist to the next, from one work to the next, artists have engaged naturalist motifs and theoretical underpinnings as a way to address a whole range of issues from the public to the personal. That said, some stories that can be woven about natural history in the contemporary era, in the realm of the visual arts at least, emerge as more compelling than others. I would argue that artists like Mark Dion, Fred Tomaselli, Walton Ford, Roxy Paine and Cy Twombly have all taken up natural history for three reasons. First, natural history operates as a kind of umbrella or anti- or non-discipline, which allows it to be a springboard for talking about a range of diverse issues at the intersections of art and science. Second, we can look to natural history's displacement by more modern disciplinary subjects such as molecular biology; but even the distinction between biology and zoology, botany and mycology allows these artists to engage paradigm shifts and explore spaces between epistemology and pragmatism. Third, in the age of microbiological science, an engagement with natural history reinvests observers with a sense of wonder, observers who have been largely reduced to DNA codes with the micro-analysis of genes and chromosomal functions.

While I have made many broad claims for the artworks that I have discussed, I do not want to make parallel claims for artistic intention. In other words, I have not tried to account for and am not really that interested in answering whether or not these artists set out to claim these theoretical or visual positions for their work, though I have the utmost respect for their goals. The work of the art historian Margaretta M. Lovell's has become among those whose strategies I have looked to for guidance. In the introduction to her book *Art and a Season of Revolution: Painters, Artisans and Patrons in Early America*

(2005) Lovell describes her own method as “the outward-moving synchronic analysis of single objects....not as quickly solved inquiries into making and patronage but as almost-inscrutable center points which prompt a series of ever-expanding interrogatives.” She proceeds to explain that her “material-culture method...reads objects to unfold out knowledge about culture rather than reading culture to better our appreciation of singular artworks.”⁶⁰² Though Lovell directs her methodology at works from the eighteenth century, particularly portraits, she could have just as easily attended to works in the contemporary era. Whether intended or not, the work of Dion, Tomaselli, Ford, Paine and Twombly reaches from the pre-Enlightenment era of the Renaissance *Kunstkammer* through the classical age of natural history and the revolutions of Darwin to a quite contemporary, post-evolutionary age that has in many ways replaced a descriptive natural history with descriptive cosmology. The success of these artists’ works lies in their ability to open up old and new avenues of thinking simultaneously, many of which make specific connections between art and science. But these works also more sweeping universal gestures and theoretical, epistemological and cosmological positions we are only beginning to come to terms with.

Three works by Roxy Paine—*Specimen Case* (1995), *Model Painting* (1996) and *Blob Case (No. 8)* (1998)—demonstrate the ways these artists have drawn out themes such as evolution, origins and artistic creation from daubs of paint (**Afterword Figs. 1-3**). Each piece consists of brushstrokes, daubs, swooshes, and blobs, more sculpture than painting, and cast in polymer as Paine has done with his poppies and mushrooms. He orients some horizontally and others vertically, in alternately long and short strokes.

⁶⁰² Margaretta M. Lovell, *Art in a Season of Revolution: Painters, Artisans, and Patrons in Early America* (Philadelphia: University of Pennsylvania Press, 2005), 4.

Differentiating each swath of pigment from the next, Paine regularizes and contains his oozes within the frame of the rectangular canvas. He classifies each stroke with a number, not unlike the taxonomical identification process of a naturalist encountering a new species in the field. The name of the pieces suggests a naturalist's cabinet, something that contains butterflies or other insects, rather than pieces of a painting. *Specimen Case* and *Blob Case (No. 8)* offer a glimpse of a deconstructed painting or segments from different sculptures, either as parts of a single work or of many. Yet they stand as works of art in their own right, complete as sculptured paintings. For the art historian these works of art find counterparts in Jasper Johns's *Painted Bronze* (1960) and Roy Lichtenstein's *Big Painting No. 6* (1965), where the artists called to mind the styled brushstrokes of New York School artists Jackson Pollock and Willem De Kooning, respectively. Paine pushes these examinations of appropriation and artistic identity into the realm of natural history, where every shape becomes a morphological sign post, and where his brushstrokes resemble less egoic identity than just another of the world's billion specimens.

Specimen Case and *Blob Case (No. 8)* also illuminate the great variety of things that we cannot categorize at all, let those of a movement, style or method of painting. Paine's "specimens" and blobs stand in for the every artist, the every art work, the every organism, the every thing. With only a finite number of blobs, daubs and swaths of sculptured strokes contained within the borders of his frame, Paine's works of art become their own absurd renderings. They can never possibly encase all the specimens, all the varieties of paint, the ways it is applied, and the things it represents. His two little "paintings" demonstrate the inability to exhaust all specimens, to come to terms with the

nature of specimens any more than we can possibly come to understand the nature of painting. In his use of the naturalist concept of the specimen, Paine spoofs art historical paradigms of knowing. He conflates the naturalist's interest in taxonomy with the connoisseur's identification of artistic authenticity. Who gathers, or in the case of the artist, depicts a specimen? Who gets to name and classify each bug, each blob, and with what rights does one engage in such an activity? The very act of classification, for Paine, connotes a value system where certain people get to have the vocabulary (often construed with knowledge) to name things. Who gets to be the keeper, the person who oversees our systems of knowledge and who gets to place value upon the things that our named? Paine's specimen cases meticulously, but irreverently extinguish the specimens of any worth, exposing their arbitrary boundaries and their class-specific, epistemologically-based codings. But they also get us to look closely at a gesture, to consider up close that which we often view only as a series of brushstrokes comprising a larger representation.

Model Painting, similarly, operates as a singular work of art, but presents itself as a simulacra or even a miniature version of its other. Like his other two specimen cases Paine's *Model Painting* functions as much as a sculpture than a painting. Paine's painting contains pieces of paintings, brushstrokes to be assembled. They recall the model airplanes and cars I built as a child that instruct one how to assemble a whole transportation vehicle from a finite set of parts. While there are variations to the ways things come together, the end product becomes practically a given. Paine's *Model Painting*, then, like the sets of model planes and cars, suggests the same kind of algorithmic patterning that takes place in Daniel Dennett's explanation of Darwinian natural selection. Rather than being spurred by the genius of godly creation or artistic

creation, paintings and the nature of art spring quite unremarkably from the next artist, the next art work, etc. Paine's specimen cases alternately suggest a space where paint acts as a metaphor of organisms, but also of artistic creation and production. The anxiety manifest by these three painting-sculptures lies not only in their suggestion that we have we have displaced species in our environment in our attempts to understand and protect them. Paine's specimen cases take us beyond the realm of nature into our culture gardens, wherein our own creative acts become mere models already circumscribed by a given set of forms and gestures.

And yet Paine's specimen cases and the process of creation on which his pieces play hardly imply a state of affairs where our given situation arises unremarkably. Just as Dennett views Darwin's evolutionary function as existing *ad infinitum*, playing out predictably, though indeterminately, to create a future lineage of species, so too will humans continue to create paintings, model paintings, specimen cases, collect specimens and to participate in their collection, conservation and destruction. The process indicates nothing less than us all having the greatest responsibility to embrace each algorithmic function and each moment of creative consciousness. The human capacity to embrace the great diversity and variety of our creative and evolutionary futures remains for me—as the case of Paine's specimens suggest—nothing less than remarkable. To argue the ways that Paine's paint specimens fit into a self-referential history of art history and paint misses the point here. Paine's work, as much as the other artists I have discussed in this dissertation, finds itself engaged in a far wider sense of being.

In an article on the value of pragmatic versus epistemological knowledge writer Edwin Dobbs argues that we must acknowledge our anthropomorphic conception of the

universe, but also embrace our *inability* to measure everything, and to spurn single disciplines, such as physics, as a means of understanding in arriving at universal truths. “We [all] come to grips with the world by drawing pictures, telling stories, conversing. These acts are our special contribution to existence—we make cosmologies. To have a workable cosmology is to be at home in the cosmos. To be in the process of creating a cosmology...is to be traveling toward home,” he says.⁶⁰³ Paine’s paint blobs are as poised as any scientific specimen, laboratory test, or resulting proofs to provide us insight into our own cosmologies, and they do so in cooperative dialogue with science, the natural world, and cultural ideologies. That is what makes them so effective and readable. They provide an opportunity, as I think the works in this dissertation do, for art history itself to register its own anthropomorphisms, its own self-referentiality and the possibilities of opening up art historical ways of seeing to those in other disciplines, just as we have the potential to open up the questions and answers of the universe to scientists. What is our own model as art historians, after all, if not an attempt to understand the worldviews of artists and their works? Our writings themselves take on their own lives, becoming not necessarily written representations and interpretations of art specimens and model paintings, but attempts to create our own cosmologies. The process of the artist and the art historian, the naturalist and the scientist are not all that different then. We are all driven to understand that which is unclear, to illuminate mysteries, to satisfy our desires in extrapolations of thought. “If we desire from cosmology something more than trivial intimations of divinity or an ancient religious impulse reflected back to us in abstract form—that pallid god, oneness—we must make room for organisms, history,

⁶⁰³ Edwin Dobb, “Without Earth There is No Heaven,” *Harper’s Magazine* (1 Feb. 1995): 40.

consciousness. We must allow ourselves to be seduced,” says Dobb.⁶⁰⁴ All facts are, as he argues, the work of desire. They are markers of our thought, conceptual signposts that emerge from investigations, such as those made by a scientist in a lab, a naturalist in the field or an artist in her studio. Whether a computer print out, a genetic code or a blob of paint these facts less mark truths than the range of the mind, “amplitude instead of its verisimilitude.”⁶⁰⁵ There are many stories to be told and some are more timely and compelling than others. Paine’s specimens offer us particular cases in which we can consider the finite space of art history and the wide expanse of cosmological models. The artist’s brushstroke remains no doubt indebted to those that came before him, but they also provide their own variations and anticipate mutations. His blobs easily extend themselves beyond the cases in which they are contained, into future sequences, permutations and arrangements. They allow us to envision the ways that the fixed and the contained become just as easily undone and free of themselves.

III. “I am Evolution”⁶⁰⁶

Even though identities, materiality and the things and concepts of our world remain arbitrarily rooted in categories of nomenclature, we still largely rely on descriptions as extrapolations of understanding, whether the microcosmic descriptors of a chain of DNA or a macrocosmic survey of temperate rain forest mammals. In *The Order of Things: An Archaeology of the Human Sciences* (1970), Michel Foucault argued for a shift from the study of natural history to the study of biology, from an epistemological

⁶⁰⁴ Dobb, 39.

⁶⁰⁵ Dobb, 41.

⁶⁰⁶ Holly Dunsworth, “I am Evolution,” *National Public Radio Weekend Edition* (11 May 2008); <http://www.npr.org/templates/story/story.php?storyId=90311455> (accessed 12 May 2008).

concept of the natural world that focused on the external morphological properties of beings organized within taxonomical tables, to biology in which animals are considered by the similarities of their internal structures. But it occurs to me that this story remains only partly true. Foucault went both too far and not far enough. On the one hand natural history strikes me as something that is very much alive and well in the world, on the fringes of academic and professional science and very much within the world of amateurs, many of whom have a knowledge base completely lacking among modern-trained scientists. In addition, Foucault's shift or rupture does not account for the ways in which naturalists and scientists often work side-by-side, and the ways in which single individuals themselves have taken on these dual roles in their quest to answer pressing questions about the natural world. On the other hand, the shift from natural history to biology does not really account for the place where our most pressing questions about the nature of the universe are answered today.

The questions that early naturalists sought to answer about the nature of the *world* have today been largely taken up by cosmologists who seek to answer questions about the nature of the *universe*. I was struck by Dobb's observation that Stephen Hawking's goal is "nothing less than a complete description of the universe we live in," as the cosmologist himself says in *A Brief History of Time* (1988).⁶⁰⁷ Hawking's descriptive cosmology is not that dissimilar from what Preston viewed as the descriptive natural histories of Audubon and Darwin. While Foucault elucidates the crucial transformation from the natural history specimen to the biological one, he did not go far enough. Granted, however, he was limited by the time in which he wrote, a moment of burgeoning cellular studies increasingly replaced attention to whole organisms.

⁶⁰⁷ Dobb, 35.

Cosmologists, it could be argued, are our new naturalists, attempting to understand life through inanimate forces and phenomenon, not unlike Darwin did while standing in his fossil field with Alan Sedgwick. But while this has some truth, it would be a mistake to turn solely to cosmologists to answer the most salient questions of our existence.

Dobb would argue that we all have the capacity and the intelligence to understand the universe and we should surely not leave that to scientists. While most scholars would agree with this principal in general, I wonder to what extent those in the humanities have completely embraced these possibilities, myself included, of course. That I would like to see we scholars of material culture focus, sustain and enliven our observations, lies not in an effort to replace older methodologies with revisionary ones, but in a desire to see ourselves reinvested in what we are the very best at—description. If we couple our social and cultural histories with a vision of what we see, we can begin to embrace the bigger questions of existence—like our purpose. But I recognize how difficult this may be, and what a vulnerable place it puts scholars in; I wonder if we will not be brave enough to put our own selves out there into the world as do the artists about whose works we have the great privilege to experience.

Descriptions can take on many forms, from the expository to the poetic. When I implore art historians, myself included, to look more closely I do so with the recognition that looking does not just happen within the lines and colors of a painting, but also in a space between the work of art and our own “largeness of spirit.” This was a phrase Dobb describes in a moment of pondering the night sky on the South Fork of the Salmon River one night. “What I felt was...dilation. My whole being expanded; felt intensely alive, on the verge of a momentous revelation...precisely when we grasp the vastness of the

universe we also glimpse an equally vast interior, the enormous geography of the soul,” he says.⁶⁰⁸ I wonder if we cannot put into play such “largeness of spirit” into our own examinations of works of art, to place them not within movements or styles or trends, but within a wider cosmology that has greater resonance for those outside the field and would likely also provide writings in a spirit more faithful to the process of creative art making itself. I do not pretend to have gotten there yet in my own writing. I have only begun to see glimpses of possibility, and ways we can abandon replacing one methodology every ten or twenty years with a new one, instead of combining the various knowledges all of them have to offer, along with our own efforts to work at a cosmology through art and through our own largeness of spirit.

Paleoanthropologist Holly Dunsworth recently made the bold remark that she “is evolution,” rather than “believing *in* evolution.”⁶⁰⁹ In her search to answer the question, “Where did I come from and how?,” Dunsworth explains that evolution has taken on for her less a belief than a way. It connotes her own constantly changing belief systems, an accumulation of scientific theory and history of science it is metamorphic and increasingly interconnected to everything from her “bipedal feet” to the fossils that fuel her car. Evolution is so pervasive and everywhere that it becomes less about Darwin than about everything that has passed through its sieve, which for Dunsworth remains arguable everything. “I feel it. I breathe it. I listen to evolution, I observe it and I do evolution. I write, study, analyze, scrutinize and collect evolution. I am evolution,” she says. In her immersion in evolution she becomes an embodiment of Darwin’s theory, rather than merely a being subscribing to it. She and it evolve and transform

⁶⁰⁸ Dobb, 40.

⁶⁰⁹ Holly Dunsworth, “I am Evolution,” *National Public Radio Weekend Edition* (11 May 2008); <http://www.npr.org/templates/story/story.php?storyId=90311455> (accessed 12 May 2008).

simultaneously, immutable beings and ways commingling. And the approach surely opens up a path far beyond her attempt to answer such questions as, “What were the circumstances that gave rise to the ape lineage (includes humans) back in the Miocene epoch?,” which is itself no small matter.⁶¹⁰ “[My work] deepens my understanding not just about what drives my life, but all our lives, where we came from. And the deeper I go, the more I understand that everything is connected. A bullfrog to a gorilla, a hummingbird to me, to you.” The entwinements that emerge in Dunsworth’s work speak to the importance of a larger vision, a cosmology, even when addressing very specific questions evidenced by something as small and trace as a single fossil record.

Recently and rather publicly cosmologists and other scientists have been discussing the merits of the Boltzmann Brain Problem, otherwise known as the “Big Brain Theory.” The theory asks science to address simultaneously the origins of the universe, the nature of energy in the universe at its birth, and whether or not the universe, currently drifting apart, will create another Big Bang or be consumed in a flash by dark matter. So much of Big Brain Theory relies on how things are counted, how the early universe is characterized, in terms of matter, and whether or not we ourselves are typical observers or not. With the universe moving farther and farther apart, we will likely find ourselves in a black hole like atmosphere with a cosmic glow on the horizon, emitting radiation and fluctuations that could well spur a new universe, a process with the potential to repeat endlessly. At stake in this theory is what is produced from these energy fluctuations and glowing cosmic horizon—“typical observers,” like us humans, or another universal possibility, free floating and instantaneously emerging observers that can appear and disappear in an instant. The problem can be compared to a box of

⁶¹⁰ http://www.anthro.psu.edu/faculty_staff/HOLLYDUNSWORTH.shtml.

Scrabble letters, which more often produces a word when shaken than an entire sentence or paragraph. Fragment organisms, or organisms with a brief time and history, emerge more quickly than whole organisms. Weirder yet remains the possibility, as explained by some scientists, of ourselves embodying these Big Brains, reincarnated in another place and time, or as we stand ourselves today. Instinctually, most scientists think the probability of Big Brains outnumbering typical observers like us, if they exist at all, is infinitesimal. But scientists cannot agree on a formula that will banish Boltzmann Brains completely. What is clear is that we just do not know and either do these cosmologists, though I think their attempts to reckon with big questions mirrors the attempts of explorers and early naturalists to come to terms with the nature of their world.⁶¹¹ I am often amazed at the way the computations of cosmologists about a theory such as that of the Boltzmann Brains finds its counterparts in the work of those in the humanities and other disciplines, scholars theorizing, working in parallel universes, but not crossing over overtly. Jean Baudrillard, for instance, argued for the superfluity of the human body in a world where increasingly “everything is concentrated in the brain and the genetic code.”⁶¹² It may be that we are all flickers on the horizon, mere cosmic glows recurring so frequently in our own time that we cannot even distinguish our own corporeal

⁶¹¹ Dennis Overbye, “Big Brain Theory: Have Cosmologists Lost Theirs?”, *The New York Times* (15 Jan. 2008), http://www.nytimes.com/2008/01/15/science/15brain.html?_r=1&scp=1&sq=dennis%20overbye%20big%20brain%20theory&st=cse&oref=slogin; Lisa Dyson, Matthew Kleban, and Leonard Susskind, “Disturbing Implications of a Cosmological Constant,” *Journal of High Energy Physics* (Oct. 2002), <http://jhep.sissa.it/archive/papers/jhep102002011/jhep102002011.pdf>; Andreas Albrecht and Lorenzo Sorbo, “Can the universe afford inflation?”, *Physical Review D* 70 (2004) 063528, <http://prola.aps.org.ezaccess.libraries.psu.edu/pdf/PRD/v70/i6/e063528>; Mason Inman, “Spooks in Space,” *New Scientist*, 195 No. 2617 (18 Aug. 2007): 26-29.

⁶¹² Jean Baudrillard, *The Ecstasy of Communication* Sylvere Lotringer, ed. Trans. Bernard and Caroline Schutze (New York: Semiotext(e), 1988), 18.

fluctuations. Or maybe we are indeed just waiting to be born into the evolutionary efficiency of a Big Brain.

Sometimes art historians are accused of reading too much into a work of art, reading too overly deterministically into a work's intent or the intent of the artist. In this dissertation, however, I may not have gone far enough. Taking on natural history in the contemporary era, in conjunction with current concerns about the environment, the integrity of our identities and the manner in which systems of classification code our daily operations, proves its own kind of cosmology. It is not just the attempts of Dion, Tomaselli, Ford, Twombly and Paine to look back, to revise a history already gone for many, but to engage it in a new era in which we must reconsider our place in the order of things. This is why an artist like Smithson continues to resonate so well for me, too, in this investigation. I continually return to the form of *Spiral Jetty*, never clear whether it is expanding or imploding, not unlike our own universe. The "flickering lights" that Smithson describes remind me of cosmologists' own view of the horizon's cosmic glow; his "quaking" landscape a fluctuation' and his "fluttering stillness" like a hummingbird floating fast, or like ourselves, reiterations that hardly miss a beat from one moment to the next. In the face of the *Spiral Jetty*, which he even refers to as evidence "No ideas, no concepts, no systems, no structures, no abstractions could hold themselves together."⁶¹³ And so like the Boltzmann Brain or like our artistic theories, we are all swirling in the midst of and simultaneously at the edges of Smithson's spiral, with no clear beginning and no clear end. But we are not without hope because in some space in between categorical imperatives we are all floating fast with the potential to grab onto moments of

⁶¹³ Robert Smithson, "The Spiral Jetty," in Jeffrey Kastner and Brian Wallis, *Land and Environmental Art*, 215-16.

bursting cosmic fluctuations, a sense of oneself as part of something much more profound—a universal largeness of spirit.

Dobb writes that “The heart of this cosmology is a heightened sense of our shared condition and fate, our singular and precarious place in the universe. We need not love, much less understand, other human beings to realize that they too suffer, that they are conscious of their mortality, that a longing burns inside them, that they have their own maps and metaphors.”⁶¹⁴ These maps and metaphors emerge more clearly from descriptions, rather than taxonomical classification schemes of binomials and Excel spread sheets. If we can glean from natural history, art history, cosmology the value of its descriptive qualities we would be on our way not only to describing a sense of our universe, but provide a feeling for it, our own sensorium of wonder. In his most recent novel *The Road* (2007), Cormac McCarthy describes a moment of contemplative confluence when the memories of a man who has just died collapse upon those of his son. The boy has never himself seen earth before its current apocalyptic hell, but he finds himself nonetheless poignantly determined to hang onto his own memories and those of his father:

Once there were brook trout in the streams in the mountains. You could see them standing in the amber current where the white edges of their fins wimpled softly in the flow. They smelled of moss in your hand. Polished and muscular and torsional. On their backs were vermiculate patterns that were maps of the world in its becoming. Maps and mazes. Of a thing which could not be put back. Not be made right again. In the deep glens where they lived all things were older than man and they hummed of mystery.⁶¹⁵

The father and the son find themselves not merely linked by the road, or their genetic codes, but as part of a vast cosmic currency in which we can see in ourselves as much in

⁶¹⁴ Dobb, 41.

⁶¹⁵ Cormac McCarthy, *The Road* (New York: Vintage Books, 2006), 286-87.

the polychromed patterns of brook trout as ourselves and the start under which we reside. We perpetuate our own species, manifest our own becomings and draw our own maps and mazes. We can tune ourselves to these mysteries and others just as the artists in this dissertation have done. In the flow and in the deep glens we all hum with hopes and desires of what may be.

Appendix: Figures

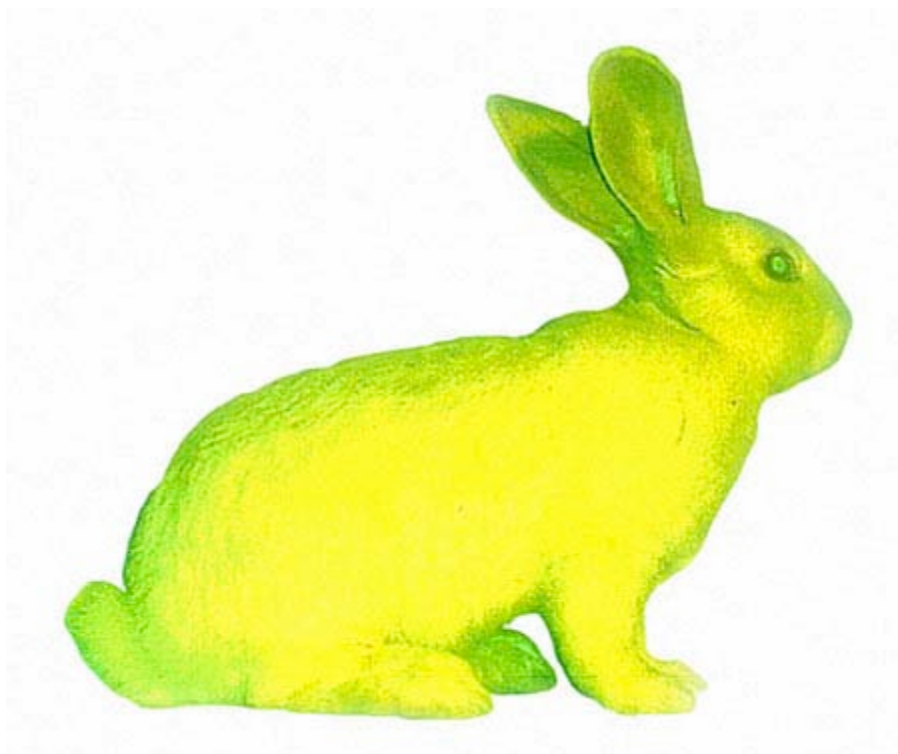


Fig. Intro. 1

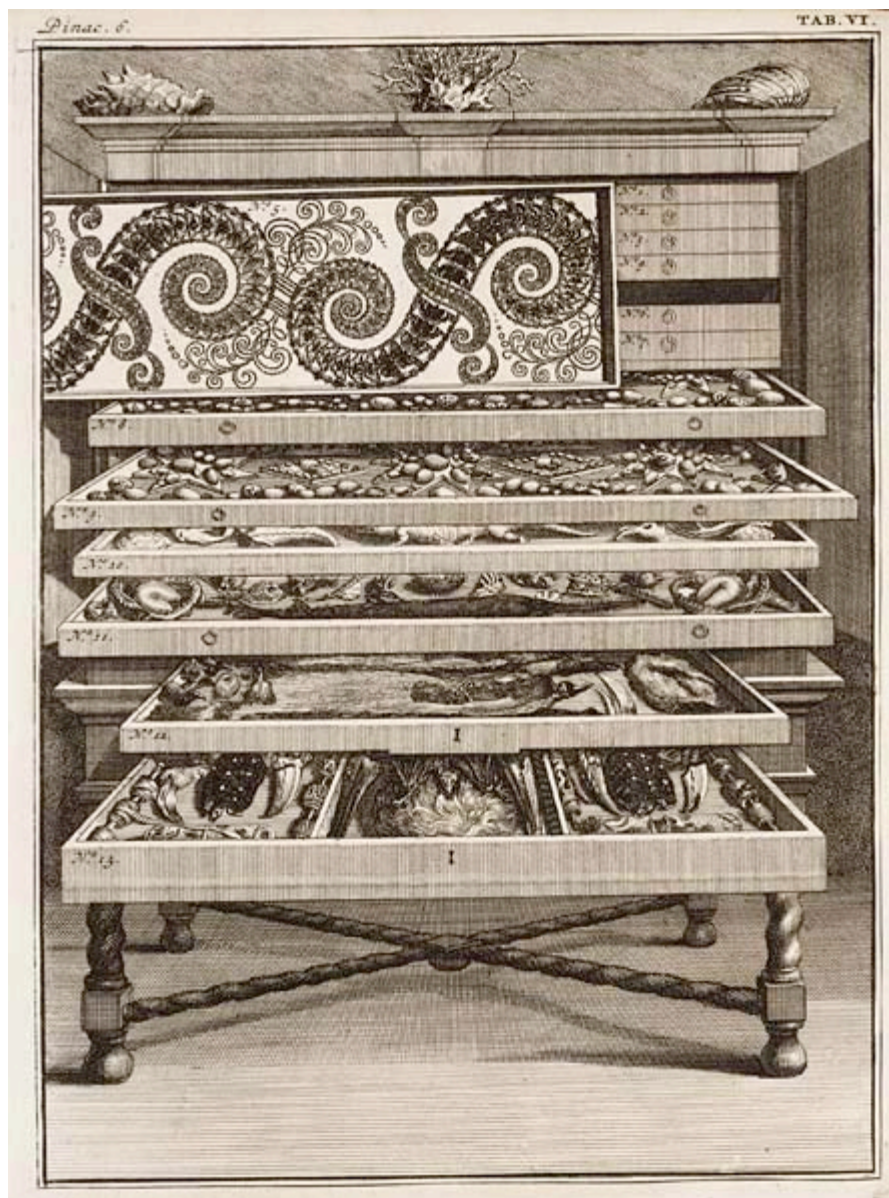


Fig. Intro. 2



Fig. Intro. 3



Fig. Intro. 4



Fig. Intro. 5



Fig. Intro. 6

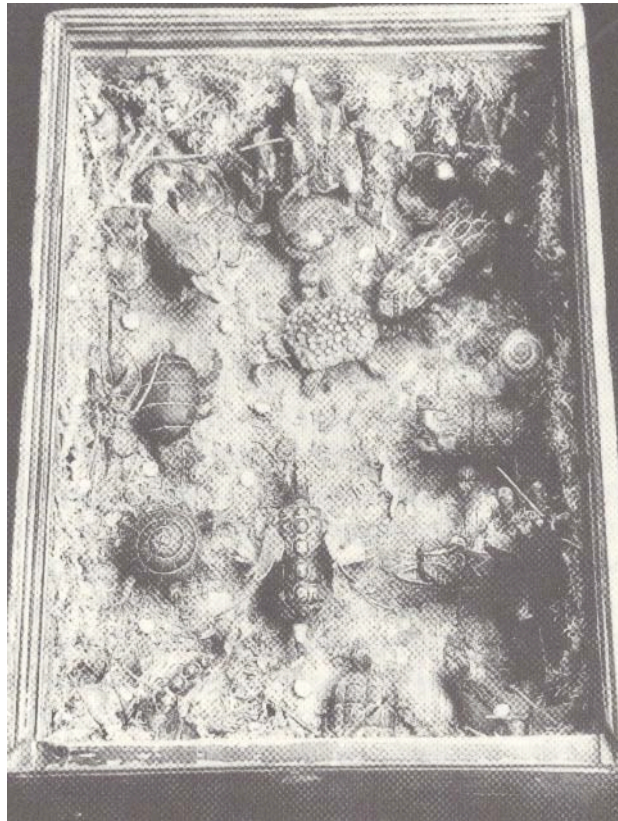


Fig. Intro. 7



Fig. 1.1



Fig. 1.2



Fig. 1.3

[illegible]

339

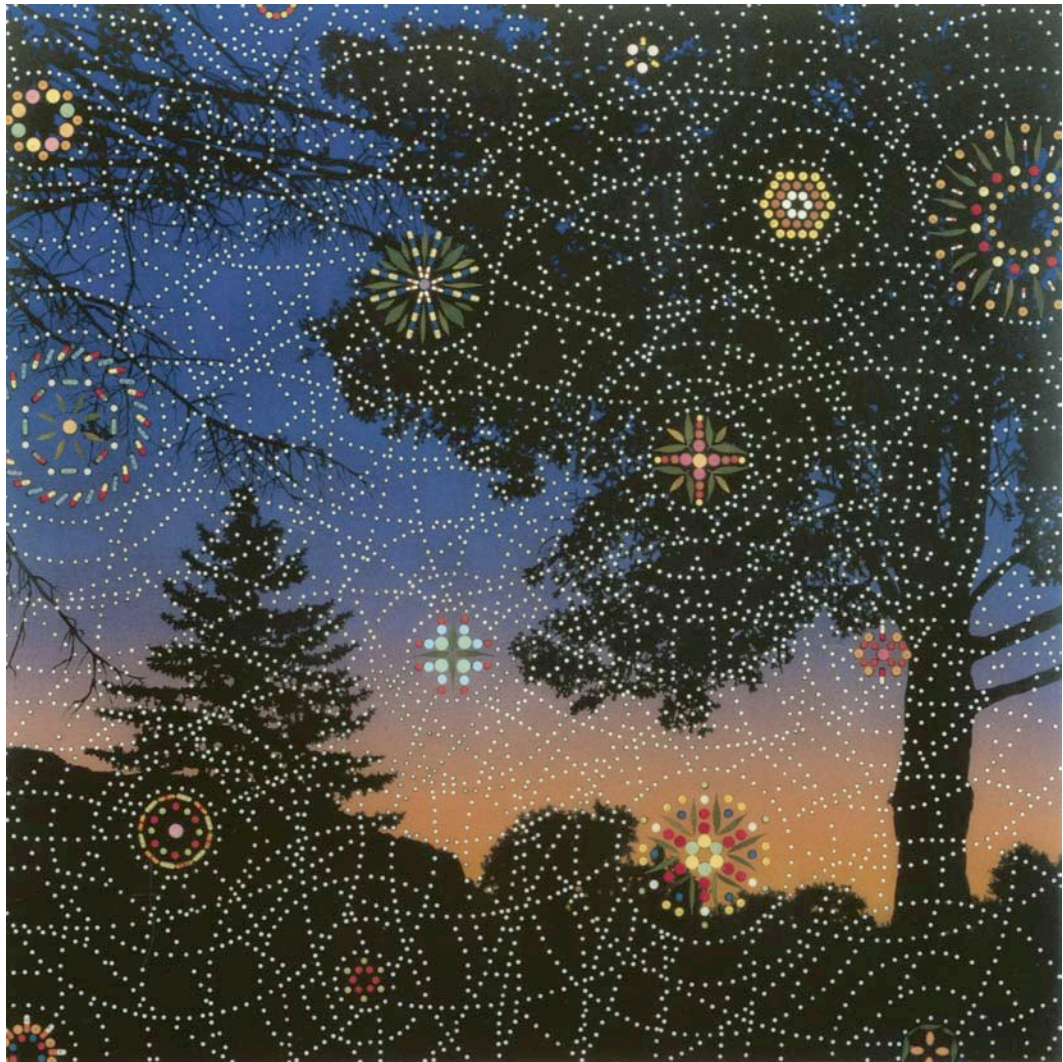


Fig. 1.5

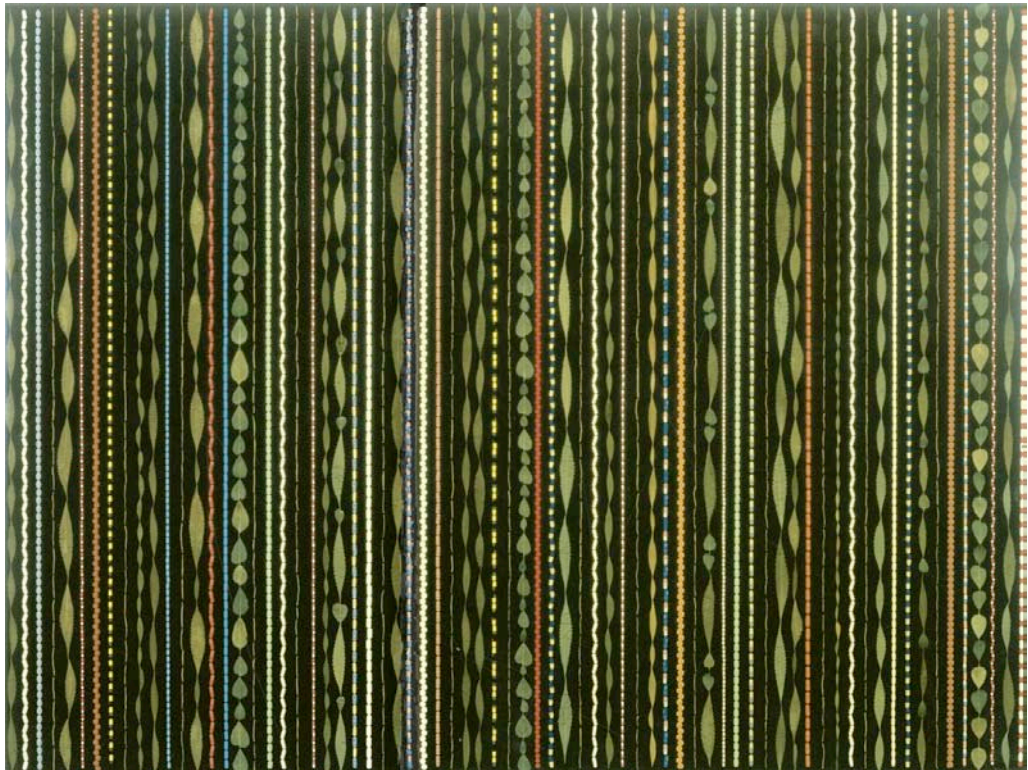


Fig. 1.6

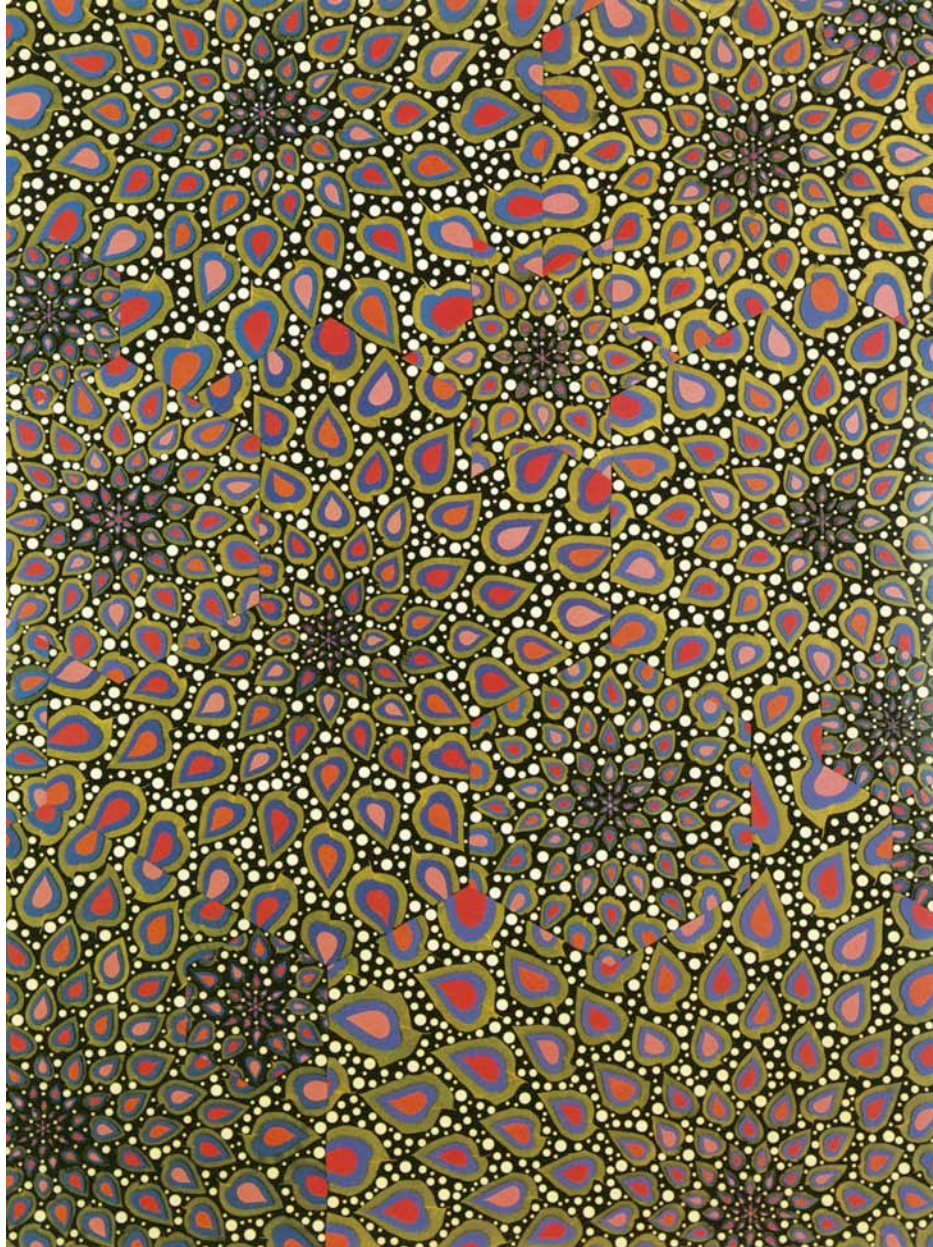


Fig. 1.7



Fig. 1.8

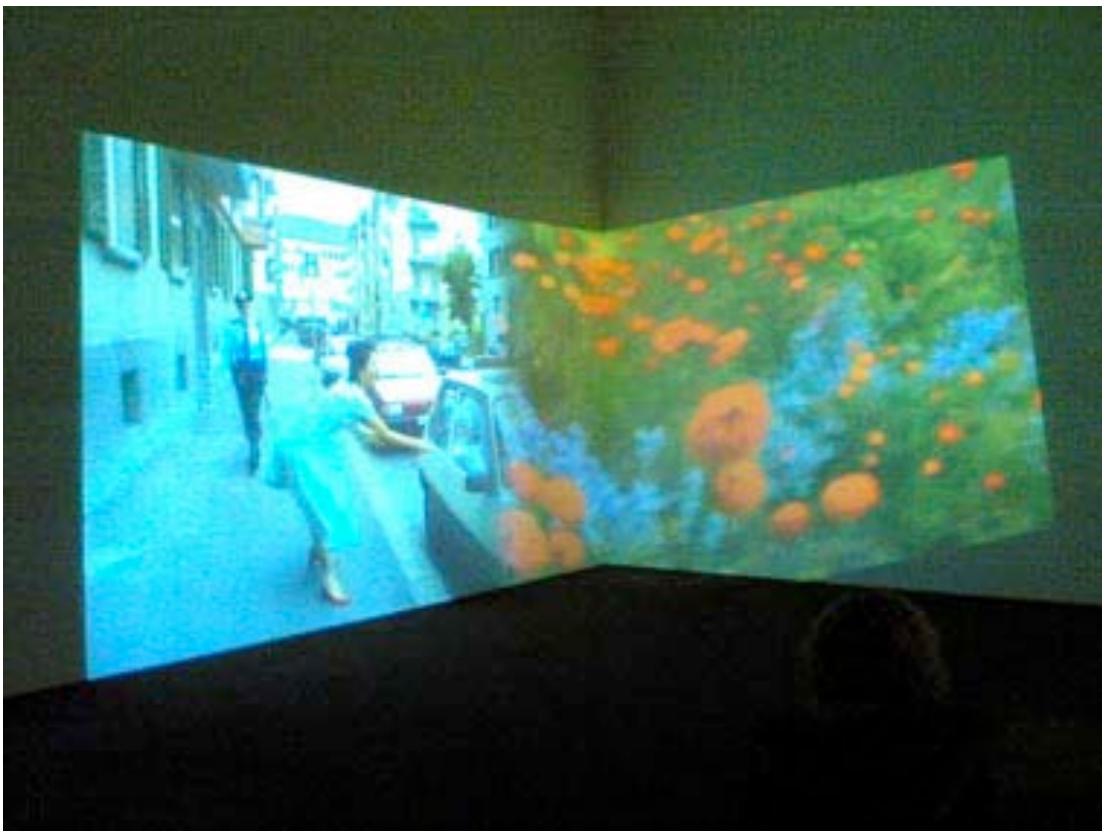


Fig. 1.9

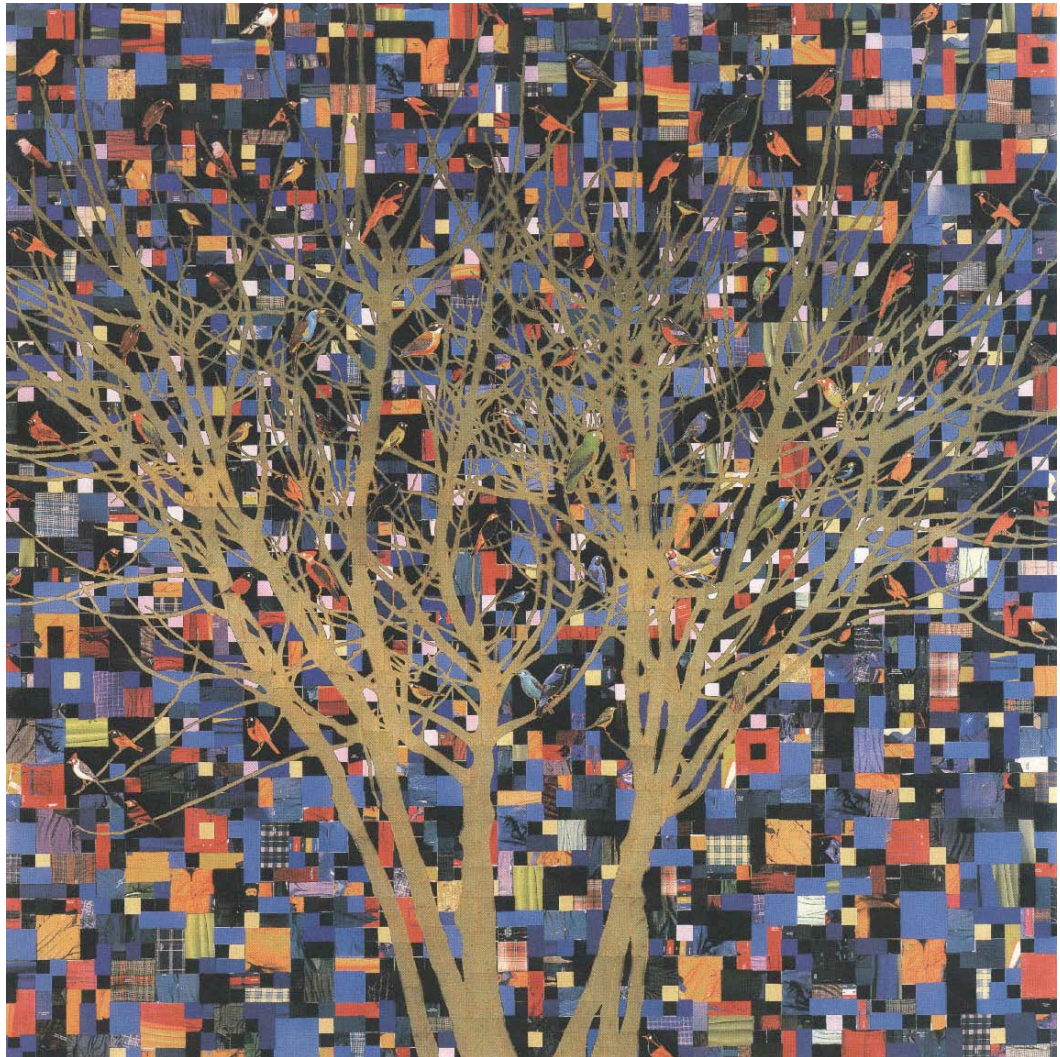


Fig. 1.10



Fig. 2.1



Fig. 2.2

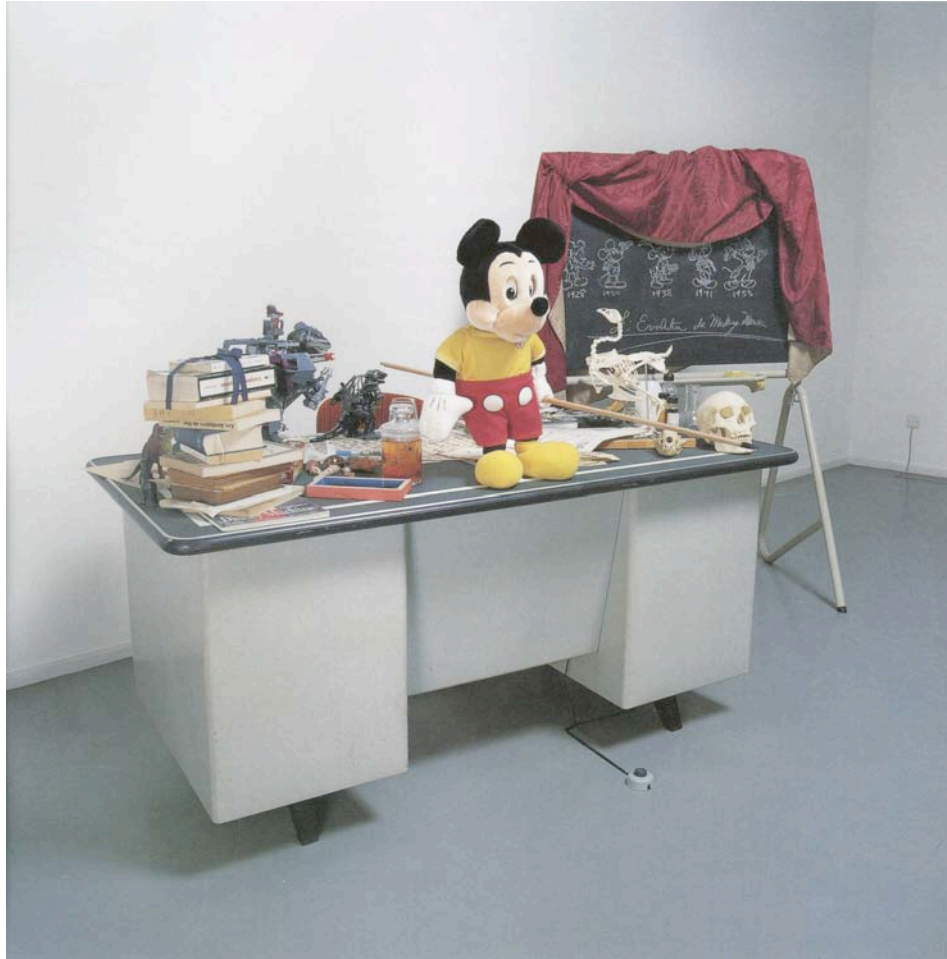


Fig. 2.3



Fig. 2.4

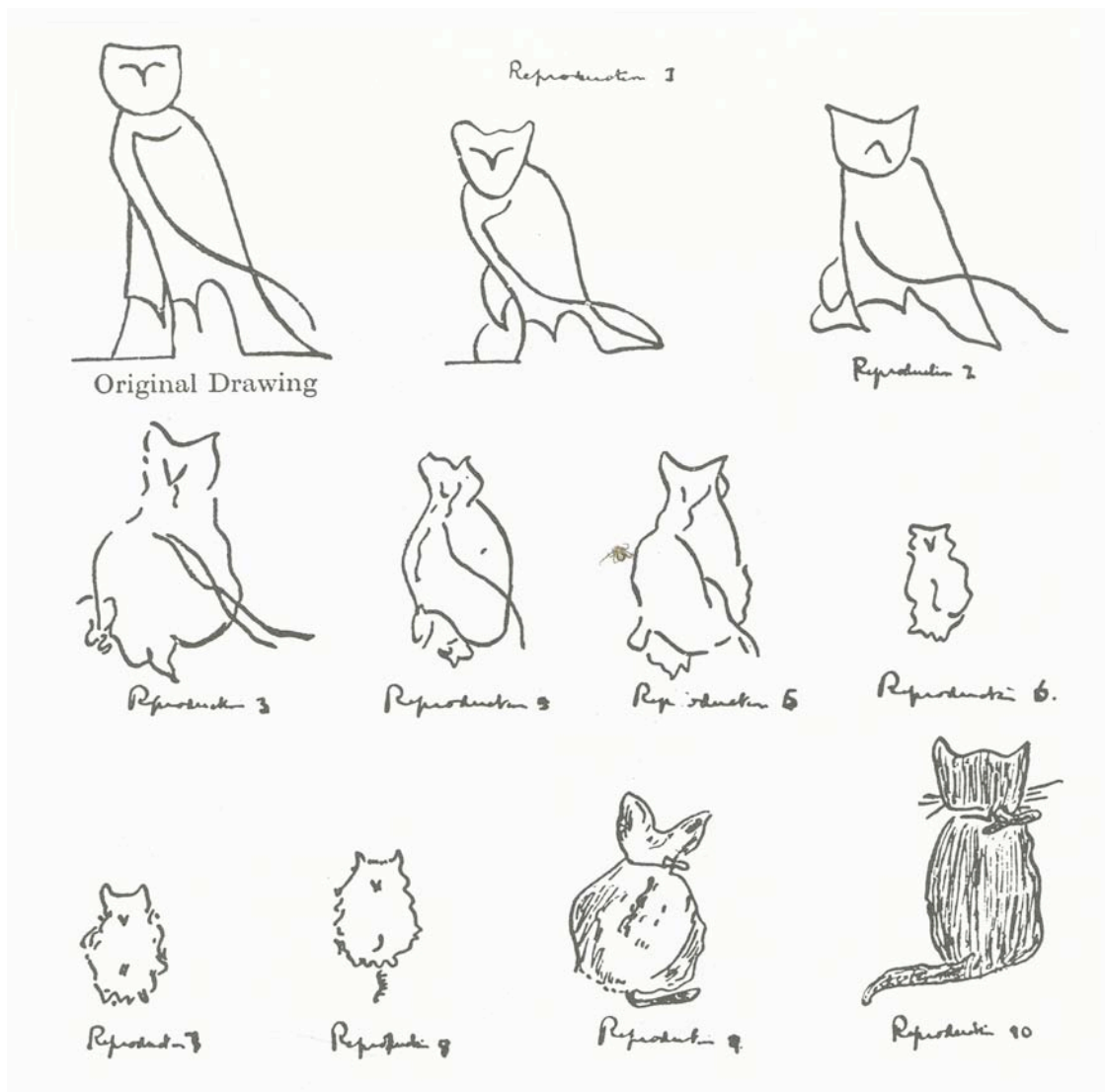


Fig. 2.5

Natürliche Contrafeyhung des gewaltigen flugs der Hews- schrecken welcher gefangen worden ist der gröfste zu Mayland am andern tag des Heymonats im 1556. Jars.

N Ewe zeytung von einem flug Hews-
schrecken/so gar wunderbar lich als
die natur geben mag/wil man ach-
ten es sey der Herr oder König der grös-
t anzahl der Hewschrecken / so lan das
Maylandisch gebiet an komen sein/vnd
dem bemelten Hewschrecken so gar
wunderbarlich vnd gröfser dann all-
der / ist er von einem genanten Mei-
ster Blacens Maurfinger in seinem
aß zu Mayland auff ein abent gefan-
gen worden/vnd nachfolget istet er so vil
es vber alle maß auch vnglaublich ist/
so sie nicht zu essen hat so wispelt sie
eich wie ein Schlang das ein mensch
vermoleet/vñ der Meister Vincenz
er ist gefangen / hat ja lebendig geha-
uptes seinem bruder Anthoni von
apona gefandt/für ein wunderzeichen
hemit der abdruck sollich natürlich
et zu Mayland für ein wunderzei-
chen gehalten worden / als ob ein heilig-
um were/angeigt wird.

Vom fluge der Hewsche-
cken/vnd was sich allwegen darnach
begibt/auch was für straff ge-
folget / Etlich warbaffte
Bischoffen/auff der Cro-
nica gezogen.



Fig. 2.6

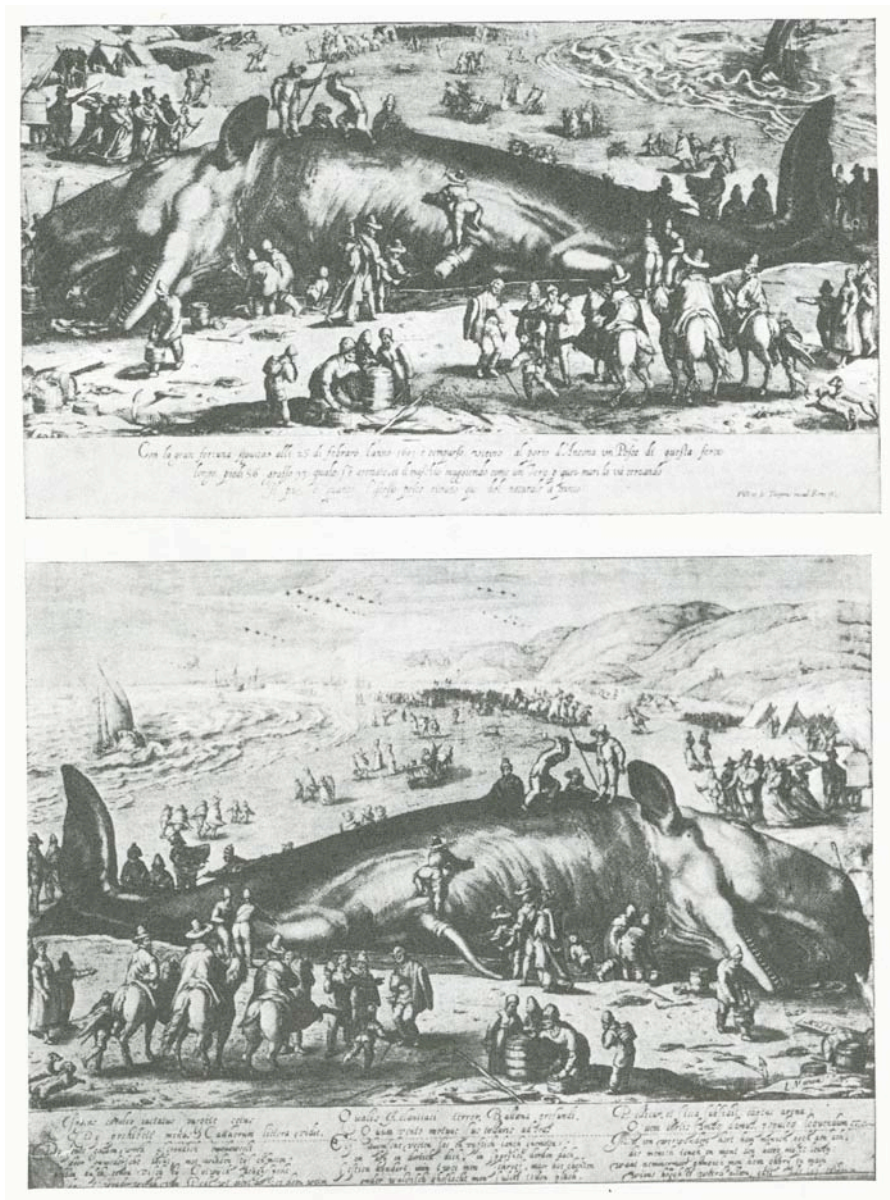


Fig. 2.7



Fig. 2.9



Fig. 2.10



Fig. 2.11



Fig. 2.12

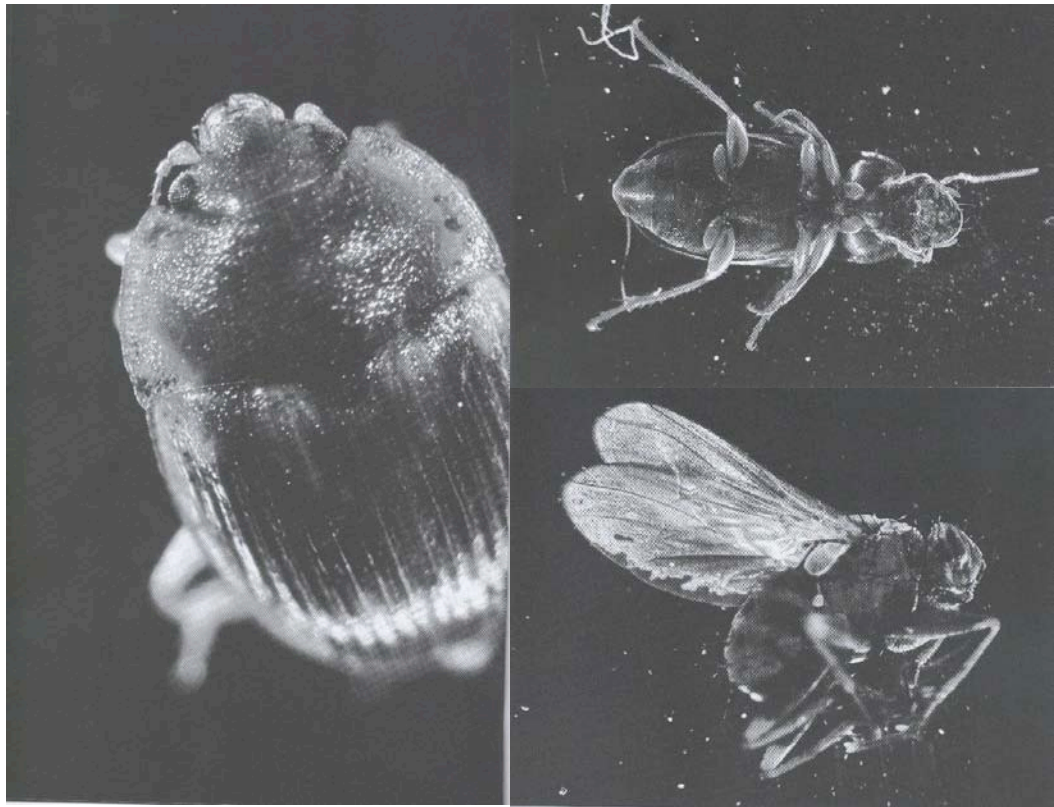


Fig. 2.13



Fig. 2.14



Fig. 2.15



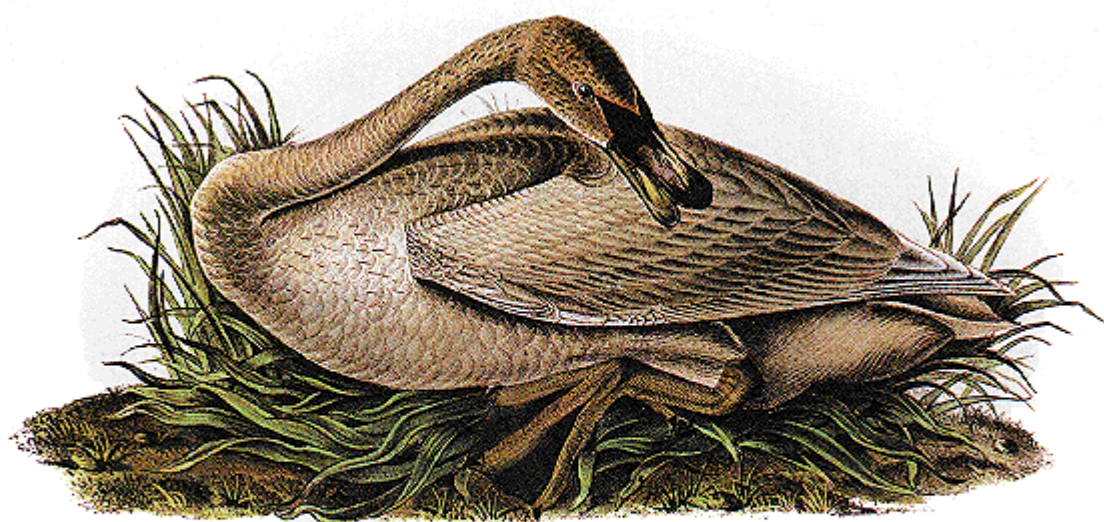
Fig. 2.17



Fig. 2.18



Fig. 2.19



Trumpeter Swan

Fig. 2.20



Fig. 2.21



Fig. 2.22



Fig. 2.23



Fig. 2.24



Fig. 2.25



Fig. 2.26



Fig. 2.27



Fig. 2.29



Fig. 2.30

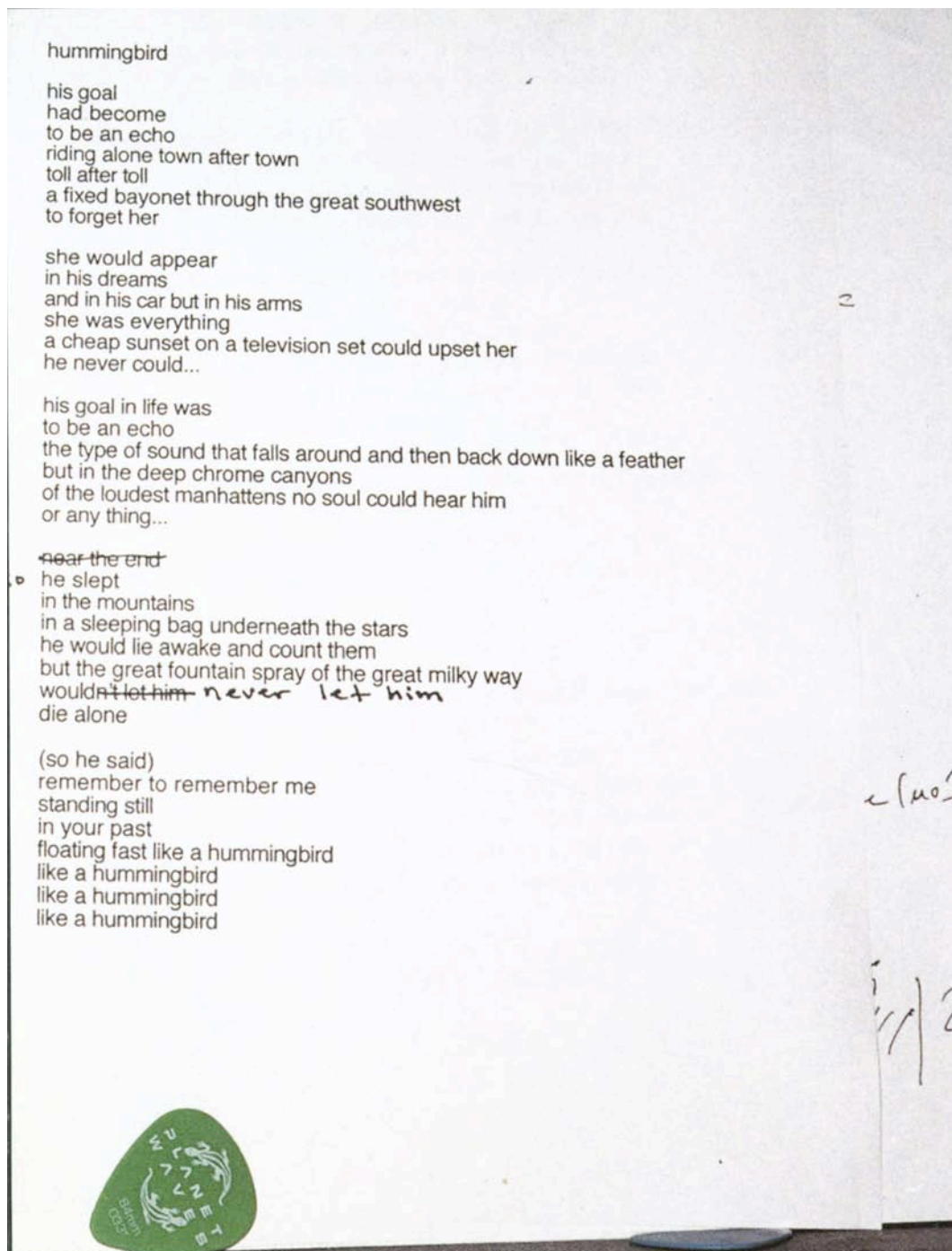


Fig. 2.31



Fig. 2.32



Fig. 2.33

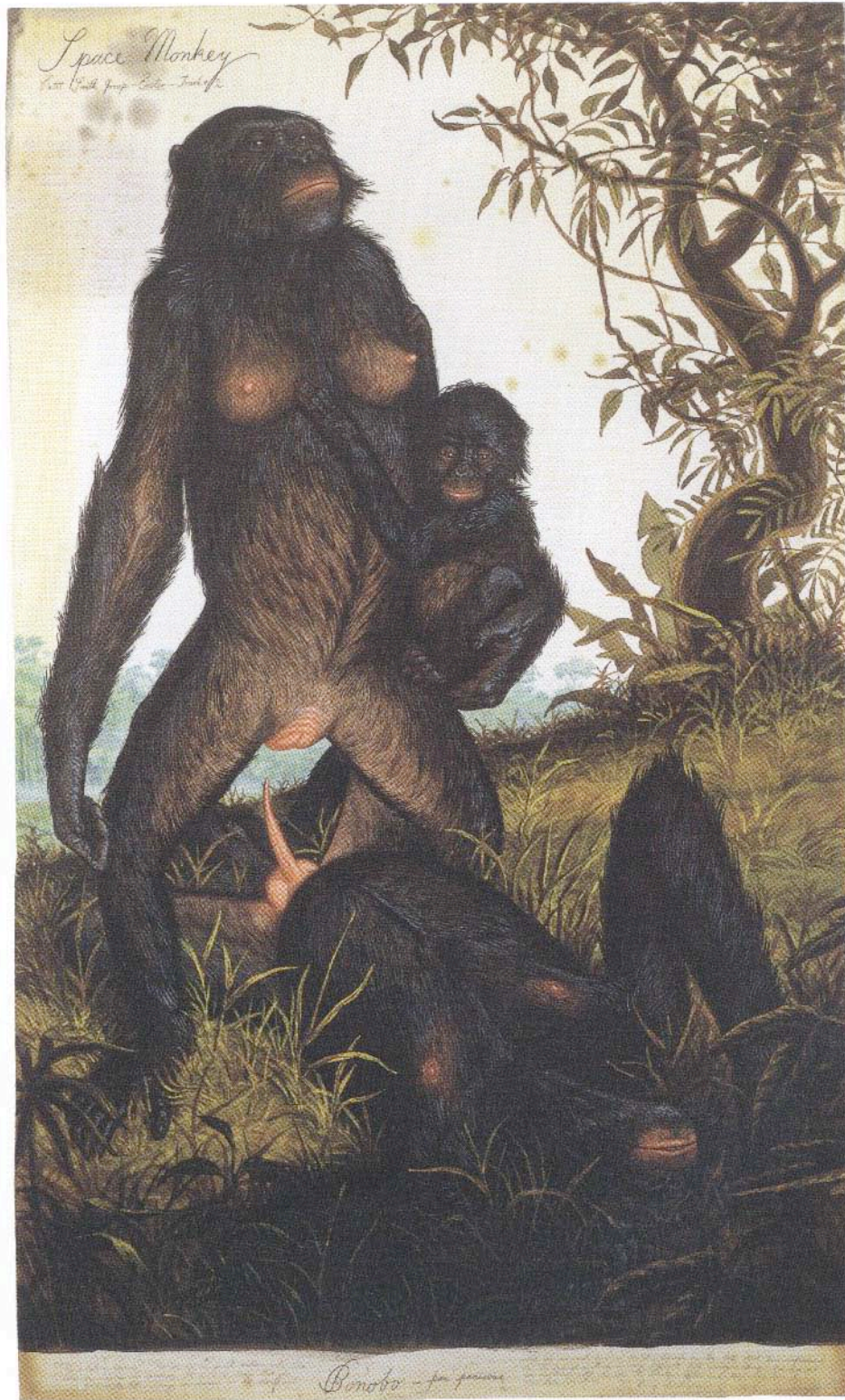


Fig. 2.34

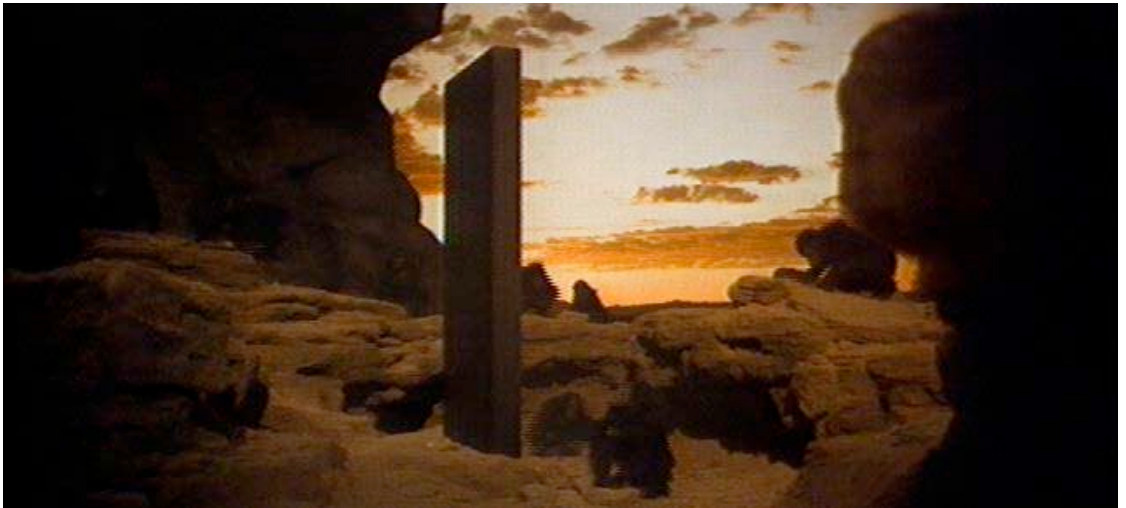


Fig. 2.35



Fig. 2.36



Fig. 2.37



Fig. 3.1

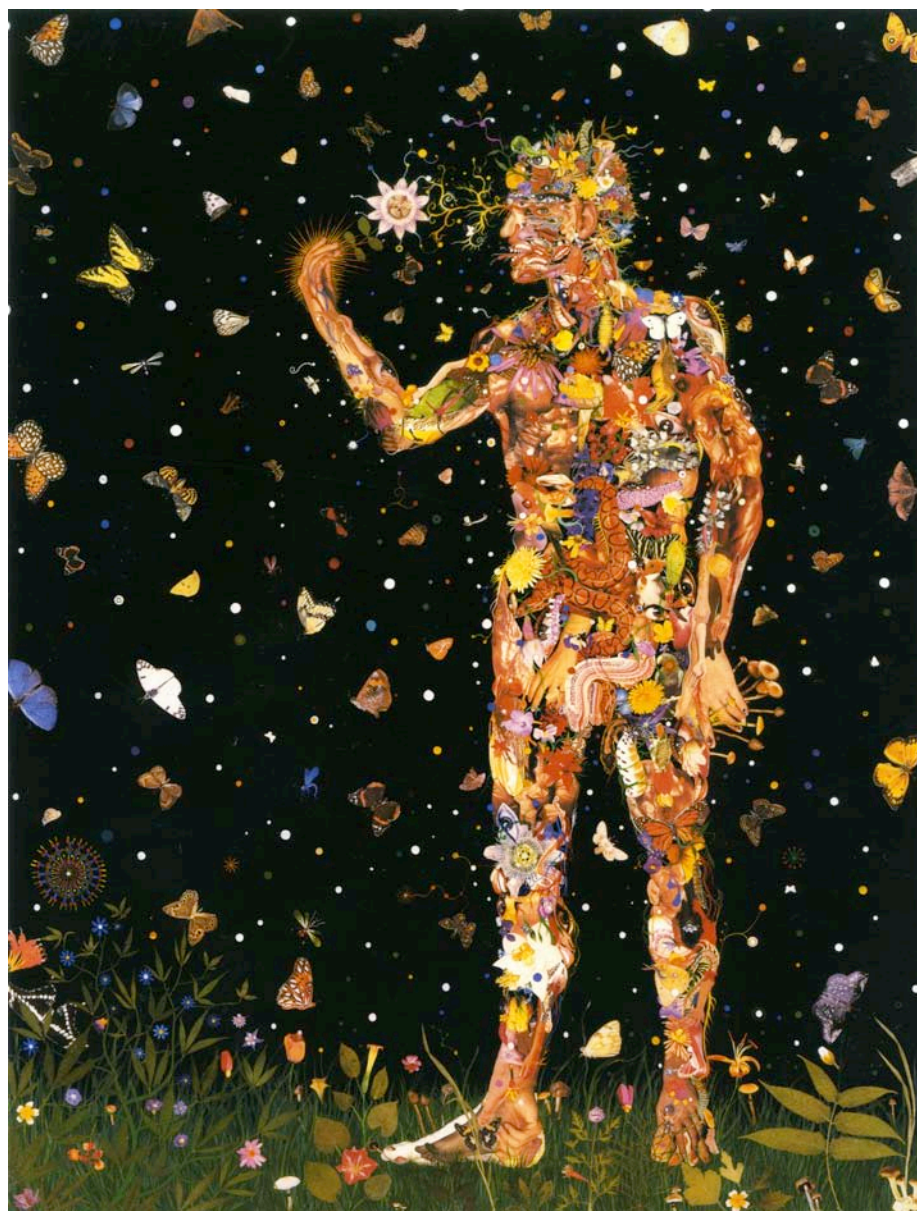


Fig. 3.2



Fig. 3.3



Fig. 3.4



Fig. 3.5



Fig. 3.6

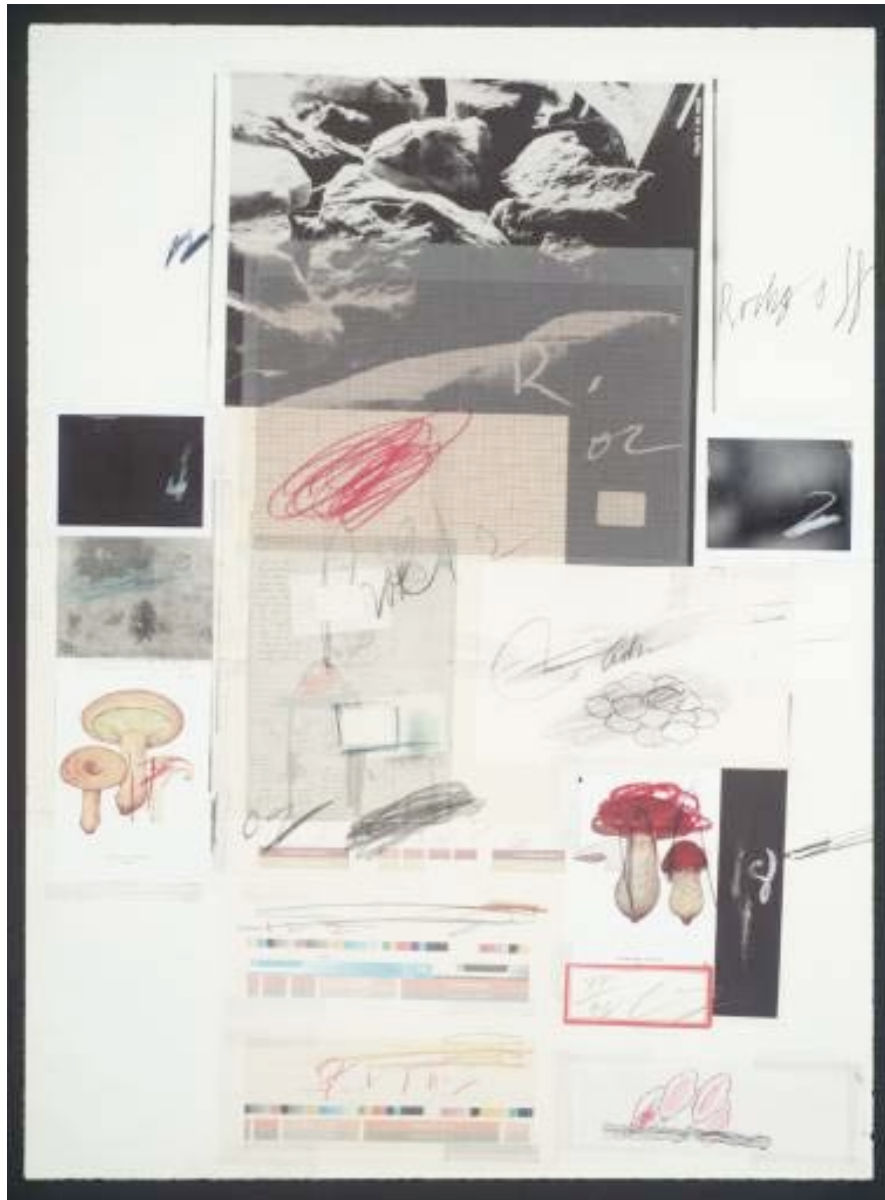


Fig. 3.7



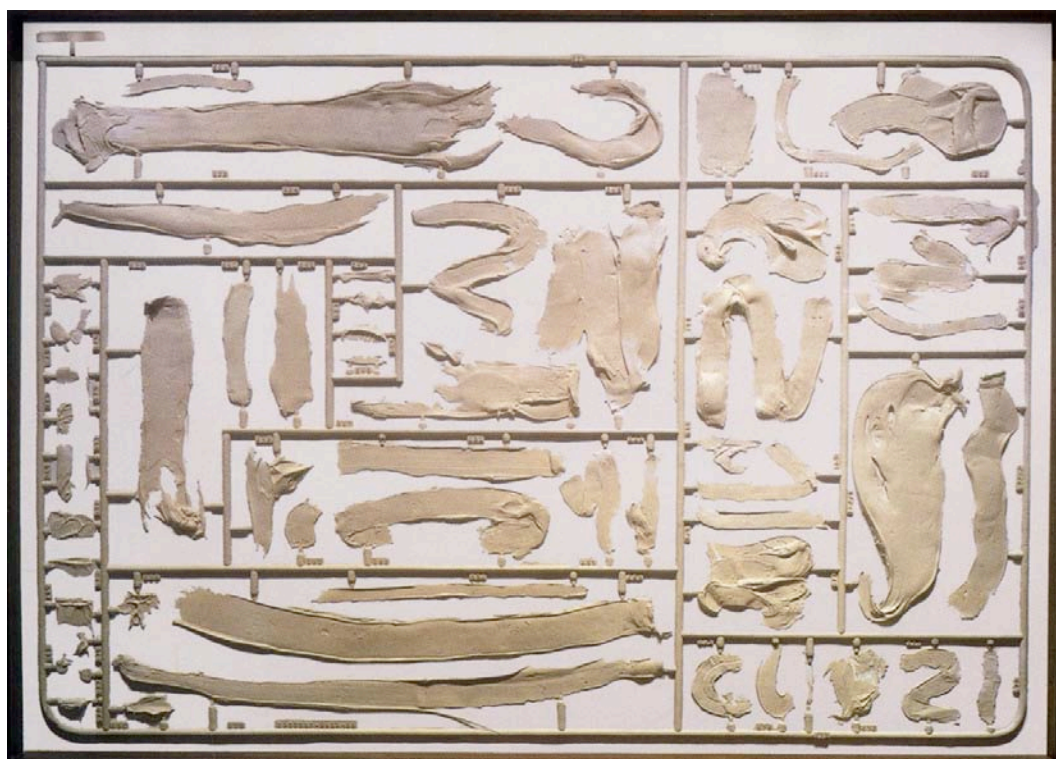
Fig. 3.8



Afterword Fig. 1



Afterword Fig. 2



Afterword Fig. 3

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Alissa Walls Mazow was born on January 5, 1975 in Philadelphia, Pennsylvania. She received a B.A. in archaeology and anthropology with a concentration in art history from Washington and Lee University, Lexington, VA in 1997 (*cum laude*). She worked under the direction of John McDaniel, a physical anthropologist, and the art historians Pamela H. Simpson and George Bent. Supported by a James Leyburn Scholarship, Walls Mazow worked as an archaeologist for the Bridger-Teton Forest in Wyoming during the summer of 1995. That fall she studied art and architectural history at the American University of Paris. While a student at W&L she played intercollegiate athletics, served as co-news editor of the *Trident* and tutored elementary school students in reading and writing.

Walls Mazow earned an M.A. in American Studies in 2002 from Penn State Harrisburg, Middletown, PA under the direction of folklorist Simon J. Bronner, who also served on her doctoral committee through the comprehensive examinations. Her thesis—“*The Collection of Designs in Glass by Twenty-Seven Contemporary Artists: On the Convergence of Fine Arts and Corporate Craftsmanship*”—examined a 1930s glass project between Corning Glass, Steuben Glass and modernist artists. Walls Mazow has also worked in higher education administration, first as an admissions representative at the Pennsylvania College of Art and Design, then as assistant director of admissions and financial aid at Dickinson College, Carlisle, PA. She has also worked in the Office of Student Aid at The Pennsylvania State University, University Park, PA.

While a doctoral student in art history at The Pennsylvania State University, University Park, PA Walls Mazow received numerous awards: a Douglass Foundation Predoctoral Fellowship at the Smithsonian American Art Museum and the National Portrait Gallery (2008), an Alumni Association Dissertation Award (university-wide) (2008), a Creative Achievement Creative Achievement Award from the College of Arts and Architecture (2008), a Department of Art History Dissertation Fellowship (Fall 2007), a Graduate Student Summer Residence, Institute for the Arts and Humanities, The Pennsylvania State University (2007), The Susan W. and Thomas A. Schwartz Endowed Fellowship for Dissertation Research in Art History (departmental) (2006-07), as well as conference travel grants from the American Studies Association (ASA), the Southeastern College Art Conference (SECAC), and the College of Arts and Architecture and the Department of Art History at the Pennsylvania State University.

Walls Mazow has given numerous papers at professional conferences, including the annual meetings of the College Art Association, Society for Literature, Science and the Arts, the American Studies Association and the Southeastern College Art Conference. She has published her work in the peer-reviewed journals *Shenandoah*, the literary review of Washington and Lee University, and *Montage*, the graduate journal of art history at the University of Iowa. Walls Mazow is Instructor of art history and science, technology and society for 2008-09 at The Pennsylvania State University. She was also employed as Visiting Assistant Professor of art at Bucknell University, Lewisburg, PA during the spring of 2007.