Syracuse University
SURFACE

Dissertations - ALL SURFACE

May 2016

Whose Honey, Whose Hive?: Genre and Rhetorical Agency in the U.S. Colony Collapse Disorder

W. Kurt Stavenhagen
Syracuse University

Follow this and additional works at: https://surface.syr.edu/etd

Part of the Arts and Humanities Commons

Recommended Citation
Stavenhagen, W. Kurt, "Whose Honey, Whose Hive?: Genre and Rhetorical Agency in the U.S. Colony Collapse Disorder" (2016). *Dissertations - ALL*. 455.
https://surface.syr.edu/etd/455

This Dissertation is brought to you for free and open access by the SURFACE at SURFACE. It has been accepted for inclusion in Dissertations - ALL by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.

ABSTRACT

This dissertation analyzes the rhetoric surrounding the environmental crisis of the honey bee Colony Collapse Disorder, commonly known as CCD. Since 2007, the United States has lost an average of a third of its honey bee colonies each year to CCD. The crisis has potentially serious environmental consequences. Without honey bee pollination services, over $14 billion worth of crops in the United States alone are in jeopardy. Drawing on environmental rhetoric, genre theory, and agricultural rhetorics, I offer a rhetorical analysis and genre analysis of the narratives surrounding CCD from select popular press newspaper articles, documentaries, nonfiction works, and personal interviews with beekeepers that cover the span of the early years of the U.S. crisis from 2007 to 2011.

I argue that specific narratives of CCD offered by stakeholders such as scientists, reporters, beekeepers, policymakers, and environmentalists both constrained and invited deliberation about the synergistic causes of the crisis. One narrative I examine in detail in Chapter Two is the nesting genre of the "crime mystery" of CCD in news stories that often reduced consideration of the causes of CCD to a warring search for a pathogenic solution. This focus on a "smoking gun" for CCD focused the public's attention on scientists seeking a single solution instead of considering multi-factoral causes. The genre also reduced consideration of the multiple roles stakeholders played

in the crisis. In contrast, beekeepers' protests, insights and perspectives (Chapters Three and Four) and the trope "listening to bees" popular in nonfiction media (Chapter Five) expanded consideration of systemic economic and cultural causes for the crisis, and allowed bees and beekeepers to emerge as informative agents. This project considers, too, how American beekeepers have approached CCD in largely individualistic terms in contrast to French beekeepers who have collectively organized in large groups to protest their sense that CCD was caused by the sale of a pesticide by the Bayer Corporation.

I apply rhetorical and genre analysis to representations of CCD in popular media and beekeepers' discourse. I cite stakeholders such as scientists, researchers, journalists, beekeepers, and protestors. This dissertation contributes to scholarship in environmental rhetoric and environmental communication that analyzes the narratives and causes of environmental crises. This project evaluates the solutions and challenges that varied stakeholders have posed, specifically through analyzing the shaping and impact of their narratives. Ultimately, the concluding chapter argues for the trope of "listening to bees," the idea that bees are a critical indicator species whose behavior informs how we should approach and potentially solve this crisis.

WHOSE HONEY, WHOSE HIVE?: GENRE AND RHETORICAL AGENCY IN THE U.S. COLONY COLLAPSE DISORDER

By
W. KURT STAVENHAGEN
B.A. Pacific Union College, 1990
M.A. La Sierra University, 1996

DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of
doctor of Philosophy in Composition & Cultural Rhetoric in the Graduate School of
Syracuse University

May 2016

Copyright © W. Kurt Stavenhagen 2016
All Rights Reserved

ACKNOWLEDGEMENTS

Nine years ago my family and I endured a house fire. We were left with half a house. As such, I had to take an extended hiatus from finishing my doctoral work. I am grateful that this marks its completion.

So many assisted me in this task. Thanks first of all to my director, Dr. Eileen Schell. Eileen, thank you for your perspicacity, humor, and attention to the project all the way through, not only in terms of comments and edits, but conception of the project as it began and the willingness to continue over the years it took to bring this to completion. Thanks for helping me interpret and position the rhetorics in play in the crisis. Thank you for helping me recognize the powerful discourses within this crisis, for affirming this project's importance, and for understanding what it's like to grow up working with the land.

Thanks as well to my other readers, Dr. Lois Agnew, Dr. Collin Brooke, Dr. Krista Kennedy and Dr. Amy Devitt. Lois, thank you for serving as my second reader and being a constant source of encouragement. Thank you for your timely and thorough feedback, for your sense of humor, and for helping me define my project. Collin, thank you for your feedback on the chapter of French protests and for your references to New Materialism and genre theory. Krista, thank you for your encouragement, references to sources, and mindful sharing of perspective on nonhuman agency. Dr. Devitt, your work left an indelible mark on my conception of how language captures

experience. Your vision cast in 1993 to a large extent has been fulfilled: to embrace "notions of genre as dynamic patterning of human experience." Thank you for your remarks and strong support for this project.

Lastly, to my family and God, to you I am most grateful. Katja, Maya, Gabriel and Micah, you've sacrificed many a sunny day watching Dad peck at the computer keyboard. That said, we still got out and hit the trails together, and we know why we are a family.

Wendy, we made it. As my partner, you have been my solace and the epitome of discernment. We've journeyed through it all. I will never forget, and together we journey onward.

And to God—my life force, spirit wind, the well that never goes dry. Forever thanks.

May we, with the bees, dance the way to the bloom.

TABLE OF CONTENTS

Chapter 1: Whose Honey, Whose Hive? 14

Chapter 2: Whodunnit: CCD as a Crime Mystery 51

Chapter 3: French Beekeepers' Instantiation of Protest Genre 87

Chapter 4: American Beekeeper's Discourse on CCD 115

Chapter 5: Listening to Bees 158

LIST OF ILLUSTRATIVE MATERIALS

Figure 1 Sign “Our poisoned bees . . .Your dangerous future” underneath the Eiffel Tower
Figure 2 Sign “The Death of Beekeeping. Ban Gaucho Immediately” just outside the Eiffel Tower.
Figure 3 Beekeepers gathered underneath the Eiffel Tower
Figure 4 French beekeeper at protest rally with bullhorn
Figure 5 French beekeeper “funeral pyre”
Figure 6 French beekeepers throwing boxes over fence at Bayer CropScience French headquarters
Figure 7 Beekeeper throwing box over fence at Bayer CropScience French headquarters
Figure 8 Bee smoker raised in salute at protest rally
Figure 9 Woman dressed with funeral sash at protest rally
Figure 10 Mannequin of beekeeper hanging at protest rally

Introduction

In America, the honey bee has a history parallel to the Europeans that brought them. Thomas Jefferson wrote, “The Indians call them the white man’s fly, and consider their approach as indicating the approach of the settlements of the whites” (qtd. in Ellis 121,122). And like the settlers, swarms of *Apis mellifera* migrated westward. The first honey bees to make it to the continent were brought by settlers to Virginia in 1622. By the early eighteenth century, wild honey had become plentiful in the Carolinas and bees were thriving in New England. During the American Revolution, a British Army officer passing through Pennsylvania remarked, “almost every farmhouse has 7 or 8 hives of bees” (Ellis 122). For the next hundred and fifty years in America, honey bees were lauded as purveyors of hard work and producers of “sweetness and light” (Swift qtd. in Ellis 122). Their interpretation seemed in step with the colonist’s self-identification with productive work. Honey bees enjoyed a symbiosis with the European colonization of America.

Two hundred years later, with the onset of CCD in the U.S., that partnership was suddenly tested. The disorder was first officially noted in the U.S. on November 12, 2006. At 3 p.m., Dave Hackenberg, former president of the American Beekeeping Federation and a commercial migratory beekeeper of 3000 hives, checked his hives that had been foraging on peppers just south of Tampa, Florida. He was shocked to

discover the hive bodies[1] completely empty. He flipped lid after lid from the top of the hives only to discover a few bees in each hive. Within days in this yard, he went from having 400 to 32 hives (Jacobsen 5; Schacker 15; Benjamin and McCallum 103). Hackenberg was completely dumbfounded. By mid-November less than 10% of his hives were still alive. He lost 2,000 of 2,950 hives the first year of the disorder at a cost of $450,000 and the price of interest for a loan (Schacker 16; Court and Sharman). Nor was he alone in bearing the loss. Other beekeepers reported losses to the chief reporting agency–Penn State University's Department of Entomology and then acting state bee apiarist[2] Dennis Van Englesdorp. In November, seven other commercial beekeepers reported losses of thirty to ninety percent of their colonies—all collapsing the same way: "with no adult bees or dead bee bodies but with a live queen and usually honey and immature bees still present" (Benjamin and McCallum 105; USDA "Honey Bee Health"). By spring 2007, "a quarter of [the] northern hemisphere's honey bees were AWOL" (Jacobsen 64). The phenomenon was also reported in over a dozen other industrialized countries (France, Belgium, the Netherlands, Greece, Italy, Portugal, Spain, Germany, Poland, Sweden, Ukraine, Russia, Canada, Thailand, China, South Korea and countries in South America) (Jacobsen 64).

---

[1] Hive boxes are called supers and deeps. Both house between 8-10 frames. Deeps are bigger boxes. Two deeps form the bottom of most hives and generally house the queen, eggs and honey. The supers usually have a depth of 6⅝ inches, are stacked above the two deeps, and generally house just honey.

[2] Most states employ state bee inspectors that visit and inspect beekeepers's hives for disease, conduct surveys, and help distribute information about diseases and state and federal mandates.

In the United States, 800,000 of the nation's 2.4 million bee hives collapsed that winter—thirty-billion bees dead (Jacobsen 64). Since then, losses have continued. Officially named the honey bee colony collapse disorder (CCD), the worldwide disorder is defined as a syndrome of these vacant dead colonies. Though beekeepers keep restocking hives and not all losses are attributed to CCD, winter losses between 2008 and 2011 were on average 33% each year, up from an average of 15-20% before 2007. In 2012, perhaps because of a milder winter, the losses dropped to 22% (USDA 2012 Colony Collapse), yet in 2013 losses rose again to 31.1% (USDA Fact Sheet). A volley of studies published in the journals *Science*, *Nature* and *PLOS* still have not reached consensus on causes of the disorder.

Like the death of the canary in the mine, this disappearance of honey bees indicates a crisis with potentially serious environmental consequences. Without their pollination services, over $14 billion worth of crops are in jeopardy. California's largest cash crop of almonds, alone worth two billion dollars, is completely dependent on commercial beekeepers transporting 1.5 million hives to pollinate the groves every year. Although beekeepers are often well-compensated, they risk the death of their bees from stress and exposure to others bees infected with parasites and viruses (Benjamin and McCallum 4; 106). Pesticides, metabolites, and pathogens abound and a scientific solution still has yet to been found, now nearly a decade later.

I have a personal stake in the issue of CCD. My father, brother and I cared for 120 beehives for fifteen years before the onset of CCD. My brother still works as a commercial beekeeper in Florida. While we each interpret the crisis in slightly different ways, we share a deep kinship for bees. As the saying goes, once a farmer always a farmer; the same applies for beekeepers. Eight years ago, CCD decimated my brother's business. He lost all but a few hundred of his 1800 hives. Ever since, he has been slowly building his business back, working part-time for another beekeeper while raising and maintaining new hives.

His and other beekeepers' woes put in bold relief the ties between CCD and the U.S. industrial agricultural system and the ties between beekeepers' livelihoods, the bees' demise, and discourses of loss and blame. To earn a living, my brother and many beekeepers feel compelled to at least partly participate in a system that likely propagates the problem. Beekeepers become part of a web of industrial agriculture, one in which culpability, like the cause, is hard to trace. Is CCD more so the "fault" of beekeepers? Pesticide companies? Farmers' application of pesticides? Parasites? Hackenberg speaks for many beekeepers who epitomize the idea of a hard-working farmer caught within a system of staying ahead of the losses. He laments, "our kind is a stubborn, industrious bunch. We split hives, rebound as much as we can each summer, and then just take it on the chin–eat our losses" (Pesticide Action Network). Hackenberg's self-

identification surfaces an accepted way of life: beekeepers work hard to provide a service and make a living within a world wherein huge losses of bees are now assumed as inevitable. How might we better understand this seeming bind and beekeepers' field knowledge? What factors inform both this discourse of inevitability and the discourse of blame?

In pursuit of an answer, I examined a corpus of mainstream media, EPA documents and beekeeper discourse. I assessed the attribution of causes and the discussion of solutions in 120 mainstream newspaper articles, four documentaries, three popular nonfiction works, a series of letters and memos exchanged between beekeeper associations and the EPA, and ten interviews I conducted with beekeepers. In part, I found what I expected to find: stakeholders decried loss and eagerly named potential causes of CCD. Less expected was the discovery of the complex ways beekeepers and bees were represented, the different rhetorics employed by French and American beekeepers, and the primary role narrative constructs played in framing the crisis.

Though not labeled as such at the time, CCD was first identified in Europe in the 1990s. In 1998 French beekeepers enacted funeral rites as protests that helped trigger a ban of a pesticide suspected of causing CCD. In 2007 with the onset of CCD now in the U.S., journalists portrayed the crisis as a

crime mystery. In both cases, bees became the poster-child of stakeholder bias and served as stand-ins for beekeeper loss, a sign of an impending food crisis and human apocalypse. Bees also served as the proverbial canaries in the mine of industrial agriculture. Stakeholders used symbolic representations of bees to narrate the meaning and consequences of CCD in various forms. In turn, they scripted each other as heroes, villains and victims.

Narrative constructs especially framed the roles stakeholders played in the crisis. In one instance I examine, French beekeepers performed a funeral in street protests to communicate that the death of bees marks a potential loss of husbandry and regional food. They embodied this loss and appealed to the French public by using the ethos of French food culture. In contrast, U.S. news media dominantly used the narrative genre of a pathogenic crime mystery to pursue a single cause—the "smoking gun" of CCD. In another instance I examine, American beekeepers use narrative constructs about science, independence and a payback mentality that epitomize their mitigation of fair market economics and stewardship. In yet another instance, full-length nonfiction works and documentaries underscore the appeal of the crime-mystery genre and the trope "listening to bees." Defining narrative constructs greatly helps explain the rhetoric of the crisis.

Genre-ated Crisis; an Overview of Methodology

Following Foss and Booth, I define narratives fundamentally as structures that order time and experience to “interpret unwarranted life” (Foss 400; Booth 14). As I’ll show, stakeholders use narratives to emphasize aspects of the crisis. In turn, such narratives propagate perceptions among stakeholders and often the roles stakeholders play in the crisis. Robert Entman defines frames as selections of “aspects of a perceived reality“ made “more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described“ (52). Entman further delineates frames as defining problems, diagnosing causes, making moral judgments and suggesting remedies (52).

In my analysis, I especially show how narrative frames are used by stakeholders to define problems and make moral judgments that either constrict or expand consideration of variables. Some narrative frames in this crisis reduced consideration of crisis variables and were more abstract while others emphasized relationships between stakeholders. For example, the crime mystery emphasizes the search for a single solution and restricts the roles of many stakeholders as either heroes or victims. In contrast, the trope of listening to

bees expands the rhetorical situation to include bees and the possibilities for stewardship. Narrative frames, whether genres or tropes, underscore a pathogenic, criminal appraisal of the crisis or encourage a values-oriented evaluation of human stewardship of the environment. My analysis confirms and extends Entman's definition of a narrative as making moral judgments. In addition, I confirm what Adrienne Lamberti found in her analysis of Iowa agricultural discourse: these beekeeper narratives also sequence events to illustrate truths, create shared meaning, and elicit an audience's involvement (8). Narratives create structural "presences" that instate a Burkean order; as mythical frames they justify and make sense of events (Jasinski 401; Peterson 173).

In two crisis events I examine, these narrative tropes and constructs collectively acted as genres. Identifying and defining genres in these instances helped define the interplay of multiple sociological and biological variables. As Amy Devitt establishes, genre is a "nexus" between culture, an author, and specific situations that can be traced through textual forms (Devitt 31). As such, examining and identifying crisis events as genres demarcates the cultural, individual, and site-specific material realities that define the events. A genre serves as a means to "study the concrete and local as well as the abstract and general," allowing one "to particularize context while generalizing individual action" (30). Genres also mark "sites of material interaction within groups" and

can, therefore, be used as "tools for understanding and interpreting these interactions" (Reiff 37).

I furthermore examine these narrative tropes and genres within a methodology of "context-sensitive text analysis" wherein texts are understood as "a major part of the context within which any act of writing takes place . . ." (Huckin 84). In Huckin's terms, "intertextuality" gets recognized and sociological and cultural dimensions get considered. Following Devitt, Reiff and Huckin, I examine transcribed interviews, news, nonfiction books and documentaries for thematic narrative frames that both influence and reflect CCD socio-cultural discourse. Genres serve as "guideposts" to the "cultural artifacts of a culture's knowledge, values, [and] ideologies" (37). Through rhetorical analysis of narrative structures that frame media, the project defines both a stakeholder's propositional meaning and the "metalinguistic and interpersonal content as well" (Huckin 87).

Audience

Given that the CCD crisis is fundamentally environmental, this dissertation is indebted to and influenced by the field environmental rhetoric. The interdisciplinary field of environmental rhetoric began in the 1980s with publications in communication journals on risk management and environmental

planning. Composed of scholars from English Studies, Composition, Communication, Environmental Studies and Political Science, the field was defined as a study of linguistic constructs of ecology shaped by cultural values. Site-specific material realities and place-based rhetorics rise to the fore, as does the concern of their erasure from consideration. In her editorial remarks for the special issue on regional rhetorics in *Rhetorical Society Quarterly* (2012), Jennifer Edbauer Rice critiques the erasure of place by forces of globalization. She notes, "what is particularly insidious about flat data is that it smooths over the tectonics of place" (202). Globalization, often like genre, standardizes and obscures particulars. Further advocating for a more robust definition of place, Peter Goggin's edited collection of case studies in environmental rhetoric (*Ecologies of Place* 2013) "illustrate[s] the concepts and practices of knowledge making and knowledge distribution at geographical and geospatial locations" (6). For Goggin, ecology serves as a "metaphor and organizing principle for examining relationships between people and the natural, synthetic, and social systems of the places they dwell in" (8). "Beyond the assumption that rhetorics are situated," we must question "how and why they are situated" and define "notions of situated, place-based rhetorics" (9).

This dissertation responds to Goggin's call to define situated, place-based rhetorics by examining both the narratives CCD stakeholders used and

the location of these narratives. I examine the embeddedness of rhetorics in both cultural referents and material sites such as the Eiffel Tower, the headquarters of Bayer CropSciences, and U.S. bee yards. Citing environmental rhetoric scholars such as Killingsworth, Phaedra Pezullo and Eileen Schell, I define the interplay between cultural rhetorics, place-based rhetorics and embodied rhetorics in environmental crises. I identify how the media, scientists, corporations, and beekeepers narrate the crisis, and specifically how narrative constructs dictate roles for stakeholders and their consideration of crisis variables.

Overview of the Chapters

In Chapter One, I provide a literature review on environmental rhetoric and genre theory that I will later cite to illuminate the causes and consequences of CCD. In Chapter Two, I analyze media coverage of initial stages of the U.S. crisis, wherein the crisis was repeatedly cast as a crime-mystery. In this "whodunnit" genre, journalists cited the search for a single "smoking gun"cause of CCD, lamented the victims of CCD (the bees, beekeepers, and the general public), and lauded scientist hero detectives. I argue that the metaphors used to depict CCD as a "crime mystery" obligated scientists to find a "smoking gun." As such, they created a nesting genre that scripted scientists as hero detectives

and beekeepers and bees as victims. I'll argue, in part, that this nesting genre constrained consideration of variables likely causing CCD.

In Chapter Three I shift from the U.S. media's initial framing of the crisis to the French beekeepers' organized response to the crisis. I analyze their protests and use of genres against the backdrop of a cultural history of social protest, culinary pride, and agricultural unions. I examine how French beekeepers conducted funeral-like rites at the Eiffel Tower and at the French headquarters for Bayer CropScience, the manufacturer of the class of pesticides that beekeepers deemed a major cause of CCD. I analyze these social protest rhetorics and how they granted French beekeepers and bees a particular agency. In the protests, French beekeepers took action to demonstrate how the CCD has affected their livelihood and named the Bayer Corporation as a primary culprit.

In Chapter Four I examine U.S. beekeeper's discourses to both identify the narrative constructs they use to interpret the CCD crisis and to extend the tradition with environmental communication of examining primary source material of laborers or activists. In this case, I seek to add to the discourse frames identified by Adrienne Lamberti and Tarla Rai Peterson in their analysis of farmer and rancher discourse by examining how a representative group of U.S. beekeepers navigated agricultural discourses and made sense of the CCD crisis.

In Chapter Five, I explore an alternative counter narrative about CCD that emerged in the trope of "listening to bees," as invoked by beekeepers and represented in the genres of U.S. nonfiction books and documentaries. How does such rhetorically-shaped "listening" create consciousness about CCD? How might propagating such responsive rhetorics help the public and concerned citizens, scientists, farmers, and beekeepers better address environmental crises?

Chapter 1: Whose Honey, Whose Hive?

This dissertation compares and contrasts narrative structures used by media and beekeepers that rhetorically framed key moments in the CCD crisis. In key protests, French beekeepers stressed rhetorics of embodiment and consciousness-raising. U.S. newspaper media primarily stressed rhetorics that defined the crisis as a crime mystery in search of a singular "smoking gun, U.S. beekeepers stressed narratives of economics and stewardship, and nonfiction sources more so advanced the trope of "listening to bees." Narrating structures framed key moments in the crisis.

To equip the analysis of these specific CCD crisis moments and their narrative structures, this chapter first defines the field of environmental rhetoric, rhetorics employed in the crisis, genre theory and some constructs used in New Materialism theory. Recognizing this dissertation may also speak to those outside the field of environmental rhetoric, I first define constructs of that subfield especially salient to this study. I then define apocalyptic rhetoric, farm crisis rhetoric, and constitutive embodied rhetoric, since CCD stakeholders often employ them.

Given the primacy that genres play in framing two key CCD crisis events that I analyze later, I review the inception of genre studies within the academic disciplines of Composition and Rhetorical Studies and Communication Studies and underscore the key pertinent definitions of genre. I end the chapter by defining key constructs from

New Materialist theory that will inform how I interpret the trope of "listening to bees" in the final chapter of this dissertation.

I. Environmental rhetoric

As a sub-disciplinary field, environmental rhetoric has a long tradition of defining the environment as a cultural construct. Beginning with Christine Oravec's 1984 historical analysis of the fight between conservationists and preservationists over the Hetch-Hetchy Dam, a cross-disciplinary group of scholars from English Studies, Composition, Communication, Environmental Studies and Political Science has defined the field as a study of linguistic constructs of ecology shaped by cultural values. In their early and seminal work *Ecospeak* (1992), M. Jimmie Killingsworth and Jacqueline Palmer defined environmental dilemmas as problems generated by the way people think and act in cultural units (2, 3). In his broad collection of critical and literary essays titled *Green Culture: Environmental rhetoric in Contemporary America* (1996), Carl Herndl more explicitly stresses that society shapes values that influence the way we use language and manage the concept of the environment (3, 5). In these early works, social construction theory is prevalent. Culture shapes language, which, in turn, shapes the conception of the environment.

In his oft-cited textbook, *The Study of Environmental Communication and the Public Sphere*, Robert Cox defines environmental rhetoric as 1) the study of persuasive

communication strategies that individuals use to address the environment, and 2) the study of critical rhetoric wherein "questions about dominant discourses about nature and society" are raised (7). Many environmental rhetoric scholars pursued environmental case studies and applied critical rhetoric as a "critique of domination and nominalism" (cf. R. L. Mckerrow; Roberts-Miller 460). Critical rhetoric exposes discourse that rationalizes the "disenfranchisement of the already disenfranchised" (460). To a large extent, environmental rhetoric scholarship still focuses on case studies of such discursive manipulations of the environment and this project, in part, adds to this work. I found both beekeepers and bees were often disenfranchised by media and government entities by being perceived as secondary field informants or merely victims of the crisis. The part of environmental rhetoric that takes up cultural critique helps define the economic and cultural systems within which beekeepers operate.

A. Apocalyptic Rhetoric

To further determine communication patterns and the role of key stakeholders of beekeepers and bees, in the next two sections of this chapter, I examine forms of critical rhetoric stakeholders employ to navigate and position themselves in the crisis. ER scholars note that stakeholders often employ apocalyptic rhetorics in environmental crises, and in the instances of CCD I examine, stakeholders confirm this finding.

As a subset of environmental rhetoric, apocalyptic rhetoric has been theorized in over thirteen works.[3] Fundamentally, it emphasizes limits. Myerson and Rydin define apocalyptic rhetoric as a stakeholder's response to the perception of limited resources. According to them, once limits are realized, stakeholders underscore them and issue threats with an ethos of scientific certainty and use of hyperbole (46, 48, 50). Yet while Myerson and Rydin stress the constraints of apocalyptic rhetoric, others emphasize that apocalyptic rhetoric necessarily leads to resolutions. In their book *Ecospeak*, and articles "The Discourse of Environmental Hysteria" (1995) and "Millennial Ecology: The Apocalyptic Narrative from Silent Spring to Global Warming" (1996), Killingsworth and Palmer argue that apocalyptic rhetoric emphasizes a discourse of limits that in turn triggers a pathos-driven response they call hysteria. Their rhetorics of limits pushes further than Myerson and Rydin since they stress the end goal of such rhetoric is to correct the way we conceptualize the environment. For Killingsworth and Palmer, hysteria surfaces and challenges hegemonic discourse, and presents a positive counternarrative. Citing Freud's classic analysis of the human psyche, they define hysteria as a cultural "outbreak" in reaction to the West. Hysteria serves as corrective: we innately know there is a price for "progress" and sounding the alarm of hysteria is

---

[3] Killingsworth and Palmer review three decades of work, from the 1960s to 1990s in their 1996 chapter, "Millennial Ecology: The Apocalyptic Narrative from Silent Spring to Global Warming" (in Carl Herndl's collection, *Green Culture: Environmental rhetoric in Contemporary America)*. The article defines the use of apocalyptic frames as central to environmentalism. Among the works that define apocalyptic rhetoric are Killingsworth (1992; 1995;1996); Carpenter, 1978; Ritter, 1980; Brummett, 1984; Johannesen, 1985; Murphy, 1990; Opie & Elliot, 1996; Wolfe, 2008; Rosteck & Frentz, 2009; Johnson, 2009; and Salvador & Norton, 2011.

the rightful response. We cannot perpetrate a culture of extinction—short-term affluence at the cost of long-term impoverishment of nature ("The Discourse of Hysteria" 24). Killingsworth's hysteria "establishes a new foundation for communal action" (23). Without hysteria, environmental rhetoric gets reduced to protest that is beholden to the standard status quo. It stultifies as *ecospeak*, the discourse wherein nature plays the weaker half of the fixed binary between nature and culture. Hysteria corrects. It upends this positivist binary and offers a revisioning of the world akin to Black Elk's view: "only crazy men would sell their Mother Earth" (135).

Killingsworth and Palmer advance a discussion of apocalyptic rhetoric as an alarm to reshape the perspective of the world, one that Salvador and Norton follow. In this model, apocalyptic rhetoric seizes attention with pathos *and* plies the conscience. As Salvador & Norton additionally define, such plying of the conscience should instigate the consideration of counterbalancing solutions that can be implemented. In their summary of Killingsworth and Palmer's "Millennial Ecology" (1996), apocalyptic rhetoric provides a "malleable framework" of "prefacing the solution with a future scenario of what could happen if action is not taken" (48; Killingsworth & Palmer 22). Defining outcomes in ideological rather than Freudian terms, Salvador and Norton claim pathos does not assault the ideology of progress but rather transforms it into an ideology of sustainability. Such apocalyptic rhetoric implicates mechanistic and instrumental rationality as the primary cause of environmental degradation. Used as

such, apocalyptic rhetoric empowers stakeholders to question progressivism (23). Yet, it does not stop there. As the audience is made aware of the problem and begins questioning the ideology behind it, the rhetoric then prompts them to pursue solutions. Thus the rhetoric poses a "balancing act" between the "need for anxiety with the need for efficacy" (48). Apocalyptic rhetoric uses hyperbole and hysteria to incite an ideological shift that resolves in sustainable responsive stewardship (Salvador and Norton 41).

As a subset of apocalyptic rhetoric, the jeremiad structures this counterbalancing rhetoric even more, the substance of which I will reference in my review of U.S. news coverage of the CCD crisis. The jeremiad first emerged in Puritan emulation of the Old Testament prophet Jeremiah. As defined by Johannesen (1985), it is comprised of four elements: 1) a chosen people who fail to keep a covenant of values, 2) the probable impending calamity and suffering that result, 3) an avoidance of such calamity if the chosen people return to righteous action, and 4) the promise of such action leading to avoided ruin and the recaptured status of a chosen people. Opie and Elliot follow this trajectory, but define the jeremiad more by the rhetoric such situations call for: chastisement, persuasion, a call for American revitalization, and provision for hope (11). From their analysis of jeremiads in Puritan sermons, Emerson's *Nature,* Muir's *Yosemite,* Leopold's *Land Ethic*, Rachel Carson's "Fable from Tomorrow," Bill McKibben's *End of Nature*, Al Gore's *Earth in the Balance*, and the Environmental

Impact Statement, they conclude that American environmental rhetoric promotes "advocacy, utilizes evocative or implementational strategies, and necessitates tools like the jeremiad to obviate the polarity between these strategies" (35). As a strategy of environmental rhetoric, the jeremiad provides the "best rhetorical device" for Americans "to rage with displeasure, to evoke the beauty of metaphor, to find safety in method, and to reconcile opposition" (35).

Like Salvador and Norton, Opie and Elliot emphasize the jeremiad reconciling the need to raise an alarm with the need to implement changes. According to them, users of the jeremiad oddly pair poetics and metaphors with denotation and quantified data. Similar to Salvador and Norton's concept of balancing a "need for anxiety and a need for efficacy," Opie and Elliot imagine a space between evocation and implementation wherein both poetic and analytic mindsets can come to terms, and establish stewardship. The key concept in play among all four scholars seems to be balanced management. Apocalyptic rhetorics demand a sense of timing as to when to flip the switch back and forth between evocative and implementational rhetoric. In their own analysis of commonalities between the apocalyptic and jeremiad "archetypes," Salvador and Norton stress the importance that each form "manage tensions that are critical to sustained collective action over time" (48).

Such management is difficult since liabilities always threaten. Apocalyptic rhetoric risks ostracizing an audience and promulgating disbelief when evocation and

advocacy are not quickly paired with empirical data and strategic solutions. Finding such data, especially that which has a visceral impact, can also be a problem early in environmental crises, as I will show in the CCD crisis. What happens when a "crisis" doesn't readily affect one's paycheck or health or when it is abstract or involves acts that are not immediately consequential, such as honey bees dying but not in enough numbers to immediately threaten the pollination of crops raised worldwide?

Furthermore, environmental rhetorics must contend with how the general public and the academy still perceive the field as a topical specialization, akin to a section of the newspaper dedicated to sports or technology. In his 2005 review of the field in *Technical Communication Quarterly*, Killingsworth raises such questions. While he celebrates major works such as Cantrill and Oravec's *The Symbolic Earth: Discourse and Our Creation of the Environment*, Herndl and Brown's *Green Culture: Environmental rhetoric in Contemporary America*, his and Palmer's *Ecospeak: Rhetoric and Environmental Politics,* Peterson's *Sharing the Earth: The Rhetoric of Sustainable Development*, and Waddell's *"And No Birds Sing": The Rhetoric of Rachel Carson*, he wonders if environmental rhetoric became too constrained by praxis to be seen by others as little more than a hyphenated specialty. Given the field's "relatively tight" focus on "environmental subjects and genres" the "professionalization of the environment leaves us thinking that only certain groups are touched by ecological concerns" (Killingsworth "From Environmental rhetoric to Ecocomposition" 361).

Contending that the field is still somewhat mired in modernism, he recommends we move beyond Cold War binaries of environment vs. human activity and environmental activists vs. government and corporate entities. His concern is that these binaries reinforce the belief that the environment is only an arena of experts or activists.

Countering such professionalization, Killingsworth proposes we focus more on how the environment as place informs communication and rhetoric. Like Dobrin and Weisser, Killingsworth conceives of the environment as a definitive shaping construct of all communication. He cites, for example, how weather, travel, pollution and a writer's access to materials would affect professional writing. As he states, a person composing on a computer in Shanghai is not the same as a person composing on a computer in New York City. Killingsworth challenges the academic fields of composition and communication studies to build a theoretical basis for chronicling how communication gets situated. As he and others (especially Derek Owens) have contended, the environment needs to be reconceptualized as both a material and cultural construct, much like gender and race, to make its effects and human entanglements apparent.[4]

[4] Tarla Rai Peterson noted as early as 1992 the need to re-conceptualize sustainability as necessarily local and communal. Within the field of composition studies, Owens (and later Lynch) suggest a postmodern pedagogy with students observing their locales and suggesting changes. As mentioned in the introduction, Owens advocates for a sustainable pedagogy wherein "[w]e become sight-seers, contemplating our relationships to the sites we live in (homes and neighborhoods), the non-sites we also work in (classrooms and workplaces [. . .]), and the imagined sites we envision for our future selves, families and communities" (143–44). Reynolds, after Owens, insisted that social, cultural and natural systems be understood in terms of inhabitance. She insists that "[w]here the work of ecocomposition looks mostly to the natural world, cultural geography focuses on the interaction of the social and the built environment, with the idea of inhabitance as "crucial to both geographical or ecological theories of writing"(4). Outside the purvey of ecocomposition, communication scholars Salvador & Clarke shift the terms even

Killingsworth wants the field to pursue more than case studies that cover debates between environmental entities. While Killingsworth agrees with Cox that environmental rhetoric has helpfully defined persuasive strategies used to address the environment as well as critical assessment of dominant discourse about the environment, the field must now also explore how the environment situates communication in a particular time in a particular place. Killingsworth argues for the constructs of ecocomposition and ecological criticism (beyond the literary field of ecocriticism) to complement feminist and cultural theories in the conception and interpretation of communication. In his inception, the environment rises to the fore not only as a referent but also as an informant of how sites influence communication.

In the case of CCD, the need for such consideration of a place became especially apparent when French beekeepers engineered protests against Bayer CropScience, the company that sold the chemical they believed to be primarily responsible for CCD. As I'll explore, the French beekeeper's protest under the Eiffel Tower clearly associated with the French ethos of nationalism and agrarian pride, taking place underneath the symbol of French sovereignty. Beekeepers also protested at Bayer CropScience's French headquarters just outside the agricultural corporation's

---

further, from human inhabitance to biosemiotics, suggesting their phenomenological "weyekin principle"—close observation and mimicking of other species relationship to the environment would help us better assess and understand language as multifaceted and rooted in human and nonhuman intersubjectivity. I'll discuss this more in chapter five.

fenced industrial lot. Here they burned boxes that bees had abandoned just weeks earlier as victims of CCD, responding to and refiguring this place.

Killingsworth's insistence that the environment be viewed as situating communication in a particular time and place further prompts the question of how well CCD genres acknowledged regional and environmental factors. What "field" knowledge gets reported? Are variables such as regional weather, watersheds, and local forage considered? What about the bees' genetics? And to what extent are the bees acknowledged as embodying the disorder: not only in death but through the ingestion of pesticides and having mites suck body fluids from their foreheads for their entire life? How do such environmental, embodied material realities get represented and played out in the environmental rhetoric of CCD?

The role of locations, bees and beekeepers needs to be further defined for its role in configuring the communication about the crisis. A key question to take up is how their bodies and the places they inhabit get rhetorically conveyed through crisis narratives.

B. Constitutive environmental rhetorics

One way to define embodied and emplaced rhetorics is to address how they correlate with appeals to personal and group identity. Charland defines constitutive rhetoric as generating conditions "of possibility that can structure the identity of those

to whom it is addressed" (142). He likens such a force to conversion, where an audience comes to inhabit a "reconfigured subject position" (Jasinski 107; Charland 142). In later chapters, I analyze how stakeholders made such appeals, particularly through the use of image-events and what Phaedra Pezullo's calls embodied "witnessing."

Kevin Deluca contends that image-driven environmental protests function differently than those conducted through written or oral communication alone. He shows how image-driven rhetoric creates events of symbolic subterfuge. His project, in part, is to show how groups prompt media coverage of a temporal event that "disarticulate[s and re-articulate[s] the links between ideographs (social realities) and the synchronic cluster of discourse" (45). Such image events "reconstitute[s] the identity of the dominant culture" by challenging and transforming mainstream society's key discourses and ideographs primarily through appeals to one's identity. This rhetoric posits a new way to name and constitute social material reality (16). Image-driven environmental protest posits an issue less as a binary between two parties and more as the exposure of hierarchies among people groups and an exposure for the need to reconstitute and rename "reality" (Perelman & Olbrechts-Tytecca 80, 81). To show this, he analyzes a Greenpeace protest of the whaling industry. In this protest, six activists confronted a Russian Whaling vessel 50 miles off the coast of California in a small Zodiac vessel. Film captured the Russians shooting a harpoon at the whale and barely

missing the protesters. Subsequently, clips from that film were broadcast worldwide and featured in the U.S. on network television news. As Deluca defines it, the event was reconstituted as an ideograph by inverting the idea of the nature/culture binary and shaking up presumed hierarchies of humans and nonhumans. The whale was no longer the leviathan threatening man from the deep bur rather the innocent victim of greedy men. Playing with the Cold War binary, the images captured the mytheme of David vs. Goliath not only in terms of Americans vs. Russians but also as nonhumans vs. the hierarchies of governments. The sum became more than the parts. The jumbled mix of images, mythemes, and human and nonhuman agents show the environment as more than informing discourse and binaries as Killingsworth implicates; the images of the environment here detonate a "mind bomb" for the audience, propagating an appropriation of new constellations of agents and new ways to conceive of the environment.

Though Pezullo's project is not driven by an analysis of images, she too sees the environment as expressing a type of agency through constructs—in this case not so much through images of bodies as through emplaced bodies. She envisions how humans rhetorically constitute and embody the environment in protests, in one instance charting how Louisiana communities and Sierra Club tourists rename sites of industry pollution in Louisiana. Illustrating Dean MacCannell's idea that to rename is to elevate a place, enshrine it and mechanically and socially reproduce it, she notes the

powerful effect of this community renaming DOW Chemical's "Industry Corridor" as "Cancer Alley" (79). Residents embody the toxic exposure emanating from chemical pollution in these sites. Pezullo argues that as tourists, organized by environmental justice groups, move though such sites, they "embod[y] rhetorics of resistance aimed at mobilizing public sentiment and dissent against material and symbolic toxic patterns" (3). Tourists end up standing in solidarity with local people who share stories of hardship on and off the bus, and for whom a toxic tour is where their "bodies are at stake" (10). Tourism gets reconstituted as communal activism and human health gets renamed as environmental health that includes the land, and the community of humans, water, air, animals and plants that coexist with it. Tourists witness and participate in residents' bold "buy-back" of their bodies and land (140). The rhetorical appeal is not as much the binary between protesters and a company but an embodiment of health by tourists, the local community, and their identification with a locale. As with Deluca's Greenpeace protest, such rhetoric cannot be reduced to a single binary or a single act.

Deluca and Pezullo expand an understanding of rhetorical sites and rhetorical embodiment. By renaming and "revisioning" sites and bodies, they promote a rhetoric of community health—a rhetoric that espouses protection for each other's health. In the case of CCD both French beekeepers and nonfiction media renamed beekeepers and bees as more than victims. Just as one example, the French beekeepers

rearticulate a protest by performing it as a funeral. They also reconstitute themselves and the bees not just as victims but informants of a crisis. The "mind bomb" of the "funeral protest" triggers a reconstitution among the audience of protesters who are both strong and victimized; both abused by a specific perpetrator and stewards of a larger agricultural rhetoric. Deluca and Pezullo helpfully define image-driven and embodied appeals that challenge an audience to reconfigure the identity of stakeholders and themselves as they reconfigure the environment.

Killingsworth, Deluca and Pezullo advance thinking about the environment not just as cultural constructs but also as materialized sites that spur constitutive identity among stakeholders. Environmental locales and embodied protests prompt appraisal of what constitutes one's environment and informs my analysis of the environmental rhetoric employed in this crisis.

C. Agricultural Rhetoric

Since many of the locales of CCD events are agricultural, agricultural rhetorics need to be considered as well. Adrienne Lamberti, Tarla Rai Peterson and Eileen Schell especially identify narrative structures and rhetorics used by U.S. farmers and by the media sources that represent them. In her book *Talking the Talk: Revolution in Agricultural Communication*, Adrienne Lamberti examined documents published by the Agricultural Extension System of Iowa State University and interviewed farmers to

identify rhetorical patterns of communication that signify dramatic changes in U.S. agriculture, specifically among rural communities. Tarla Rai Peterson and Christi Choat Horton interviewed ranchers to identify their narratives and how they might impact government policy and Schell examined key web sites to identify rhetorical frames that inform the farm crisis in America.

Lamberti, Peterson and Horton helpfully define narratives that inform the identity and values of farmers. Lamberti defines narrative as a depiction of a sequence of events and a "belief" that experience is "storied and knowledge-making is a narrative endeavor" wherein context and community shape meaning (8, 9; cf. Perkins and Blyer p. x). Peterson does not define narrative outright but rather defines the "mythic structures" she identifies after multiple interviews with farmers. These structures are functional means that farmers use to fashion their world vision and justify contingencies. Referencing Burke, Peterson identifies myths as structures that specify boundaries of correct behavior, distinguish "insiders from outsiders," and allow for individuals to mediate between "identification and division" (173). Peterson's idea of myth differs slightly from Lamberti's emphasis on narrative in that she stresses it as a means to illustrate truths and create shared meaning. Still, both define narratives as larger cultural structures that transmit codes of ideology (173). Both identify narrative structures as a means that farmers use to situate their values and precepts; both define narrative frames such as "common sense" that, in turn, define an epistemology. Given

the similar context of agriculture, I later cite their methodology and test to see if such frames apply to U.S. beekeeper discourse.

I also cite Eileen Schell's analysis of "myth information" of the American farmer since she identifies specific rhetorical frames and places them into a larger cultural context. Schell specifically identifies rhetorical frames the public and media apply that constrict many U.S. farmers' identities. She notes that mainstream public media's coverage of American farmers generally pursue only two lines of argument: "the pathos-driven rhetoric of tragedy and the logos-driven rhetoric of smart diversification" (78). The rhetoric of tragedy boxes farmers into keepsake roles; they become the proverbial farmer with a pitchfork, a symbol for the way things "once were." This pathos-induced rhetoric forces sympathy for farmers (in this case beekeepers), stereotyping them as bygones from yesteryear.

Not only do farmers or beekeepers get stereotyped as victims, but they also get goaded to perform as technological innovators. Schell identifies the latter as the rhetoric of smart diversification. Smart diversification rhetoric "emphasizes how farmers can survive by 'thinking outside the box' through strategies such as niche farming, farm tourism, and technological methods" (79). Farmers are to become innovators, adapters, and smart entrepreneurs who use the latest technology. As she traces, the discourse puts the onus on the individual farmer *alone* to respond to market based logic, often where the farmer has to "get bigger or get out" (80). Not only does the

farmer/beekeeper have to scale up to compete and make a living, they also have to find market-based solutions even when external threats such as pesticides are not aggregated or figured into their costs. As this projects brings to light, beekeepers feel pressure to get the job done—alone and brilliantly. They must be CEOs, marketers, technological wizards, scientists, and public relations spokespersons.

Lamberti and Peterson's narrative constructs and Schell's agricultural rhetorics help situate this analysis of beekeepers. They define the role of narratives among rural communities and the public rhetorics that they identify with or counter. The narratives they identify and the role of narratives in agricultural communities prompts questions that I will take up later. Do the media and beekeepers employ similar narratives and rhetorics? How do beekeepers respond to and manage dominant representations of themselves as either victims or innovators?

II. Genre Theory

As both a type of narrative and a larger social construct, genres define two key CCD crisis events and therefore call for definition here. In the two instances, the genres of a funeral protest rights and a crime mystery framed the events. In this section I define genre as a cultural force that frames and norms knowledge of events. As Anthony Pare noted and forewarns, actions within genre "appear normal, even inevitable; they are simply the way things are done" (Pare 59). CCD genres serve as

artifacts that show how the crisis was normed. They particularly show beekeepers, scientists and journalists scripting variables they deemed salient to interpreting or solving the crisis. Genres were used not only to name and ignore other stakeholders but also to get the audience to envision a limited set of possibilities, akin to the game of Mad-Libs that asks its audience to fill in pre-selected blanks for set sentences. As I will explain in subsequent chapters, in CCD crisis moments, genre propelled and constrained consideration of stakeholders' roles and crisis variables. Genre baited assumptions by the audience and framed stakeholders' views of these key events.

A. History and Foundational Definitions

As Richard Coe helpfully charts in his 2003 collection, *The Rhetoric and Ideology of Genre*, new genre theory emerged in composition, rhetoric and communication in the 1980s "from practical attempts by educators and researchers to understand writing as social" (3). Michael Halliday's systemic-functional linguistics (1978) became the intellectual basis of the "Sydney school" of genre theorists, formed in opposition to an emphasis on a "creative" or "expressionist" process approach in Australian elementary schools. In North America, the area of rhetorical genre studies found its starting point in the work of Carolyn Miller (1984), Campbell and Jamieson (1978), and Mikhail Bakhtin (1983, 1984). This school's focus was rooted in the practical concerns of "writing in the disciplines" and "workplace writing" (Coe 3). Genre became defined as

"primarily social, embedded in the community and context of writer and audience" with a focus on genre as a "rhetorical strategy of functional/motivated relation between form and situation" (91; 5).

Such theory arose in part as a response to constructions of genre as template forms configured by literary critics. According to Catherine F. Schryer, this literary group focused on texts sharing commonalities of form (Black, 1965), audience (Mohrmann & Leff, 1974), and rhetorical situations (Halloran, 1978; Ware & Linkugel, 1973; Windt, 1972). Miller's article shifted the discussion away from textual similarities toward a "pragmatic understanding of genre" as a form of social action. Her work established a new trajectory and "the sources of many of the ideas [of] current composition theory in North America" (Schryer 77; Devitt 3). Miller defined genre as "typified rhetorical actions based in recurrent situations" while maintaining genre as forms or texts within a matrix of contexts (159). Schryer notes such "typical" or "recurrent" social action necessitates the input of social actors. Miller's social context thus also necessitated that genre scholars pursue ethnomethodological studies.

Scholars responded by pursuing research that collectively then became know as the field of rhetorical genre studies. They established a semiotic and social theory of genre and its instantiation in workplaces. As Amy Devitt chronicles, Lloyd Bitzer, Karlyn Kohrs Campbell and Kathleen Hall Jamieson, Carolyn Miller, Charles Bazerman, Carol Berkenkoter and Thomas Huckin, and David Russell made major contributions. Devitt

further calls for the academic field of composition and rhetoric to shift from teaching genre as category and text with universal formal features to a "dynamic patterning of human experience" ("Generalizing About Genre" 84). In her 1993 article in *College Composition and* Communication, Devitt asked the field to help students identify the "sources" of textual effects to enable a more robust construction of "our writing world" (84). In such pedagogy, students traced the use of genre back to social and cultural influences. In her book *Writing Genres*, Devitt noted that by 1997 David Russell could take "as a given that participants' recognition of genre is what rightly determines whether one genre is distinct among another" (8; cf. Russell "Rethinking" 518). Genre had become defined as a participant driven typified action,[5] one chronicled well in Professional Communication case studies of genre use in workplaces. In 1988, Charles Bazerman examined how social exigencies shaped the scientific article. Catherine Schryer studied veterinary medicine (1993, 1994) and declared genres therein to be "evolving, dynamic entities" both shaping and shaped by their users (77). Throughout the 1990s, scholars analyzed genre use in discourse communities as varied as bank economists (MacKinnon, 1993; Smart, 1993), social workers (Pare 1993), psychotherapists (Berkenkotter & Ravotas, 1997), tax accountants and examiners, (Devitt, 1991; Sullivan 1997) and architects and business students (Medway 1994;

[5] As Devitt summarizes (with her apologies for generalizations given the complexity of genre theory) genre theory scholarship echoed Miller in this way: "that genre is action, that genre is typified action, that typification comes form recurring conditions, and that those conditions involve a social context" (*Writing Genres* 13).

Forman and Rymer 1999; Schryer 74). Genre was then understood as a social action that demanded an accounting of participants and various measures of use. Devitt spoke for a consensus: "the heart of genre's social nature is its embeddedness in group and hence social structures" (*Writing Genres* 36).

By the time Devitt published her seminal *Writing Genres* in 2004, three strands of genre theory pertinent to this project had further emerged: a systems approach to interpreting genre, the analysis of genre function and interaction, and a call for more critical analyses of the effects of genre enactment. I define these strands because each helps further define how genre framed two key CCD crisis events.

B. Systems Approach

David Russell's (1997) definition of genre within an activity system marked the shift from interpreting genre as a unidirectional response to interpreting genre as an interactive system. In his oft-cited article, "Rethinking Genre in School & Society: An Activity Theory Analysis," Russell proposes an activity system theory of writing to mediate and map "macro-level social and political structures" affecting and affected by "students and teachers writing in classrooms" (505). He blends Y. Engelstrom's (1987, 1993) systems version of Vygotskian cultural-historical activity theory with Charles Bazerman's theory of genre systems to move past the impasse of dualism instantiated by social construction theory (506). Building upon Bakhtin's dialogism, Russell sees

writing not as a text undergirded by a structure but as an intersubjective process between writers and readers mediated by all forms of discourse (506). This discourse encompasses non-linguistic "actions and material tools," such as buildings, machines, and financial resources, thus encouraging analysis of the totality of social discourse embedded in a system (509). The system as a unit of analysis includes "any ongoing, object-directed, historically conditioned, dialectically structured, tool-mediated human interaction" mutually constructed by participants in systems such as families, religious groups and professions (510). In such systems, genres are defined as "tools" used for "operationalized social action" (512). They mediate the behavior of people in the activity system by helping people predict actions.

For Russell, to analyze genre therefore is to analyze multiple dialogic interactions and recognize discourse as one genre "tool-in use" among many (513). Writing, for example, might thus be linked to the drawings in an architectural sketchbook. Genre mediates these actions between individuals in activity systems (514). In the "simplest terms," genres become "ongoing use[s] of certain material tools . . . in certain ways that worked once and might work again" (515). Genres thus define genre function beyond Miller's "typified rhetorical actions based in recurrent situations" (159). For Russell, genres become overlapping "operationalized" actions within a system that mediate relationships and identify tasks taken by individuals locked together in a system.

However clarifying and expansive, Russell's idea of genre as an activity system has been qualified and challenged as well. Building upon and yet differentiating from Miller's definition and Russell's theory, Devitt (2004) emphasized genre as reciprocal and dynamic. Like Miller, Devitt defines genre as rhetorical actions that people perform in their everyday interactions with their worlds that can't be isolated from themselves, as if they were just a "material tool" or "agent" (2-3). Like Russell, she envisions genres as mediating multiple interactions between multiple individuals within a system. Devitt also conceives of genre as an interactive site and process; she agrees with Russell that context cannot be separated from actions or text and that Miller's claim of "social situation as singularly defining genre" is problematic (26; 3). Yet she faults Russell's activity system for neglecting the influence of other genres and making it difficult to analyze cultural constructions that overlap multiple systems. For Devitt, genre operates more as a site of dynamic mediation of situation, culture and other genres than Russell's "tool" approach would allow. Genre is the "nexus between an individual's actions and a socially defined context . . . a reciprocal dynamic within which individual actions construct and are constructed by recurring context of situation, context of culture, and context of genres" (31). More than a chronicle of typified actions in response to reoccurring rhetorical situations, genre informs and shapes individual actions by responding to and generating situations, culture and other genres.

Genre frames local and global contexts and mediates between form and content:

> In studying genre, thus, we can study the concrete and local as well as the abstract and general. Not as removed as situation or activity system, genre mediates between text and context. Not as general as meaning, genre mediates between form and content. Genre allows us to particularize context while generalizing individual action (Devitt 30).

Genre is defined as more than a tool operationalized by agents; it's a generative nexus that defines and mediates texts, individual actions, and the contexts of situation, culture and other genres.

As nexus, it becomes a site within a system; a location that configures agency. Bawarshi further pushes this concept of genre as creative and generative. He conceives of genre as an ever self-organizing ecosystem. Bawarshi lauds Russell's activity system as more generative and holistic than the field's traditional analysis of a discourse community, but adds that "genre function" must be underscored as a way to tally discursive activities within a rhetorical ecosystem (33-34). Agreeing with Russell and Devitt that genres are not deterministic, he sees genre akin to an ecological growth cycle wherein typified practices support conditions that in turn support more of those practices. In *Genre and the Invention of the Writer* (2003) he states:

> Within material constraints, then, our social relations, subjectivities, commitments, and actions are rhetorically mediated by genres, which organize the rhetorical conditions within which we enact and reproduce our social relations, subjectivities, commitments, and actions. In this way, genres are not merely passive backdrops for our actions or simply familiar tools we use to convey or categorize information; rather, genres function more like rhetorical ecosystems, dynamic sites in which communicants rhetorically reproduce the very conditions within which they act. Within genres, therefore, our typified rhetorical practices support the very recurring conditions that subsequently make these rhetorical practices necessary and meaningful. This is why genres, far from being innocent or arbitrary conventions, are at work in rhetorically shaping and enabling not only social practices and subjectivities, but also the desires that elicit such practices and subjectivities" (82)

Genres here take on powerful subjectivity. Rather than Russell's tools, they work as system agents. They also are not mere categories or "passive backdrops" for actions but rather cultural rhetorical sites–ecosystems–that generate the reproduction of actions and corresponding social conditions. They shape, enable and balance social practices, identities, and desires. Similar to Devitt, both the human operative and system have play. Even as Bawarshi focuses on the role of genres in sustaining a system, both he and Devitt carefully define genre's agentive function so as not to make

it independent of human action. As Devitt cautions, "For genre to act as agent independent of human operators is to magnify its force too much, to enlarge the nature of genre to material action that makes people do things or that does things without working through people" (Devitt 48, 49).

In my analysis of CCD, it's helpful to define genre at times as a tool and at other times as a cultural force. Devitt's emphasis on genre as a nexus of culture and pre-existing genres and Clay Spinuzzi's frameset of genre as macroscopic, mesoscopic and microscopic help. In Spinuzzi's early model, culture and genre shape each other (genre as force) even as stakeholders manipulate and put genres into play in real-time context. At the macroscopic level, the question is how does genre manifests as a "cultural-historical activity" that shapes a situation wherein genre gets implemented. At the mesoscopic level, the question is what "goal-directed action" of agents within a workplace system can be traced. In turn, at a microscopic level, the question is how documents get enacted by workers configuring and completing tasks in response to field specific conditions (31-36). By analyzing the use of genre at these three levels, one can assess the influence of culture, materials, and locale. One can also identify how stakeholders implement texts in "real world conditions." Spinuzzi implies that genre captures a dynamic range of culture, responsive to a given rhetorical situation. Spinuzzi and Devitt underscore how genre analysis can account for *both* cultural norms and user

bias, an emphasis that helps explain how narratives about beekeepers and bees were often oversimplified.

Thus while genre is a force of replication (Bawarshi) and not an independent agent (Devitt), in CCD, to borrow Bruno Latour's term for an inanimate agent—it works as an actant. It works within a dynamic constellation of other actants (Spinuzzi) as a veritable force that is neither objectified nor independent of other elements (Devitt 3). It represents "constellations of regulated improvisational strategies triggered by the interaction between individual socialization, or habitus, and an organization or field" (Spinuzzi 31). As such, I define CCD genres as responsive to culture and fashioned by stakeholders to cue action. Like scripts that cue actors and keep the audience engaged, genres cue stakeholders to play roles in the crisis.

C. Genres as Interactive

Genres also derive narrative power from how they are paired. In my analysis of initial news coverage of CCD, I found the genre of a crime mystery nested within news stories. Given the interaction between the news story and the crime mystery nesting genre, I briefly define here how genres are necessarily referential to each other, often in hierarchies.[6]

---

[6] This part of genre theory will be elaborated upon more in chapter two wherein I show how nesting genres share similarities and yet, are differentiated from genre sets, pairs, and repertoires.

Genre is not only a nexus of cultural and textual cues but also an indicator of hierarchy and categorization because texts within a genre necessarily have to reference each other. In her widely cited article, "Anyone for Tennis" (1987 and 1994), Ann Freadman notes that a genre gets defined in pairs, akin to how tennis cannot be played by one player. She establishes genre as "applied to the interaction of minimally, a pair of texts than to the properties of a single text" and uptake as the "bidirectional relations that holds between this pair" (Freadman 40). A text confirms its "generic status" by uptake—responding to the other text's invitation. In other words, a text has to reference another as a confirmation or differentiation of genre conventions. As Richard Coe notes, Freadman clarifies this social nature of generic discourse that requires a minimum of "two players" has the author consider the moves of another within a socialized space (6). Genre arises at the point of interaction between texts, sometimes in pairs that constitute a single genre or in a ceremonial sequence (Coe 7).

Texts here "ping" each other, not only defining genre and each other (cf. Devitt) but also defining an incredible range of macro cultural relations (to borrow from Spinuzzi) and localized social configurations. Devitt notes such exchange and configurations in her analysis of workplace genres, arguing that "rarely does a group accomplish all of its purposes in a single genre . . . a set of genres functions for the group, and the interactions among those genres affect the functioning of each genre" (54). Expanding upon Bakhtin's repertoire of genres (which operate within a "sphere of

activity"), Devitt defines a repertoire as genres a group owns and selects from. Genre sets, in turn, are more localized, sequenced subsets of repertoires, such as the "charge, minutes and reports" that correspond with the function of a workplace task force. All of these genres evolve with the group's needs and exigencies and respond to each other in a constellation: "A marriage proposal is tied to wedding invitations, cards of congratulations, guest books, marriage vows, thank you notes" (Devitt 55). One influences the other; one can't be understood apart from the other. In Bawarshi's analysis of the Patient Medical History Form, he also finds that genre sets "function in relation to one another" and together "maintain and participate in the situated activities that constitute the larger ecosystem we call the physician's office" (84). Such sets cue the subjectivities of the participants and organize the relationship between participants; medical patients "write" themselves into a position by filling in medical history forms and thereby subject themselves to the functions of forms that follow (84). A genre operationalizes actions that inform subjectivities. A genre necessitates that one text respond to another. Genres thus reify themselves and powerfully configure human health.

In the case of CCD, two genre sets emerge whose similar influence I'll chart. First, the genre of crime mystery nests in the genre of news stories in early reports of the crisis within U.S. journalism. Secondly, key French beekeepers' protests get performed through signage and rites as a funeral lament.

As I'll explore, genres not only define each other, they propagate and accelerate normed actions.

D. Genre and Critical Rhetoric

This norming of ideology and even the erasure of stakeholder agency deserves some concluding analysis. In their 1994 edited collection *Genre and the New Rhetoric*, Freedman and Medway criticize the North American school analysis of genre as "descriptive, with the accompanying tendency to an uncritical acceptance of the status quo" (11). Freedman and Medway's series editor, Allan Luke states without such critical rhetorics of power, "genre risks becoming simply a new 'unit' of psychological skill, individual competence, or cultural virtue" and calls for genre analysis that "foreground[s] the interests they serve" (x). Freedman and Medway's publication launched a discussion in the field, to which Richard Coe's 2002 collection in part responded. In her analysis of the doctor-patient interview, Judy Segal warns of the inherent tendency of genres to generalize; to "highlight similarity and hide difference" and provide "a rationale for the rehearsal of the typical in discourse" and "a usurpation of the particular by the general" (171, 172, 182). If genres standardize and generalize operations, questions must be raised as to whose standards they reinforce and whose positions they occlude. Richard Coe cautions, "Like other aspects of discourse community, genres are neither value-free nor neutral and often imply hierarchical social

relationships" (2). Given that genres often embody hegemonic discourse, the generalizing tendency of genres should be defined and hierarchies named. In large part, Catherine Schryer, Amy Devitt and Risa Applegarth respond to this critique.

In her article, "Genre and Power: A Chronotype Analysis" Catherine Schryer addresses the issue of genre and power by addressing genres' relationship to time and space. In part, she defines genres as "strategies agents can call upon to enhance and distinguish their own position and 'play the game successfully'" (83). Schryer conducts a case study of bad news letters written by employees of an insurance company. Referencing Bakhtin and further defining genres as "instant[iating] a commonsense understanding of time and space," Schryer found that the letters were template forms designed to bury the bad news and keep readers "waiting." After coding the letters and the interviews she conducted with their writers, Schryer found fault with the organization's managers. By pre-scripting the letters, the managers forced their writers to detail the company's analysis of the client's case before delivering the bad news to them. Such a tactic in Schryer's estimation,"freeze[s] its readers in space and time and reduce[s] them to passivity and response" (85). Schryer further traces this rhetoric to North American business culture and notes the fallout not only for readers but writers: demeaning template work that rarely serves both client and company interests.

Devitt further defines social roles that workplace genres reinforce. A corporate genre "reflects, constructs and reinforces the values, epistemology and power

relationships of the group from which it developed and for which it functions" (*Writing Genres* 63) engineering how people in the group are expected to act and believe (78). As a normalized element "within the group" genre dictates what gets deemed appropriate or inappropriate behavior (77). For example, Devitt shows how in North America, the memo evolved from being a personal letter to a document of positions and an extension of the company's memory. To "put it in writing" became a way to enforce management and instantiate official and legal positions. Language changed from relational and polite to "direct, impersonal, and matter of fact" telegraphic phrasing. The memo became a means to enact policy and efficiency (Devitt 105).

Schryer and Devitt's definitions of the rhetorical dimensions of genre helpfully raise a set of questions to be applied in my analysis of CCD. For example, what are the effects of multiple seemingly "objective" news stories that harbor a nesting genre of a crime mystery that associates with fictional entertainment? To borrow Schryer's terms, how might such a mix of genres "freeze" its audience into overly prescribed subjectivities? What bias of American culture does this reveal?

The power of genre to "site" a select assemblage of agents and construction of social action (Devitt 64) begs analysis for gaps of the acknowledgement of human-nonhuman agency. In this crisis, identifying genres critically helps identify agency, cultural and social mores and nonhuman variables left unaccounted. It helps more accurately map dynamic intersubjective agency.

III. New Materialist Theory

In a final turn, I review New Materialist theory that informs how bees are represented in some CCD accounts and how they might better be defined. Bruno Latour, Ian Bogost and Marilyn Cooper provide constructs that helpfully expose problematic dualities undergirding the genres and rhetorics employed by CCD stakeholders. These authors specifically challenge the divides of text/context, nature/culture and nonhuman/human that often are employed to frame CCD. Bogost notes the occlusion of the biological and actual (the building as agentive force) is rooted in the false binary between scientific naturalism and social relativism. Buildings are ignored in the domain of language and culture; in the humanist and social science tradition, social construction theory does not intersect with biology and is adverse towards scientific naturalism (13). For the social relativist, science itself is situated within culture. Working within the Humanities or Social Sciences paradigm, the social relativist claims “nothing exists that cannot be explained through the machinations of human society . . .all things exist through conceptualization; they are really just structures within the temple of human cultural production” (Bogost 13). Using different terms but getting at the same ironic binary, Latour claims culture versus nature conveniently ends up as a zero-sum game for gaming political (cultural) forces; a “pair as firmly united as the two seats on a seesaw, where one goes down the other goes up” (28). Similar to

Bogost (though Bogost claims Latour is too subservient to human politics), Latour advocates ecology to be identified finally for what it is: “attached to everything” and “dissolv[ing] nature’s contours and redistribut[ing] its agents”(21).

For Latour, agency is finally seen for what it is: distributed between constellations of humans and nonhumans. Rather than referring to humans as agents and thereby obscuring the agency of nonhumans and defaulting to object/subject dualism, Latour prescribes we refer to both humans and nonhumans as “actants, acting agents, interveners” or “entities” that furthermore modify and associate with each other through interactions or “trials” (75, 237). For Latour, nonhumans such as animals, machines, and plants substantiate intersubjective agency. Humans and nonhumans associate where subjects and objects never could (76).

In her 2011 *College Composition and Communication* article, “Rhetorical Agency as Emergent and Enacted,” Marilyn Cooper further grapples with the definition of agency in posthuman terms. She grounds her definitions of agency in the field of neurophenomenology, the scientific and philosophical study of the experience of consciousness, and defines it as “complex systems” that are self-organizing wherein sequence is derived from an “ongoing process in which a multitude of agents interact frequently and in which the results of interactions feed back into the process” (421). For Cooper, “emergent properties (such as agency) are not epiphenomena, nor ‘possessions’ in any sense, but part of the systems in which they originate” (421). At

issue is not just the death of the modern subject but the "whole notion of subject;" a construct "hamstrung at the start, struggling with how to account for any action that is not either determined by or resistant to semiotic, social, political, and material others or orders" (423).

Extending Latour's theory of actant, Cooper focuses on interactive systems. In such systems, both humans and nonhumans act and influence each other. Agency takes place as organisms respond to each other and the perceived consequences of their actions (426 and 435). Members act and modify other actors through a series of trials. Actants intervene within labs, sites, and situations and cannot be reduced to actions or mere manipulations by a human subject (Latour 75). Though animals, machines, plants, and material objects enact agency in different ways, all occur in circular causation—not linear cause and effect. One agent's action "perturbs" another agent who in turn responds (437) within a constellation of humans and nonhumans prompted by *kairos*. Rhetors and audiences remain agents responsible for actions, "but they are not the sole cause of what happens" (439). Instead they prompt or invite other actions in an open process of possibilities.

Given that an understanding of place is central in this analysis of environmental rhetoric, New Materialist theory helpfully challenges presumed divides between "individuals" and, in this case, places of protest, bees, and culture. Place becomes redefined as a constellation of interactive actants that influence human intent.

Regardless of one's definition of the possession of agency, where and when stakeholders act needs to be considered when interpreting a text. Places such as the Eiffel Tower, beekeepers bodies, and the bees themselves cannot be ignored or merely labeled as objects subsumed in human agency.

Conclusion

This dissertation examines how CCD stakeholders employ apocalyptic, emplaced and embodied rhetorics in narratives to identify the rhetorics and the agency of these stakeholders. I will particularly note when place gets erased by forces of globalization—the "insidious" nature of "flat data" that Jennifer Edbauer Rice notes—"smooths over the tectonics of place" (202).[7] I will argue that chronicling context helps identify the "knowledge making and knowledge distribution" spurred by specific locales (Goggin 6). Mapping CCD's cultural and material "tectonics of place" helpfully defines environmental crisis rhetoric and underscores intersubjective agency.

[7] In her editorial remarks for the 2012 special issue on regional rhetorics in *Rhetorical Society Quarterly* (2012).

Chapter 2: Whodunnit: CCD as a Crime Mystery

It was all the hype of CSI meets agriculture. In February 2007, news of the honey bee colony collapse went viral and quickly appropriated the tone and language of a crime mystery. The *Philadelphia Inquirer* broke the story on February 5 and within a day, 487 newspapers reported it (Court and Sharman). The *Inquirer's* headline calamitously claimed "Mystery Killer Silencing Bees: If the die-off continues, it would be disastrous for U.S. Crop yields." The emphasis on mystery abounded. *The New York Times* reported, "Mystery Disease is Threat to Bee Colonies"; *Reuters* titled their story, "U.S. Bee Colonies Decimated by Mysterious Ailment"; and the *Houston Chronicle's* headline read, "Thousands of Honey Bees Die of Enigmatic Illness" (Schacker 14).

In this initial coverage, whether the disorder was labeled a killer, disease, ailment or illness, mystery was the modifier. Colony Collapse Disorder (CCD) became a media sensation and the mystery of the bees' absence became the media's favored focus. Entomologists and beekeepers were suddenly thrust into the role of being informants. Commercial beekeeper, Dave Hackenberg, credited with first reporting the disorder, found himself deluged with phone calls from reporters after the story broke (Personal Interview). Every major newspaper in the United States, Canada, and Europe ran stories about "the mystery of the disappearing bees" (Jacobsen 70). Film and television entertainment outlets also accentuated the scare, forthrightly or with irony. In M. Night Shyamalan's 2008 apocalyptic film, *The Happening*, Mark Wahlberg plays a

high school science teacher who cryptically tells the class, "bees are disappearing. There's no sign of them, no bodies, they're just mysteriously gone. It's scary, huh?" True to sarcastic form, in an episode of *The Simpsons* when Homer's daughter Lisa tells him that "no bees means no honey," Homer instantly imagines newspaper headlines reading "honey famine." Likewise facing the bee apocalypse with a caustic laugh, TV show host and liberal pundit Bill Maher quipped, "It's nature's way of saying can you hear me now?" (*Vanishing of the Bees*). Writers and performers consistently referred to the crisis as a crime mystery and an apocalypse. The circumstance of the disorder matched the genre of the classic whodunit, complete with "all the savory elements: mysterious deaths, missing bodies, end-of-the-world ramifications, and no shortage of culprits" (Jacobsen 70).

This chapter offers a rhetorical analysis of how the U.S. media and nonfiction authors what I will label a crime mystery genre to frame this first stage of the U.S. CCD crisis—between 2007 and 2010. To address how the "crisis" rhetoric of CCD circulated during this stage, I initially analyzed dozens of newspaper articles, three creative nonfiction books, a *60 Minutes* story, and two documentaries based upon their direct discussion of the U.S. crisis. I further narrowed down representative texts by considering the range of their public distribution in the United States, and their citation of respected stakeholders or authorities on the debate. In the process of identifying

patterns of discourse in these media, the nesting genre of crime mystery emerged as a central rhetorical frame of CCD stakeholders and crisis variables.

With what follows, first I analyze the emphasis on the pathos in the genre of the crime mystery defined the dead bees as representative of the loss of beekeeping and the potential loss of human food supply. Salvador and Norton, Killingsworth, and Opie and Eliot among others, argue that evocations of apocalyptic rhetoric necessitate a counterbalance of practical implementation. My analysis shows nesting genres and their presuppositions can greatly influence such implementation. In the case of CCD, the confusing narrative structure of crime mystery motif within the parent genre of a news story, the genre's narrative elements, and the presupposition of CCD as criminal blocks consideration of multiple crisis variables.

To set up this analysis, I first define metaphors and how they collectively acted as a genre. Crime and apocalyptic metaphors dominated and framed the U.S. public's conceptualization of the crisis, standing in for whole systems of thinking about and perceiving the problem. As linguistics scholars Lakoff and Johnson establish, metaphors are so commonplace in human practices that "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (3). Phillip Eubanks adds that figures of speech are so prevalent that we cannot even think without them (236). Metaphors and other figures of speech ground and drive the meaning-making process by helping the reader quickly draw parallels

between concepts. As Jeanne Fahnestock further notes in her landmark *Rhetorical Figures in Science*, metaphors have a heuristic power that stands in for entire conceptual systems, as epitomes of arguments, not mere "verbal tinsel" (6, 37).

In this instance of CCD, metaphors collectively frame it. In the case of media coverage of the U.S. Colony Collapse Disorder, the metaphors worked as terministic screens and framing devices, as defined by Burke and Entman. Burke claims terministic screens direct attention "into some channels rather than others" (Burke 45), both focusing and diverting attention. They not only reflect reality, they select and deflect it (45). Such selection and deflection is also emphasized in Entman's linguistic frame analysis. For Entman, to frame a discourse is to "select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item prescribed" (53). The media's use of figures of speech to frame colony collapse disorder evidences this dual work of selecting and deflecting a perceived reality to make aspects of a text and the agency of certain stakeholders more "salient."

Not only did these metaphors highlight aspects of texts, and in this case variables of the crisis, they collectively acted as genres. Given their clustered placement, dominant presence, and framing function, the metaphors ultimately form the larger narrative structure of a crime-mystery genre. As defined in chapter one,

genre is a guide of agency (Bawarshi 2003; Devitt 2005) that comprises social actions (Miller 1984; Russell 1997) and construes rhetorical agency responsive to a rhetorical situation or system (Russell 1997; Devitt 2005; Bawarshi 2003). Like Burke's screens and Entman's frames, genres select reality; they suggest typical social actions in response to recurrent rhetorical situations (Miller 155). But they encompass more than extended metaphors or frames. More than labels for actions of selection and deflection, genres highlight recurring contexts and serve as a nexus for the interactions between culture, text, audience, stakeholder and authors (Devitt 4; 31). In this instance of CCD, journalists used them to "guide the process of 'uptake' for readers or listeners enabling them to categorize, to understand how a symbolic act is to be framed" (Campbell 7). Genre serves more than just to cue an audience's reception and shorthand for the rhetorical situation (Bawarshi 8). The nesting genre of crime mystery worked as a narrative structure, identifying singular causes (a "smoking gun") and specifying roles for stakeholders (victim & detective).

Genre scholars have long defined genres as functioning as interactive repertoires and genre sets. Amy Devitt notes in examining workplace genres, "rarely does a group accomplish all of its purposes in a single genre . . . a set of genres functions for the group, and the interactions among those genres affect the functioning of each genre" (54). Devitt also defines repertoires as genres that a larger, corporate organization owns and from which subgroups select their strategies. Genre sets, in

turn, are more localized, sequenced subsets of repertoires such as the "charge, minutes and reports" that correspond with the function of a workplace task force. Whether in repertoires or sets, a central point is that genres evolve with the group's needs and exigencies and respond to each other in a constellation.

Less theorized, however, is the power of the nesting genre—the idea that one genre could be embedded or fused with another as a major determinant in an environmental crisis. With what follows, I trace the complex intertwining of the news story as the parent genre and crime mystery as its embedded narrative structure or nesting genre. I argue that the crime mystery nested in the news story genre forces the audience to have to quickly sort through and respond to two exigencies: fictional or not. To use the analogy of a card game, the nesting genre of crime mystery nested in the parent genre of a new story deals the audience a hand of cards and asks them to sort through them quickly in order to play. As "players," the audience has to sort between the presumed fact of a news story and the fiction of a crime mystery novel. They have to ask, which card is the reporter playing? The news story genre demands the audience has to sort through and sequence facts; the crime mystery turns the crisis into a game. Fact and conjecture mix and thereby confuse the message of the text. The analysis that follows shows this confusion and how the crime mystery nesting genre selects variables and constrains perceptions of the crisis. As I'll argue, shaped by

apocalyptic rhetoric, the crime mystery genre covertly scripts these crisis accounts in ways that diminish the stakeholders and leave action less viable.

From Crime Mystery to Apocalypse: Amplified Fallout

In popular media coverage of CCD between 2007 and 2010, reporters used the crime mystery as a nesting genre within the parent genre of a news story to frame the public perception of the crisis as an eerie disappearance caused by unknown natural forces. Initial newspaper articles used the word “mystery” to modify both the disorder’s cause and the honey bees. In the first series of articles, various headlines attached the word mystery to the words ailment, disease, illness, or killer. A good example of this emphasis is found in the *Philadelphia Inquirer*’s February 5, 2007, breaking story. Its headline read, “Mystery Killer Silencing Bees” and the first line read, “Something is killing the nation's honey bees.” These first reports[8] seemed to register the public’s pause and collective shock and conveyed an eagerness to find the missing culprit. The metaphor of mystery framed the problem as criminal and cued the audience to immediately perceive and pursue the cause as pathogenic. They cited that the bees were being silenced by a deadly microscopic killer. Follow-up stories then focused on the disappearance of honey bees as an aberrant, worrisome event. The *New York*

---

[8] In spring 2007 the crisis first became public news. In this first news cycle, I review representative stories from the Philadelphia Inquirer and NY Times that illustrate the use of the nesting genre of crime mystery, capturing the shock and uncertainty of scientists, beekeepers and the public by the loss and disappearance of honey bees.

Times February 27[9] article accentuates this mystery of the bees' disappearance, giving veneration to the genre of mystery: "Now, in a mystery worthy of Agatha Christie, bees are flying off in search of pollen and nectar and simply never returning to their colonies. And nobody knows why." The April 24, *New York Times* article's first sentence also accentuates the crisis as event: "What is happening to the bees?" This line also serves as the headline of the April 4, *Christian Science Monitor* story. Journalists stirred anxiousness as they began to pursue the crime of a presumed alien and pathogenic culprit.

The PBS documentary *Silence of the Bees*[10] amplified these sensibilities toward crime and horror by likening the vanishing of bees to human disappearance from a city from a nuclear holocaust. Originally aired on October 28, 2007, the fifty-five minute documentary begins with a dramatic enactment using time lapse cinematography. The enactment begins with a scene of a city of "industrious workers" going to work.

---

[9] The article is written by reporter Alexei Barrioneuvo (as are most of the *NY Times* articles that follow). At the time Barrioneuvo was the *NY Times* national business correspondent in Chicago, writing about global agriculture and trade issues. Since then he has served as chief of the *Times* Rio de Janeiro and São Paulo bureaus. Currently he works at the *Times* real estate desk. Prior to his work with the *New York Times*, he was part of the *Wall Street Journal's* award-winning coverage of the Enron scandal. His articles mostly focus on the implication of CCD for business and agricultural interests.

[10] Written and produced by Doug Shultz, independent filmmaker. Shultz says his aim was to tell three parallel stories: "the overall mystery of why the bees are disappearing, and the scientific investigations that are under way to try to understand this . . . the surprising reliance that we have on this completely unnatural system of trucking bees around the country to pollinate our crops . . . the story of the honey bee itself. To understand the magnitude of the problem and what we're losing, it's important to appreciate how extraordinary these animals are, and the value of what they contribute to the planet. And to our plates!" (Silence of Bees Interview)

Murray Abraham narrates in a voiceover the scenes of traffic and crowds shuttling along sidewalks:

> A bustling city at dawn. Industrious workers set out from their homes, coming and going in a perfect and productive ballet. But by evening, (sound effect of the "woosh" of a passing train accompanied by a transition wipe of a flash of white to a shot of a street devoid of people), the workers vanish. No trace of foul play (sound effect of ominous tone from violins) and no bodies left behind (pause). Mass disappearance like this have occurred across the globe. Not of people, but of bees. (Shultz)

Like a scene from *The Day After,* humans are gone. What was an energetic and orderly city "bustling" with productivity becomes a crime scene. No bodies are "left behind," and though Abraham states, no signs of "foul play," the sound effects and scene of apocalyptic loss implies otherwise. A sudden disappearance of humans could only be due to nuclear fallout, war, or a natural disaster. The image of a piece of paper being blown across the street especially conveys the idea that CCD is a catastrophe of shocking proportion.

The nesting genre of the crime mystery draws on apocalyptic rhetoric. Another instance illustrates this further. Twenty-seconds into a twelve minute story on *60*

Minutes (aired originally on February 24, 2008)[11] a hive affected by CCD is shown, empty and foreboding. Correspondent Steve Kroft is then shown interviewing Dave Hackenberg:

> Kroft: The hive was even filled with honey that not even scavengers seem to want.
>
> Hackenberg: It was like a ghost town.
>
> Kroft: Like something had happened to the hive and the other bees knew it.
>
> Hackenberg: That's right.
>
> Kroft: They didn't want to go back in.
>
> Hackenberg: Nobody wanted to touch it.

Like the nuclear winter conveyed in Schultz' television documentary, the simile of a ghost town in this *60 Minutes* piece conveys the pathos of eerie abandonment, a town that "once was," a windswept space, punctuated only by the sound of a swinging creaking saloon door. Heightening the suspense, insects here know something humans don't—that "nobody" wanted to "touch" the honey. Questions arise. Just as poisonous gasses in mines caused both mines and towns to be abandoned, so might toxins in the hive prompt bees to abandon it. The pathos of suspicion, trepidation, and

[11] Kroft cites well-known authoritative scientists and beekeeper Dave Hackenberg (the sole beekeeper cited) in his review of suspected culprits at that time: pathogens, pesticides and migratory commercial beekeeping practices. He ends with an oblique summary of CCD as bees reactive to stress "that mirrors us."

escape (the “mine” goes bust) gets raised. The nesting genre of apocalyptic crime mystery spurs imaginative links between bees and humans and insinuates potential serious ramifications for all species. Is there something toxic in the hive or honey for not only bees, but humans? Is the honey bee our canary in the mine? Could the honey bee ghost town portend a human one?

Newspapers also chronicle potential systemic losses in mysterious apocalyptic terms. The February 27, 2007 *New York Times* article represents others that link the loss of bees to the loss of beekeepers’ livelihoods to the loss of pollination to the loss of food and environmental homeostasis. It begins, “David Bradshaw has endured countless stings during his life as a beekeeper, but he got the shock of his career when he opened his boxes last month and found half of his 100 million bees missing.” A paragraph later, reporter Alexi Barrioneuvo cites Bradshaw as his first source: “I have never seen anything like it. Box after box after box are [sic] just empty. There’s nobody home.” Insects again get represented as a “nobody,” this time representative of the potential loss of beekeepers’ livelihoods. In the middle of the story, Barrioneuvo underscores the point that “some fear this disorder may force a breaking point for even large beekeepers” and by the end of the story, fruit and almond growers’ potential economic loss is linked to commercial beekeepers’ pollination services. Barrioneuvo warns of an adverse domino effect from bees to beekeepers to growers to consumers.

As part of the crime mystery nesting genre, the phrases "breaking point" and "nobody home" construct the bee apocalypse as a potential human one, focusing on the pathos of beekeeper losses rather than a discussion of variables. The documentary *Vanishing of the Bees*[12] took such representation of CCD even further than the terms loss, ghost town, or nuclear winter. Directors Greg Langworthy and Maryam Henein capture the raw expression on beekeepers' faces when Dave Hackenberg and David Mendes get word that their friend and fellow commercial beekeeper, Brett Adee, had just discovered a massive collapse of his hives in the almond orchards of California. Hackenberg and Mendes are shown driving over to witness the worst case of colony collapse disorder ever on record. Narrator, actress Ellen Page, says in an understated tone, "40,000 colonies had gone from healthy colonies to empty boxes in a matter of weeks. Two billion bees, gone."

Mendes: You can't imagine. This is a holocaust. A bee holocaust.

Hackenberg: That's one of the worst days of my life. (As he says this Beekeeper Brett Adee is shown walking over the fields, pulling lids off of empty hives).

---

[12] The film was released on October 9, 2009, first to a British audience but then distributed across the United States with multiple screenings. The *Sunday Times* lauded the film was "powerfully argued and timely"; *The Independent* more vaguely claimed it "was more than a documentary." Some corporate and organic bias might be indicated by the film's sponsors, which include Haagen-Daaz, Beyond Pesticides, the NRDC, Bee Culture, Burt's Bees, and the Organic Consumer's Association. Perhaps given this bias or the later release date as compared to the other documentaries of this period (2007-2010), only Langworthy and Henein emphatically implicate the industrial agricultural system, interlocking the variables of pesticide production, loose EPA regulatory policies, and large monocultures.

Here the loss is no longer a natural disaster. As a "holocaust," it becomes a crime against humanity so horrific that it silences beekeepers. Beekeepers are shown walking fields of a barren landscape not saying a word, flipping covers of hives emptied of bees, shaking their heads while looking off camera or looking down at their feet. Spoken discourse gets clipped by a silence that conveys the depth of loss and estrangement.

In a search for meaning, the nesting genre of crime-mystery took on apocalyptic and even criminal proportions. Documentaries and nonfiction works alike sounded alarms. *Silence of the Bees* ends by stating, "The future of our food supply rests on the tiny honey bee . . . Scientists warn that the steady decline of pollinators could trigger a crisis bigger and more immediate than global warming." Michael Schacker similarly opens *A Spring without Bees*[13] with rapid-fire possible consequences: 90 crops in jeopardy and a global economic and environmental nightmare with "no hope" in sight. Repurposing the acronym, he defines CCD as "Civilization Collapse Disorder" (1). Rowan Jacobsen ends the first chapter of *Fruitless Fall: The Collapse of the Honey Bee and the Coming Agricultural Crisis*[14] likewise in point blank, dramatic fashion: "The

---

[13]This nonfiction book was published in 2008. Schacker was an investigative science reporter (he suffered a stroke soon after the book's publication) who was the first to publish a full-length book on the issue. Though Bill McKibben wrote a forward for it and it received positive reviews from the Rodale Institute, the book's use and interpretation of sources is uneven. As Schacker's first book, it offers intriguing but not fully substantiated correlations such as those between the onset of CCD in and first use of neonicotinoids in U.S. regions.

[14] Jacobsen's 2008 book ranked 59th in sales at Amazon for books on insects as of the fall of 2012. Jacobsen is a freelance writer and journalist who writes about food and the environment. His work includes articles published in

losses threatened an ancient way of life, an industry, and one of the foundations of our civilization" (5). Nonfiction authors Benjamin and McCallum begin their book, *A World Without Bees*[15] with a chilling quote attributed posthumously to Albert Einstein: "if the bee disappeared off the surface of the globe, then man would have only four years of life left. No more pollination, no more animals, no more man" (7). Just in case that's not visceral enough, they add there will be no more fruits, vegetables, nuts, protein-rich beans, meat and dairy products, beeswax and herbal medicines (247), no more flowering plants and their dependent animals and insects, and therefore, no soil turned by insects (252). The end result: we'd follow ancient South American societies that starved and became extinct (262).

Two rhetorical sequences seem in play here: the lack of closure to the mystery, goading further estrangement and the lack of reporting what implementations could counterbalance the amplification of loss. In *Rhetoric of Motives*, Kenneth Burke discusses at length how the genre of mystery explores the "strangeness" of a subject thought to be capable of communicating meaning (115). Burke uses an analogy to convey how mystery works: We look into an animal's eyes, and though we can't know

---

The *New York Times* and two books, one of which won a James Beard Foundation Award. *Fruitless Fall* took its title from Rachel Carson's phrase that not only would there be a silent spring, but a fruitless fall, a time when "there was no pollination and there would be no fruit."

[15] Published jointly by Guardian Books in London and Pegasus Book in NY in 2009. At the time Benjamin was the deputy editor of *Society Guardian* (she is now editor), a section of the *Guardian* print and online newspaper; McCallum is her partner and an apiarist. The authors clearly demarcate their project as an examination of the natural phenomena of the honey bee, a definition of the mystery of CCD, and a discussion on whether the larger questions and implications of CCD are being considered by scientists and society.

their exact thoughts, we sense an understanding nonetheless, "in some inexpressible fashion" (115). In the CCD crisis, figures of speech for the honey bee disappearance, whether a city, ghost town or holocaust accentuate estrangement even more perhaps because one can't "look into the animal's eyes." The lack of access to dead bees and the lack of an immediate and identifiable culprit shows both the power and temporal limitation of the mystery nesting genre within the news story. Compellingly, the mystery metaphors prompt the audience to sympathize with bees and beekeepers and then puzzle alongside the author about CCD's mysterious symptoms. Yet without the embodiment of the dead bees, and no foreseeable compelling culprit, understanding is limited. Mystery captures the sense of horror and loss but lacks the promise of closure. Since the crisis could not easily be comprehended or resolved, the U.S. media accentuated the agency of unknown apocalyptic forces, emphasizing, instead, the weight of the beekeepers' emotional loss, and prophesying the loss of pollination with potentially catastrophic widespread human loss of sustenance.

Such amplification of the loss in newspaper accounts and the initial pages of nonfiction works lacked a counterbalancing apocalyptic rhetorical appeal for people to analyze, rank and implement beekeeping management practices. Studies had been conducted on the number and types of pesticides found in beeswax and pollen samples. Causes, too, had been put forth: pathogens, pesticides, beekeeper practices and a lack of mixed foraging had already been chronicled. Yet, as will be shown in the

next section, these variables were only at times weighted or ranked across the genres in this initial stage of CCD media coverage in the United States. Rhetorically this becomes unbalanced. As Salvador and Norton note, apocalyptic rhetoric necessitates a "balancing act" between the "need for anxiety with the need for efficacy" (Salvador & Norton 48). In this case, "prefacing the solution with a future scenario of what could happen if action is not taken" was left undone (Salvador & Norton 48; Killingsworth & Palmer 22). Johnson notes in her literature review that works of environmental rhetoric using apocalyptic appeals can "repeatedly indulge in degradation narratives at the risk of aestheticizing environmental collapse" (34). She sardonically adds such horrific beauty can "inspire apathy, or at least a sense of powerlessness, by suggesting that such an end is unavoidable" (34). In news reports within the early stages of the CCD crisis, the pathos of suspicion and trepidation were raised but not counterbalanced by an appraisal of beekeeping practices or suggestions by scientists and beekeepers of systemic causes and probable helpful practices. By initially amplifying the crisis from a threat to a species to a threat to human extinction, the nesting genre of apocalyptic crime mystery reduced the scope of discussion. The possibilities of implementing strategies for halting or reducing the threat of CCD were not addressed.

The Mystery Framed Variables

As Ann Freadman notes, in a genre, one text responds to another. Such "uptake" necessitates U.S. understanding how texts compete and reference each other. In this case, new versions of the crime mystery genre evolved, developing from breaking news stories to different (and nested) versions that appeared months into the crises. The second stage of reporting on CCD in the United States occurred after the initial three months of crisis notification. Further extending earlier work of the nesting mystery genre, the second round of reporting developed this genre as a search for suspicious characters and causes. Given that most knew of the crisis and that still no solution had been found, journalists began to instead sort through causes with the audience, almost gaming conjecture. A major trend in this news story and now feature articles and chapters were journalists addressing questions to the audience. Many posed detective-like questions to bait a reader's interest and exhaust a list of "suspects" for causing CCD. Like a TV game show or the board game *Clue*, the reader was invited to name, sort, and rank the relative probability of causes. Judging by the ubiquitous use of this nesting genre by journalists, it engaged its audience and helped name potential causes of CCD. Yet as I'll show, it also precluded variables and undercut the serious import of the disorder.

Two sources especially represent the range of questions and sorting of causes prompted by the nesting genre. The April 23, 2007, *New York Times* article "Bees

Vanish, and Scientists Race for Reasons" begins with the question, "What is happening to the bees?" and answers with "As with any great mystery, a number of theories have been proposed" some "more science fiction than science." A list of common suspects is then given, ending with two more ludicrous, humorous suggestions posed as questions: "was it a secret plot by Russia or Osama bin Laden to bring down American agriculture? Or, as some blogs have asserted, the rapture of the bees, in which God recalled them to heaven?" Here questions are used for different rhetorical ends. The opening question of "What is Happening to the Bees?" marks the topic as an investigation worthy of a reader's attention. Reporter Alexei Barrioneuvo then labels the disorder as a great mystery followed by questions that prompt readers to consider scientific theories and identify and dismiss outlandish speculations. Questions frame the topic and direct attention from one variable to the next. This form of the nesting genre of crime mystery repeats in other parent genres in this second stage of the crisis as well. In the fourth chapter of *Fruitless Fall*, Jacobsen also frames the disorder as a crime mystery pockmarked with questions, labeling the crisis as a "classic whodunit, with all the savory elements: mysterious deaths, missing bodies, end of the world ramifications and no shortage of culprits" (70). Like Barrioneuvo, Jacobsen poses a litany of questions to front the search and to investigate the causes alluded to as culprits. "Fingers pointed in all directions, including some strange ones" (70). He cites a *London Independent* story that went viral and badly misrepresented a study

supposedly showing cell phones causing the disorder. In appraising the suspect, he prompts with the headline "Are Mobile Phones Wiping out our Bees?" He follows with "But wait a minute" and then explains the study was not about cell phones at all but rather a cordless phone! (68). After noting the media's love for the delicious irony of texting ourselves off the cliff, he asks a series of more serious questions. He questions whether genetically modified corn pollen could affect young bees. "What might all that Bt be doing to the next generation?" This question comes as the last sentence of a paragraph and leads to a short declarative answer in the next: "Not a darn thing, say the scientists" (69). Jacobsen consistently uses questions as transition markers, allowing him to march his readers through a lineup of suspects and bait them to read along as co-investigators. The narrative structure is a question/answer format that invites readers to cross well-publicized variables off the list.

At times, too, "whodunit" questions help unearth the complexity of the disorder. Jacobsen asks, "What about malnutrition?" (73). He follows by explaining that "commercial" bees have been fed a diet of high-fructose syrup to compensate for their nonstop pollination of crops across the United States. He ends with what could be defined as a rhetorical question, "Might that be a problem long-term?" He baits consideration of malnutrition as a systemic cause. He then doubles-back on his own line of argument:

> Yet all these suspects had been factors for years. Something new had sent bee populations off a cliff. A virus? A parasite? A pesticide? The scientific community had batted all these ideas around. And came up with nothing. Researchers have picked through the abandoned hives, dissected thousands of bees, and tested for viruses, bacteria, pesticides, and mites,' says the *Los Angeles Times* in a typical piece. 'So far, they are stumped.' (73)

Questions pepper the reader with mystery and separate the culprits in short successive sentences: "A virus? A parasite? A pesticide?" Like fastballs coming at a batter in quick succession from a pitching machine, these ideas get thrown at scientists and "batted" around with no hits, no results, "nothing." Ironically like Johnson's apocalyptic "powerlessness" and a sense of "unavoidable ends," such a litany of questions might lead to exhaustion and a sense that nothing can be done. Jacobsen resolves this section of his book by simply noting that there are more researchers picking through the crime scene, dissecting and testing, all still "stumped" (Jacobsen 73). The crime mystery investigation ends with scientists as derailed detectives.

While this question and answer format gets readers to sort and consider variables, as with an unsolved murder case, questions can then reinforce doubt. As Ann Freedman underscores, like tennis, a genre is referential. In this case, the apocalyptic crime mystery seems to have triggered a genre of Q and A with the ultimate answer missing. The game never ends and so the interrogative voice doesn't get resolved.

And if scientific researchers are fastidious but overwhelmed, where does that leave the public? Such questions of "mystery" force the reader to consider variables in rapid succession that implicitly demand quick resolution. Given none, the questions may frustrate the audience and even negate their consideration of co-causative and cumulative variables.

Also the questions ask the audience to consider single variables exclusive of each other. The questions operate as a framing device in which the author selects "causes" to promote a salient "causal interpretation" (Entman 53). Assumptions are made about causes: a single one must be found; many are to be considered, they can be separated, and they can be dismissed. The use of the question and answer format insists on simplicity and denies the consideration of a more complex, synthesized cause that is situated, potentially accumulated, and dynamic. This selection deflects, in a Burkean way, potential review and research into more difficult and complex answers to the problem. These detective-like questions sequenced and dismissed variables and reduced consideration of their ranking and interaction.

Mystery Framing Agency

The third major CCD news cycle began in August, 2007 and followed the first larger scientific claim of a solution: The official U.S. CCD working group--a consortium of six universities and the USDA and the Department of Defense fully published an

initial finding in the fall of 2007. This third group of articles sounds a tentative optimism in the discovery of a virus then believed to have caused the disorder. The discussion of variables had already been reduced and the roles stakeholders played and the knowledge that was deemed important became more reified. As noted in the literature review, genre often prompts users to assume subjectivities (Bawarshi 84). In his analysis of the doctor-patient form, Bawarshi points out that the form dictates the terms of the discussion and even the relationship between the doctor and patient and the roles the doctor and patient play. In effect, the form acts as a prompt to which the doctor defers and the patient submits. While it helpfully organizes and standardizes plausible variables, the patient may interpret the questions as close-ended, and therefore, report only physical symptoms of disease (as opposed to emotional and mental concerns). The form is also set up to prompt the doctor to ask the questions and the patient to reply. Bawarshi notes the doctor-patient form structures the interactions and what counts as knowledge.

In the books and newspaper reports written on CCD, the nesting genre of the apocalyptic crime mystery increasingly structured the roles stakeholders played and the type of knowledge deemed authoritative. Using the crime mystery nesting genre labels of detective and suspects, reporters defaulted to shaping the story as a hopeful progress narrative of scientists as heroes and technology as CCD's self-evident means to a solution. For example, Jacobsen chronicles the media coverage of an inflated

scientific study as a search for the missing hero: "a good whodunit needs numerous suspects, which the CCD mystery had, but it also needs a charismatic detective who nails the evildoer dead to rights" (74). He adds wryly that the story "seemed distinctly lacking in that element until Dr. W. Ian Lipkin, acclaimed researcher from Columbia University and a rock star of high-tech genetic sleuthing, stepped into the fray and announced he was taking the case" (74). Lipkin had discovered the West Nile virus' effects on human health in NY in 1999. "Lipkin hunts viruses. Like a detective, he parses a crime scene, examines every scrap of evidence to discover who was in the vicinity at the time. If the same suspect is on the scene of enough crimes, you have a likely culprit . . . If there was some new pathogen rampaging through honey bees, Lipkin was the one who could find it" (74, 5). Lipkin was the "rock star" detective destined to crack the case (74). "High-tech genetic sleuthing" was the means.

Though such colloquial language could be deemed simply Jacobsen's own bias, other accounts suggest the power of the nesting genre informing identities. Lipkin himself suggested the detective analogy in April 2007, stating in the *New York Times* that the research was "like C.S.I. for agriculture,'' and adding, it was "painstaking, gumshoe detective work." Using microscopic and computer technology, his team discovered the Israeli acute paralysis virus (IAPV) in twenty-five of the thirty samples taken from CCD colonies, but in only one of the twenty-one samples from healthy colonies (Jacobsen 75). The media then inflated the findings. In August 2007 the *Wall*

Street Journal reported Lipkin stating he had found "the cause of the honey bee plague," even though what he actually said was that it was "highly associated" with the disorder. Even when the *Washington Post* reported more even handedly that Lipkin had found "one of the likely causes," Lipkin overreached by stating it was "a major finding." The *Post* further split this quote from his rejoinder that it was still "at present a marker" and not the sole cause of CCD (Eilperin). Airing two months later, the PBS documentary *Silence of the Bees* again had "CSI meeting agriculture. . . spur[ring] the launch of a global investigation" of scientists "racing against time." Beekeepers supposedly were "turn[ing] to scientists to solve the mystery of CCD before another round of losses throws agriculture into a tailspin" (Schultz).

Here the nesting genre of the crime-mystery worked as a catalyst. Lipkin was assigned the role of chief detective, one that he readily accepted. Comparisons to CSI were also made in documentaries, books, and newspaper accounts. Technology was referenced and time was conscripted as a "race." These script-like elements seemed to work similarly as the doctor-patient form that Bawarshi comments upon. Both served as a catalysts or script cues that prompted roles for the scientist and beekeeper, dictating what counts as knowledge and accelerating a search for a solution. The egregious error of the report claiming that Lipkin had found the cause of CCD and the *Washington Post's* splitting a quote show just how eager journalists were in breaking the story of a solution. In this report, the problem of CCD, its solution and the protagonist who will

"save the day" are singular; there is one problem, one solution and one detective hero. The identified problem of IAVP continued the mystery genre plot by continuing the focus on the microscopic. Again, the crisis was unrelated to human practices, and neatly framed within a plot of a hero coming to the rescue. While the frame of scientist as detective communicates an ethos of careful and serious investigation, it also implies that they alone find the cause, the cure and decide the case—the scientist is the lone ranger. In *Politics of Nature*, Bruno Latour critiques the false notion of Science as the "mirror of the world," wherein Science perfectly reflects nature and, therefore, is no longer rhetorical or political (4). Using the allegory of Plato's cave, he further critiques a culture in which scientists are the presumed masters of knowledge and free from the "prison of the social world," shuttling "incontestable findings" of reality from outside the cave to "silence the endless chatter of the ignorant mob" inside the cave (10). In this political situation, the scientist becomes the "heroic figure" who alone can contemplate a presumed objective world. Lipkin serves as C.S.I. Detective, master of knowledge and public spokesperson. Genre here works as a script with a singular hero in pursuit of a singular microscopic culprit. As a crime-mystery hero, Lipkin serves the requisite "human interest" angle, "engineered" as "worthy" of scientific journalism (Killingsworth 135). Latour's master scientist *will* translate findings into singular solutions. As detective and judge, Lipkin *will* deliver "incontestable findings" that the

criminal was apprehended. Cued by the nesting genre, the scientist is to serve as hero and law, securing public peace by solving the crime and arresting the culprit.

Meanwhile in this script, beekeepers played stock characters and their *techne* got elided or displaced. Journalists often buried beekeepers' insights and field knowledge to give primacy and final word to scientists and their findings. However, in the documentary *Vanishing of the Bees* (which I will analyze more in the next section), Michael Pollan and beekeeper Dave Hackenberg underscore this gap.

> Pollan: In our culture, scientists have the last word, the ultimate authority on commenting on anything having to do with biology. There are other forms of knowledge, very powerful forms of knowledge about biology. There's local knowledge, there's the knowledge of beekeepers, there's knowledge of people who are really great observers of the natural world. (shot of him interspersed with shots of scientist).
>
> Hackenberg: The pesticide people say, the science doesn't say this. Well, the scientists may not say this, but I'm living in a world of real reality. These bees are reality.
>
> Pollan: We should listen. Because very often traditional knowledge gets there before the scientists.

> Hackenberg: We do know that in these same areas, every time we encounter corn, soybeans and all these crops that have been treated with systemic pesticides, the bees fall apart. (Shows a bee falling off a tree blossom).

Pollan underscores knowledge as variegated and open-ended. No one entity should have the "last word" or serve as "ultimate authority." Other types of knowledge and informants are needed. Directors Langworthy and Henein pair Hackenberg's "reality" with a supplication that we listen to him and even act upon his knowledge because his conclusions might well be right before scientific findings "prove" it so.[16]

Yet science still has the last word, and the trope of scientist as chief detective was even further empowered by associations between science and technology. After opening with the apocalyptic possibilities of CCD, the camera in the documentary *Silence of the Bees* abruptly pans across researchers moving about using test tubes and equipment in a lab. Music with a positive energetic steady beat plays as the scene expands. In a voiceover, Abraham then states brightly, "Columbia University's Green Infectious Disease Lab is the top human pathogen research center in the country. Its techniques are used to research to solve problems like the West Nile Virus, SARS and encephalitis." Since the honey bee genome had just been mapped, technology could now parse the DNA of the remaining honey bees from a CCD hive for the pathogens they carried. Supposedly this would lead to a discovery of a virus as the cause of CCD.

[16] See chapter four for analysis of American beekeepers' agency and their rhetorical standing.

Technology advances, "speeding the search" (*New York Times*), and saving time, having "fingered a prime suspect" with its "shotgun" precision (*Philadelphia Inquirer*). In the news coverage discourse after the location of the possible "solution" (IAVP), technology gets personified and furthermore engendered with the power of what rhetorical scholars Myerson and Rydin call "liberating creativity" in a trick of ecological accounting in which "we can invent problems but we can invent remedies too" (51). Even superbees. In *Silence of the Bees*, after narrator Murray Abraham notes scientists studying this virus want to know how to "fight it. One solution is to breed African bees to engineer a new kind of superbee resistant to all kinds of diseases." Scientists are again granted Latour's political agency, this time as the keepers of a bionic technology. Here not only is the scientist the objective reporter of reality and heroic law enforcement officer, but also the master of technology that will finger and shoot the suspect and map and engineer the bionic bee—the bee to end all other bees, the bee of the future.

Technology and the scientists deploying it serve as a rhetorical catch-all: they will find the culprit, cure the disease, and even invent a new bee. Missing is any organic context of fields, weather, regional watersheds or sustainable beekeeping and consumer practices. Even within the articles of science journalism that I analyzed, knowledge was often bifurcated: the techne of the beekeepers was separated from the studies of scientists. Even when beekeeper's techne was reported, it was mostly

treated as anecdotal evidence. This speaks back to the larger cultural underpinnings of the crime mystery nesting genre. Kenneth Burke underscores the conditions of a mystery are "set by any pronounced social distinctions" such as those between rich and poor, a leader and people, a judge and prisoner. Accordingly, neither side entirely understands the other and this lack of full knowledge dictates mystery. These can produce "mystifying" conditions that elicit judgment as well as "God-fearing attitudes toward agents and agencies not divine" (123). Within CCD, mystery separated the public from scientists and their technology. The public was poor in knowledge, scientists were rich; the system seemed to provoke God-fearing attitudes toward scientists, scripting them as divine agents. When scientists could not "understand" the bees plight quickly enough, the mystifying conditions got compounded: Another single "smoking gun" was pursued, only to lead to more amplification of the crisis. The push for solutions truncated a longitudinal iterative research process that could have coalesced knowledge from both beekeepers and scientists. Beekeepers' knowledge was ignored or bracketed as anecdotal, and systemic consumer and industrial culpability were left unconsidered.

Mystery Reducing Consideration of Causes

Lastly in this consideration of the nesting genre of crime mystery and perhaps most tellingly, the metaphor of a "smoking gun" constrained knowledge by suggesting

the cause as singular. *Vanishing of the Bees* states, "In the second year, scientists still had not found a smoking gun." The USDA's lead scientist on CCD (Jeff Pettis) also noted more critically but nonetheless in deference to the prevailing genre, "scientists have yet to find the smoking gun" (Jacobsen 102). Following suit, Lipkin's scientific study unduly focused on a single suspect. Once "fingered" as a factor, the media compounded reports of the Israeli Acute Paralysis Virus as *the* "smoking gun," falsely labeling the pathogen as the singular cause of CCD rather than a significant marker. Such a constraint of the crisis had marked effects. As one result, the U.S. blundered in blaming Australian bees for the problem. The vast majority of media reported the pathogen as the cause and pointed to Australian bees as the culprits, since the virus was found active in the United States about the same time Australian bees were first imported and the disorder first suspected. Though beekeeper James Fischer protested in *Bee Culture* magazine[17], others pressed for immediate action. Four days after the conference, Senator Bob Casey of Pennsylvania fired off a letter to the U.S. Secretary of Agriculture, calling for a ban on all imported bees from Australia. The American Producers Association followed suit as well, filing a letter that demanded action three days later. The U.S. Animal and Plant Health Inspection Service refused, citing more evidence was warranted (Jacobsen 77).

---

[17] Subtitled, "The Magazine of American Beekeeping" it is one of two trade journals for beekeepers that are most widely distributed in the United States. At its web site are links to "contact science people," "industry people," inspectors and a link to survey results, titled as the homophone of "Bee Informed Survey Results."

In this case, more evidence was needed. As Jacobsen notes, researchers failed to note that Canada had been importing Australian bees since 1987, and only since 2004 had they had symptoms of CCD. Furthermore, the symptoms of IAPV death were shivering, paralysis, and death "just outside the hive. The giant red flag you see rising before you waves conspicuously over the fact that these symptoms don't remotely match those of CCD" (Jacobsen 78). Though the authors of the *Science* paper acknowledged this, they claimed that perhaps the virus had turned into a different strain with different manifestations in America. As it turned out, this explanation didn't warrant exploration: in November of 2007, the virus was discovered in samples from a USDA bee lab, dating back to 2002—well before the Australian importing of bees to the United States and well before CCD took hold. The case was closed, and the Australian public hotly fired back. "Someone owes Australian beekeepers a big apology," said Peter McGauran, Australia's Federal Agriculture Minister, "but we aren't waiting for it" (79). Denis Anderson, Australia's leading bee pathologist, even cited evidence within the paper that showed the fungus Nosema Ceranae, not IAPV, was the cause of CCD. He added, "this can't reflect well on a journal such as *Science* and its selection of referees" (79, 80).

As it turns out, Anderson was not right about the fungus either, yet another casualty in the focus on a single cause. The authors of the paper, Senator Casey, and the media quickly conflated a marker of CCD with its cause. The crime mystery nesting

genre, while not entirely responsible for these scientific errors, encouraged the apprehension of a single guilty suspect. The language of finding the "smoking gun" implies a felt eagerness to find a single solution and celebrate the "case closed" with the criminal mastermind apprehended and jailed.

Conclusion

As Anis Bawarshi notes, genres work as ecosystems. As such, they not only shape the practices but the conditions that make those practices seem requisite. In such a system, "typified rhetorical practices support the very recurring conditions that subsequently make these rhetorical practices necessary and meaningful" (82). In the case of CCD, reports and much scientific research reduced the disorder to singular causes, framed science and technology as the sole purveyors of solutions, and egged the pursuit of an immediate and singular solution. Once one solution was found as false, another was immediately pursued—the genre ecosystem seemed self-perpetuating.

The nesting genre also accentuated the false binary between the criminal pathogen and scientist detectives, leading to further reductionism and oversimplification. In his analysis of a news feature on *Earth First!* that aired on the *Macneil-Lehrer News Hour,* Harold Schlectweg showed how activists were reduced to violent threats against the safety and livelihood of timber workers, a rhetorical move

that ignored other nonviolent environmentalist actions and sustainable timber harvesting. Citing Burke, Schlectweg suggests that the media's predilection toward reducing a story to set protagonists and antagonists warrants further definition and discussion (274). Like Schlectweg's reductive binary of environmentalism vs. jobs, the nesting genre of crime mystery instantiated a binary between scientists and pathogens that reduced or obscured the consideration of other variables. Though at times news articles mentioned possible causes for CCD other than pathogens, these were mostly mentioned at the end of news stories and as previously analyzed, often put in interrogative form. Journalists did not often rank or interpret these variables, consider them longitudinally or in sequence. A simple timeline chart or infographic of recent studies proposing and dismissing suspects was not offered. The binary of scientists versus criminal pathogens correlates to this lack of consideration of longitudinal data. The binary encourages the pursuit of a single guilty culprit and an attitude of moral judgment toward that presumed culprit. In this case, the guilty suspect of CCD was conveniently a pathogen, and its accomplice, Australian beekeepers, guilty by association (109). The crime mystery put the focus on bringing a guilty culprit to justice. The news media's use of the crime mystery nesting genre led to a rhetoric that emphasized pathogens to the exclusion of other causative variables. It also propagated a pathos of fear and a quarantine mentality and did not probe for an exchange of knowledge between agents other than beekeepers and scientists, thus ignoring the

role of the monocrop food system, agricultural and pesticide corporations and national and regional government policies and officials. The crime mystery nesting genre led to a focus of stakeholders on single pathogens and failed to consider concomitant variables.

The crime mystery nesting genre acted as a powerful terministic screen; its prescribed forms and metaphors encouraged reporters, scientists and beekeepers to select and deflect not only agents but also processes. The questions launched in the second stage news stories and feature chapter organized the presentation and invited the audience to participate as assistant detectives, but the questions also reduced consideration of causes by forcing the reader to process possible causes in a linear sequence, thereby prematurely dismissing variables and their potential synergism. Overall, tropes of a "smoking gun," a "classic whodunit," and a mystery "worthy of Agatha Christie" indulged pathos and elided reflective consideration of bees and beekeepers' decimation.

Genre greatly framed and scripted the agency and interpretation of the crisis in this moment, a point worthy of underscoring for its consideration in future analyses of environmental crises. In *Genre and the Invention of the Writer,* Anis Bawarshi cites a scene from Heather Dubrow's book *Genre* to illustrate how genre dictates perception of a scene. In the opening scene, the clock on the mantlepiece reads ten thirty, though someone recently suggested that the clock was wrong. A figure of a dead woman lies

on the bed in the front room as a silent figure glides rapidly from the house. Left are only the sounds of the ticking clock and a wailing baby (Bawarshi 26). As Dubrow explicates and Bawarshi underscores, if the scene opened a book titled *Murder at Marplethorpe,* a reader would view it very differently that if opened for a book titled *The Personal History of David Marplethorpe*. Given the title of *Murder*, one would categorize the work as detective fiction and consign guilt upon the silent figure fleeing the scene of a crime. In contrast, if the work were known to be a personal history, the silent figure would likely be interpreted as leaving the house in grief. Genres instigate the assignment of motive to agents portrayed.

In CCD, the genre function of crime mystery framed the issue as suspicious and the criminal result of impersonal and oversimplified ecological forces. Furthermore, as a genre nested within a news story, its interpretation was clouded by the contravening genre functions of a news story and crime mystery. By nesting in a news story, the genre of the crime mystery gets sold to the audience as a complete factual account. Yet the genre function of a crime mystery asks the audience to assign moral motives to actions, assigning them the burden of differentiating between actions that imply or don't imply such morality. They had to differentiate between "dramatistic" and "scientistic" approaches to language, work that can easily undermine comprehension (*Language as Symbolic Action* 44). Devitt implies when writers shift between genres in texts, readers cannot be sure of the situation. It's as if the genre deals the audience a

hand of select cards and demands that they play before they can even sort context and generate meaning. She conjectures how television viewers might react to *Twin Peaks'* blend of mystery and fantasy: "Am I supposed to believe this? Aren't they going to tell me who did it?" (22-23). Such questions could easily represent an audience's reaction to media coverage of CCD. In the case of CCD, the mix of genres could even provoke the audience to wonder whether CCD is a crisis at all. The nesting genre of crime mystery is contingent on finding a solution—a quick apprehension of the suspect and closing the case. If none is forthcoming over years, it's feasible to believe an audience could be exhausted and dismissive of more news about the crisis. As Martin notes, genres are "stage, goal-oriented processes" (33). In this case, genre channeled the audience to search for a "fix" that is still not forthcoming. Like the proverbial boy "crying wolf," the nesting genre of crime mystery eventually leads to disregard and a lack of commitment to solutions that may be preventative. Actions could be taken. As I'll show in the next chapter, French beekeepers protested and proved it so.

Chapter 3: French Beekeepers' Instantiation of Protest Genre

The protest site buzzed with action. The pyre of empty honey bee hive boxes stacked twenty feet to the sky. Beekeepers in their white protective suits encircled the burning inferno, some throwing more boxes on top of the pyre, others standing with folded hands as if witness to a massacre. One beekeeper used a speakerphone to call for fellow protesters to lift their smokers in unison to the sky, as still others threw more hive boxes over a fence onto the grounds of Bayer CropSciences French headquarters. A select few hoisted a mannequin of a beekeeper "hung" by a rope. The images, captured in film, are raw and undeniably transfixing.

French beekeepers emphasized losses stemming from CCD by taking to the streets, embodying a rhetoric of protest, loss of livelihood, and French nationalism to challenge Bayer CropScience's propagation of pesticides, which they suspected as contributing to the onset of CCD. In this first iteration of CCD, between December 1998 and January 1999, the National Union of French Beekeepers staged a number of protests against Bayer CropScience for their production of a pesticide suspected as the primary cause of CCD in France. The results were astounding. On January 22, 1999, the French Minister of Agriculture, Jean Galvany, banned the pesticide from sale--the first ever instatement of an agricultural ban on a product based on the Precautionary

Principle[18] (Schacker 59). Many sources, including the documentary *Vanishing Bees* and the nonfiction book *A Spring Without Bees* attributed the ban to the tactical demonstrations.

This instance of CCD examines the rhetoric of French beekeepers embodying the potential death of their livelihood and performing a protest in the genre of funeral rites. The protest was covered by newspapers, television reports and film documentaries and widely disseminated. It especially reveals the ability of the beekeepers to harness a plethora of rhetorical appeals including French pride in native cuisine and agriculture. Over two thousand French beekeepers carefully planned their protests and embodied the genre of the funeral lament, conducting funeral rites for themselves and the bees at the Eiffel Tower and Bayer CropScience French headquarters.

I argue that this instantiation of staged visual protest is worthy of analysis as a performative genre that responds, in part, to the scholarship of Phaedra Pezullo, Robert Cathcart, Gregory Clark and Karlyn Kohrs Campbell. This instance adds to the claims made in chapter two by noting how even though the variables of the crisis are likewise reduced by a combination of genres (in this case the protest and funeral), the agency and what I term the embodiment of the genre by beekeepers produces

[18] The Precationary principle insists that until the effects of a new product is known, its production should not be allowed. Up to this point it had never been applied to a pesticide.

different rhetorical outcomes. In her book *Toxic Tourism*, Pezullo's proposes tourists "witnessing" toxic chemical dump sites in Louisiana raises a deep consciousness among activists and the greater public. The analysis of this protest extends Pezullo's concept to an agricultural environmental crisis and further defines witnessing in terms of a narrative--as the embodiment of a genre. In part, I argue that though the enactment reduces the crisis to a focus on set variables much as the crime mystery nesting genre, here the rhetorical food culture of the French, agency of the beekeepers, and narrative structure of a funeral invites the audience to focus more upon the loss of beekeepers, bees, and culinary culture. The rhetoric shifts from a more abstract appeal to solve a crime (chapter two) to an embodied appeal for the public to act against a corporation they claim threatens their livelihood and the nation's food supply. French beekeepers make an ethos appeal through radical confrontation: an all or nothing rejection of the "moral underpinnings" of an established order (Cathcart 78). They do so through the use of sites that both inspire transcendence (the Eiffel Tower; cf. Gregory Clark) and materialize conflict (Bayer CropScience's French headquarters). Concurrently, they share an appeal to pathos, an appeal grounded in vulnerability and loss with French citizens akin to the tactics of "consciousness-raising" that Karlyn Kohrs Campbell underscores in her analysis of the rhetoric of the U.S. Women's Liberation movement. Differentiating from the way journalists used the crime mystery genre in U.S. newspapers to engage with their audience, the beekeepers'

embodied defiant and personalized confrontation communicates a rhetoric of self-scrutiny. Their enactments of funeral rites conveys less the feeling of a staged act and more a true lamentation that demands response. Campbell notes such a mix of "attack metaphors" and "symbolic reversals" upsets dominant cultural "reality structure[s]"; Kevin De Luca adds that the image-laden protest detonates a mind bomb that reconstitutes social reality (16). I argue that the embodiment and emplacement of funeral rites and use of protest signs at the Eiffel Tower and the French headquarters of Bayer CropScience makes for a complex rhetorical appeal of "upset" consciousness that provides identify and focus for its French audience.

As in chapter two, I offer a rhetorical analysis of popular media representations of the protests informed by genre theory. More specifically I analyze documentary and newspaper accounts of the two protests. I first provide an overview of the specific stakeholders and incidents leading up to the French protests, including an analysis of the culture and history of French agriculture that informed the protests. I then explain and analyze the two protests, concluding the chapter with overall reflections upon this instance of CCD crisis rhetoric.

CCD in France

Between 1994 and 1999, French sunflower honey production fell 55%, from 110,00 metric tons to 50,000 metric tons (Schacker 55). As early as July 1994, French

beekeepers noticed that just after the sunflowers bloomed, they lost hives. Bees simply did not make it back to the hive and those left, eventually absconded from the hive. In response, French beekeepers questioned, what about the environment or bees was different this year as opposed to previous years? The answer was imidacloprid. In 1994, the application of this neonicotinoid pesticide, trade named GAUCHO, had been applied to sunflowers for the first time. GAUCHO is a chlorinated hydrocarbon very similar in molecular structure to DDT and has properties similar to nerve gas (53). Initially, French beekeepers sought studies from Bayer CropScience (the manufacturer of the suspected pesticide) on whether the pesticide affected honey bees. The government requested the same. Bayer complied with trials in 1995 and 1997. Yet these trials did not test the effect of tiny "sublethal" doses of the pesticide upon the bees. Meanwhile, with bees dying and honey production continuing to plunge, beekeepers appealed to the French Agriculture Ministry for help. After beekeepers demanded further research, in 1998 the French government appointed a Commission on Toxins, which, in turn, initiated a series of lab and field studies to determine the role GAUCHO might be playing in the death of bees. The studies were sponsored by the European Union with 5% of the funds supplied by Bayer. Unlike studies conducted by Bayer, which suggested imidacloprid was not present in the pollen and nectar of sunflowers, scientists at two national institutes found that minute levels were detectible. Since the finding had not been corroborated under field conditions, the

committee (ComTox) called for no regulatory changes and recommended further research (Suryanarayanan and Kleinman 97). Despite data showing as little as six parts per billion could disrupt honeybee foraging, they did not ban GAUCHO but instead set aside six million francs to conduct further studies (56). Four years into the crisis, with losses piling up, the French beekeepers were frustrated. They believed the pesticide was the primary cause of the death of 30% of Frances's 1.5 million colonies and viewed Bayer and the French government as intransigent. They began plans for demonstrations. The National Union of French Beekeepers' organized with two other national beekeeper unions for the "last chance for an IMD suspension"–confronting the Minister of Agriculture himself (Schacker 58-59).

As a starting point for the analysis that follows, it is important to note that the French beekeepers mobilized a protest that involved many other unions, employed a significant number of protestors, and pursued multiple fronts of confrontation. Besides the protests, the Union also pursued independent scientific analysis, legal representation and documentation. As an example of their analysis (and public relations materials), in one particularly arresting visual document, the Union filmed close-up clips of bees attempting to gather pollen from neonicotinoid treated sunflowers. They posted these clips on their web site and widely disseminated them to the media, gaining worldwide coverage in Langworthy and Henein's film documentary *Vanishing of the Bees.* The bees noticeably struggled as they tried to use their

appendages to scrape off the sticky pollen. They took much more time in gathering pollen than did bees filmed on non-treated sunflowers. Their legs started shaking and most dropped straight off the flowers. The scene was visually arresting.

Through multiple means, the UNAF portrayed themselves to the French public as defenders of the honeybee. Their enlistment of not only two other beekeeping unions but also three agricultural unions to oppose Bayer showed their power to organize and constituted a threat to the French government. When asked about the Union of beekeepers' efforts, Henri Clement, President of the Union, claimed efficacy stemmed from three efforts. As he stated, "Three foundations–scientific, legal and communication were decisive in this kind of struggle" ("Interview with Henri Clement"). Clement underscored the role of communication as the critical means of unifying the public and gaining moral impetus: "We learned to communicate with the broad public in order to unite in defence of the bee" ("Interview with Henri Clement"). The beekeeping unions leveraged a position of themselves as expert stewards of the honeybee.

Historical and Cultural Context

Many cultural constructs seeded the French beekeepers' rhetorical efficacy. For one, the French have a long history and pride in apiculture. The Emperor Charlemagne enacted severe penalties for theft of hives. Napoleon made bees a symbol of his reign.

France is also home to the world's oldest beekeeping school. Hives are still located on the roof of the Paris Opera House (Crane 247; Langworthy and Henein). In 1808 Charles-Louis Cadet de Gassicourt published the first gastronomic geography of France in his book, *Gastronomique de France.* Icons the shape of bottles, chicken, fish, terrines and beehives dotted the map, representing a region's chief food products. Julia Csergo notes the significance of these maps:

> . . . maps of France were rare. The average Frenchman seldom had access to one. The fact that popular images of France were shaped by compilations of regional culinary specialties was an indication of the status that would be accorded to such things in both the popular imagination and symbolic representation of national identity (Flandrin and Montanari 504).

Bees made the "map" in a country that valued regional food. The first regional cookbooks were published in France at this time as well, quickly establishing the new genre. One cookbook was reprinted forty-one times between 1833 and 1900 (505). Promoters successfully tied the mapping of place and food to rural tourism. Between 1910 and 1930 a "gastronomic literature emerged that extols the various regions of France, declaring them part of the glory of the French nation" (Trubek 36, 7). Such a regionally based food culture tradition continues to this day.

As does a strong culture of farming activism. Amy Trubek notes in her bestselling book *Taste of Place: A Cultural Journey into Terroir*, French farmers are "historically well organized and culturally powerful" (43). They "protest regularly against the encroachment of regional and global market forces and regulations into their territory" (43). Since the 1980s, overproduction and falling prices has made small-scale farming difficult. Between 1945 and 1970, the number of farms had fallen from 1.6 million to 700, 000; the number of farmers as a share of the workforce had dropped from 30% to 4%. This global "marginalization" of agriculture made it harder for the French government to resist the European Union Common Agricultural Policies that many claim mainly benefitted British consumers (Price 392). Price claims these policies continued to promote industrial farming, globalization, and exports to Britain in ways that constrained and economically hurt French farmers. The policies were aimed at procuring subsidies for big farms. Price notes, that while French ministers can be "relied upon to wage a stubborn rearguard action against the more consumer-oriented British proposals for reform," power is lost among small farmers since large agri-business enterprises "control the supply of inputs and the processing and marketing of foodstuffs" (392).

To counter such global discourse and policy, French farmers regularly organize and protest. In a 1999 trade dispute between the United States and France, the U.S. imposed a 100% tariff on European luxury goods, including Roquefort cheese and foie

gras. In response, French farmers attacked a number of McDonald's restaurants in southwest France (the region where Roquefort and foie gras are produced) with "rotten apples, tomatoes, and manure" (Trubek 43). A French farmer told the *NY Times*, "My struggle remains the same . . . the battle against globalization and the right of people to feed themselves as they choose" (qtd. in Trubek 43).

Farmers repeatedly express global-awareness and demand rights for regionally grown food. In protest of global trade agreements, farmers planted their tractors on train tracks to block passage of high-speed trains. They also drove hundreds of tractors into Paris traffic in rally against unfair grain prices. In October 2009, they set fire to hay bales on the thoroughfare of the Champs Elysees, objecting to government policies they claimed contributed to a second year of a 20% price drop in grain prices and forced debt. In May 2010, farmers brought in 8,000 plots of sod and 150,000 plants and installed them "amid sheep and cattle," along a three-quarters of a mile stretch of the Champs Elysees (Davies "French Farmers Bring Chaos").

France's long history of apiculture and embodied protest combined with a severe drop in small-scale farming and four years of CCD set the precedent for the beekeepers' protest. The boulevard incident in particular shows two concurrent rhetorical appeals of protest that parallels the beekeepers' protests that follow. The incidents showcase the farmers' demonstration of their vital role in French life on the most famous of French boulevards. Backed by private investment, the president of the

farmer's union insisted the act was not to "bemoan our plight," but "to promote our trade" and make French consumers reflect on "what they have on their plates" (Davies). Protest was an appeal by farmers to fellow French citizens to preserve and advance their cultural history; to educate and remind them of their value for French regionalized farming, food, and markets. Farmers appealed to the French public's sense of pride in their culinary history even as they confronted government policy. They positioned themselves as valuable providers of homegrown food.

Figure 1

The Eiffel Tower Protest

Within this cultural milieu, the Unions enacted funeral rites at two protests. Their success seems incumbent on their organization and their clear and embodied narrative. First, many were involved. According to newspaper accounts, the Union's web site and the documentary *Vanishing the* Bees, on December 17, 1998 between 700 and 1,000 members of the three French Unions of beekeepers gathered underneath the Eiffel Tower to protest the sale and use of GAUCHO. They also were supported by large

agricultural organizations such as the FNSEA (the Federation Nationale des Syndicats d'Exploitants Agricoles) and the Confederation Paysanne (Schacker 59).

Second, unlike mainstream U.S. media, the French beekeepers identified a clear problem, culprit and solution. The problem was the sale and use of neonicotinoid insecticides, the culprit Bayer CropScience, and the solution, a ban of the pesticide. They stated this in protest signs that were succinct and arresting. The signs were hand painted or printed in bold letters with primary colors. Headlines read "Stop GAUCHO," "Stop Poisoning our Bees," and "Union–friends of bees." Some signs included subtext. For example, the subtext beneath the sign "Stop Gaucho," was "Our poisoned bees . . .Your dangerous future" (Figure 1; translated from French). The clear common theme among the signs was that Bayer's pesticides were killing bees, threatening beekeepers and potentially harming health. The action called for was equally clear: The statement on the sign in Figure 2 translates as "The Death of Beekeeping. Ban Gaucho Immediately." A sign

Figure 2

planted in the ground positioned the accused perpetrator as “Bayer buried” (see Figure 3; photos from Langworthy and Henein and UNAF web archives). Bees and beekeepers were dying and Bayer was the culprit fit to be buried.

The street theater performance of the protests as funeral rites boldly communicated loss, complaint, blame, and demands. Signs indicated direct blame be placed upon Bayer CropScience for perpetrating the death of bees through the production of GAUCHO. In light of the selling of such poison, nothing short of its ban was acceptable. Beekeepers emphatically conveyed the theme of death, the incrimination of Bayer, and the need for immediate governmental intervention and did so through rites akin to a funeral or memorial service. The “Bayer buried” sign was planted like a tombstone amidst beekeepers in white suits and head veils clustering in a half circle beneath the Eiffel Tower (see Figure 3).

Yet though the signs bluntly and darkly underscore threats and necessary corrective action, the demonstration was peaceful and even quiet at times. This points to a second form of rhetoric in play other than the confrontational rhetoric that is commonly associated with protest: the rhetorical appeal of protest that connotes a funeral lament. Union members stood solemnly, dressed in their white beekeeper suits with protective veils drawn over their faces as the UNAF president, Henri Clement, directed “fiery” remarks to the Minister of Agriculture yet also lamented for the portending death of beekeeping and the bees (59). The mood of the “eye catching”

protest was a mix of indignant directness and respectful invocation under the universal symbol of Paris, France, and French national sovereignty (Suryanarayanan and Kleinman 97; Thompson 1130).

The scene evoked connotations of a memorial service: 700 beekeepers and onlookers quietly faced Clement. Clement appealed to French people for their pride in agriculture and called for an immediate suspension of the use of IMD on sunflowers (Schacker 59). The rhetoric of complaint, blame and demand conveyed through signs, mixed with expression of lament, loss and pain, were conveyed in the speech, quiet, and dress of the beekeepers. Protest and funeral fused and communicated a mix of indignation and lament. Signs defined the problem, culprit, and necessary action in a context of enacted rites and an ethos of identity and loss.

Figure 3

Similar to the media's use of the crime mystery in Chapter 2, the protest was driven by a crime motif with defined roles for the villain, hero and victims. The difference in this instance was that beekeepers more directly conveyed their agency, the villain was no longer pathogenic, and their appeal was both protest and invitation

to the public to join them. Bayer clearly was assigned the role of a villain who was fit to be "buried." And unlike in the nesting genres of the U.S. news stories, beekeepers served as both victim, heroes and visible experts on agriculture. Initial U.S. press coverage of CCD did not acknowledge beekeepers as contributors and authorities who could offer solutions. In contrast, media reports showed French beekeepers as heralds of French culture and culinary pride. Beekeepers orchestrated complex protests involving a total of 2,000 participants, and demarcated themselves "Union-friend of bees"—unified in their effort to reproduce French "subjectivities, commitments, and actions" (Bawarshi 82). Rather than a blanket newspaper report that asked its audience to puzzle through variables of the crime mystery crisis, these appeals seemed to ask its public audience for identification. Beekeepers took on the role of watchdogs for the impending health of the French, warning the death of the bees portended "your dangerous future." The genre of signs within this larger context communicated key messages and became "strategically embod[ied]" "ways of doing" (Coe 3) that advanced the Union's identity. The enacted protest genres, in general, provide evidence that "the heart of genre's social nature is its embeddedness in groups and hence social structures" (Devitt 36). The protest signs were embedded in the French beekeepers' group ethos of guardians, farmers, and thus experts of bees in a culture that values local food. French beekeepers appealed as experts to the French people. They embodied the genre of protest.

This embodiment also gained import from the location of the protest. Like the French farmers' protest on the Champs Elysees, the French beekeepers' protest under the Eiffel Tower promotes an ethos of nationalism and agrarian pride. The protest takes place underneath the symbol of French sovereignty, appealing to sentiments of French pride and protection. The gathering of beekeepers under the arch serves as a visual cue for the French public to stand in solidarity with them and their ethos. By taking shelter and protection under their shrine to nationalism, French beekeepers convey their need for protection by the French people and French government. This appeal in part parallels ideas of identity that Gregory Clark notes in his analysis of the rhetoric at play in U.S. National Parks. Clark underscores that the parks encourage individuals to identify with common symbols of authority and transcend, for a time, differences that would otherwise divide them (70). In such instances, people discount their individual differences and join with other citizens in communion with national wonders. Clark claims such sites induce an awe—a transcendence of difference—and a sense of belonging to a nation, symbols of nationalism and national wonder. They invite people to imagine alternate identities for themselves in a man-made space that serves as background for a collective group identity (Clark and Halloran 142), even an adoption of civic virtues. Notwithstanding cultural and material differences between a U.S. national park and French landmarks, the location of the protest at the Eiffel Tower

encouraged viewers to associate the Tower, beekeepers and themselves with pride in French ingenuity and the French culinary tradition.

Such appeals are more than even an expression of agrarian pride and nationalism. In the protest genre of funeral lament, the appeals of protest get fused with appeals for sympathy and fair treatment. Karlyn Kohrs Campbell's understanding of consciousness-raising helps define these later dimensions of the beekeepers' rhetoric. In her analysis of the U.S. Women's Liberation movement, Karlyn Kohrs Campbell notes the movement's genre of confessional texts fused "substantive and stylistic features" (75) wherein persuasion was not an act by an expert or leader but more of the raising of consciousness that transforms self-perception, identity and power (78). In her review of an essay written in this genre, she notes the author "in a rhetorically atypical fashion" expresses not only feelings of "fear, anger and hatred" but a "need for love" and "ambivalence" in creating a piece with which other women in similar positions can dialogue (80). Campbell claims women within the movement forged identity by openly processing their vulnerability with a public they assumed should be sympathetic with their plight. Such "strong" vulnerability promotes a "process of self-scrutiny" within readers whose goal is a process, "not a particular belief or policy" (80).

Invoking similar rhetorical appeals, beekeepers express vulnerability that seems to promote self-scrutiny and identification between the French public and the

beekeepers. Beekeepers not only confront Bayer CropScience, they lament their loss. Their passive demonstration of encampment under the protective arc of the Eiffel Tower connotes a funeral graveside service. This triggers a reconfiguration of nationalism as not just a site of memorial of French industrial ingenuity (the tower itself) but a symbol of the keeping of a regional and national culinary and agricultural tradition embodied in the beekeepers and bees. Campbell notes the rhetoric of Women's Liberation is grounded in the psycho-social reality of personhood: when one attacks women's liberation, one does not attack an aspect of the world but a person's particularity. Though French beekeepers' embodiment of their livelihood does not quite rise to this level, the issues are rhetorically positioned as "simultaneously personal and political" (71); defiance and lament mix to prick the conscience of fellow French citizens to consider the potential death of the bee and beekeeper's profession as an attack on French culture.

The Protest at Bayer CropScience, French Headquarters

Figure 4

Figure 5

Union beekeepers leveraged this stance even more at Bayer CropScience's French headquarters, adding a more spirited display of loss. Also in December 1998, the Unions organized and demonstrated just outside Bayer CropScience's fenced industrial lot. This protest accentuated the beekeeper's lament. While the signs again emphasized Bayer's pesticides killing the bees and endangering human health, in this case, the combination of site, beekeepers, hive boxes devoid of bees, an effigy, costume, signs, and a bonfire accentuated a total loss of life and livelihood. Beekeepers gathered on a street outside a gate and encircled a bonfire. On the outside of the circle they held banners and signs. In the middle they burned hundreds of empty bee boxes. At one end, some hopped the fence and planted signs on Bayer

Property. In media interviews, they mentioned the boxes had held as many as 15,000 bees each just weeks earlier. Loss at the hands of a clear culprit was accentuated. Piled akimbo, burnt or thrown, the burning boxes alone egged on a more aggressive stance than that of the Eiffel Tower protest, one notably responsive to the location of Bayer's headquarters (see figures 4-5). The box's emptiness represented the bees' loss of home, their subsequent death and the potential loss of beekeepers' livelihoods. The fire added to this visceral portrayal of embodied loss, connoting a funeral pyre, evoking shock at the display of sheer destruction, and stirring pity and anger at the realization of such loss of life.

Figure 6

This highly personalized rhetoric of loss and defiance (see Figure 6 & 7) worked as what Kevin Deluca calls a mind-bomb of "critique though spectacle" that does not just "stage acts of protest designed for media dissemination" but that advances an alternate discourse (Delicath and Deluca 315). In the documentary *Vanishing Bees*, beekeepers are shown throwing the empty boxes toward signs they had planted there.

Figure 7

One reads “GAUCHO =” with the drawn image of a skull and crossbones after the equals sign. Underneath this statement, it reads “Save our children,” to make explicit that Bayer’s pesticide threatens humans (see Figure 6). In yet another rallying moment, beekeepers raise their smokers in the air, like swords before battle (see Figure 8) as a woman beekeeper dressed in her suit holds a funeral bouquet of flowers with a ribbon

Figure 8

draped around it. The ribbon reads, “Abteiles défunt”— dead bees (see Figure 9). And the backdrop to all of this is a hung effigy of a beekeeper: arresting attention by its simple artifice: the effigy, the sky, and the crane from which it hung (see Figure 10). In contrast to the calm protest under the Eiffel Tower and its rhetoric of transcendence, here beekeepers defy property laws and enact genres that visually communicate not only pain and loss but destruction.

Figure 9

Such rhetoric seems to work because of the high stakes invoked. Robert Cathcart notes “movements are a kind of ritual conflict whose most

distinguishing form is confrontation" that challenges and rejects the "moral underpinnings" of the established order through "symbolic display acted out when one is in the throes of agon" (78). The funeral-like rituals the French beekeepers use express deep and painful loss. For French beekeepers, the portrayal of threat is all personal: Bayer CropScience's chemicals threaten to kill not just their bees, but their livelihood and their ability to steward creatures responsible for the life-cycle of France's flora. Cathcart notes such rhetorical confrontation is no display of simple reform but rather an act of complete commitment by participants to a cause, a "symbolic enactment which dramatizes the complete alienation of the confronter" (82). It is not merely an expression of "personal dissatisfaction" or a "prod toward more rapid response to grievances," but a forced juxtaposition of one agent held as evil (Bayer) and the other as a Burkean manifestation of a new "perfect" order. The beekeepers confront Bayer CropScience as the perpetrator of chemical warfare and are not willing to bargain a middle position. Their enactment is all or nothing using a rhetorical appeal of a memorial (vulnerability) and pyre (defiance).

Figure 10

As they defy Bayer CropScience and current governmental policy, they appeal to the general French public for protection.

Both defiant and confessional, the beekeepers ask their viewers to sympathize and share in a scrutiny of their identity similar to the type Kohrs Campbell traces in women author's works in the U.S. Women's Liberation Movement. The beekeepers beg from their audience a consciousness of French tradition and French agriculture. Beekeepers use the funeral lament to address its audience with present losses in light of a history of French agricultural protests and culinary pride; the signs and collective embodied protest cue a memory of nationalism and detonate a "mind bomb" that redefines a pesticide as a poison that threatens bodies, livelihood, and the deep-seated ethos of human stewardship of a species.

Protest Genre

This protest genre of enacted funeral rites ultimately serves as "lived textuality—rhetorical performances that both shape and are shaped by lived experiences" (Reiff 39). According to Reiff, genre is malleable when performed and manifested as social action, "shaped by lived experiences" (39). The French beekeepers' actions fit these conditions.

As underscored in Cathcart's definition of "all or nothing" confrontation, at the microscopic level of protest enactment, the protest signs, for example, were not a

"typified" or "habitual" shortcut beekeepers grabbed and used to address a reoccurring task. The signs were enacted and shaped by their placement and relationship to the embodied, non-linguistic performance of social action. Unlike a workplace incident where genre gets used by workers to standardize tasks, the protest genre is enacted by people who don't use it on a daily basis and who enact it highly responsive to the immediate context. And while protest signs help viewers identify the action as protest (as such are typified), they also upset conventions—their ironic "standardization" is a lack thereof. In his analysis of image-event driven protests, Deluca notes that protesters change linguistic and non-linguistic discourse by disarticulating previously held views and socially defined image-laden concepts or "ideographs" and rearticulate them in a new "cluster" of meaning. He specifically explores how environmental groups orchestrate image events to challenge dominant discourse and ideographs of progress, nature, technology and reason. Deluca's idea of upsetting norms complements and extends Reiff's idea of genre. Deluca sets off a mind bomb; the French beekeepers' protests collectively make for a mind-altering spectacle. Reiff, in turn, states that genre does not always follow "norms" when it is performed. The French beekeepers' protests followed some typical forms of the genre of protest, but ultimately the "lived textuality" of the genre along with the funeral protest reconstituted the ideograph of technology as a given agricultural solution and the ideograph of food as a given provision of local farmers. Genre rites, including the

signs, affirmed that a pesticide is a poison (the skull and crossbones symbol) that threatens health even as they appealed to felt human values of sustenance and wellness of beekeepers, bees and French citizens. Ensconced in the greater ethos of the bees' deaths and the beekeepers' losses, the enactment of genres here gets personalized. Union beekeepers don't just identify a problem on a sign and march, they mourn and grieve the situation, like family members mourning the murder of a relative. The signs work as prosthetic extensions of their arms to express pathos. The phrase "death of bees" on the funeral sash becomes realized more viscerally when worn by a woman beekeeper. The "stop poisoning" sign planted on Bayer Science's grounds, in part, could be interpreted as equivocating a violation of property with the violation of the beekeepers' livelihoods. To use Clay Spinuzzi's terms for genre, microscopic "operations" here are certainly not typical. They respond to the location and the assemblage of bodies, nonhumans (boxes, fire), and locale. At the grounds of Bayer CropScience, genre gets placed, boxes get burned, and an effigy gets hung. The polyphony of these linguistic and non-linguistic elements show that genre is malleable and evocative when it gets enacted.

Protest Genre as Embodied Instantiation

The embodiment of a white sea of beekeepers in their suits beneath the Eiffel Tower communicated solidarity and enacted the genre of protest as funeral lament.

Beekeepers burning their own equipment showed vulnerability and true loss, not just staged loss. The throwing of boxes at the feet of the sign planted on Bayer's property showed a willingness to risk legal action. Beekeepers' performance of rites at both the Eiffel Tower and Bayer CropScience's headquarters presses the audience to more fully see, hear and feel a highly charged complaint and lament with high stakes; to witness the beekeeper's actual losses and verify the explicit messages conveyed by the signs. The embodied acts help the audience realize agency; the beekeepers like a victim of a crime lay dead victims at the feet of the perpetrator before the court of public opinion.

In her analysis of grassroots coalitions and "toxic tours" in Louisiana and San Francisco, Phaedra Pezullo defines the "embodied rhetorics of resistance" as goal-oriented acts "mobilizing public sentiment and dissent against material and symbolic toxic patterns" (3). She particularly notes how such tours make outsiders feel present to a problem—how they structure feelings and signify the pain of the affected people, and the material reality of a polluting industry (10). As she notes, "On every toxic tour bodies are at stake" (10). Toxic tours advocate that place be revisioned in terms of environmental health. The protest of "embodied subjectivity" employs multiple senses and no longer perpetuates the removed Western colonial gaze. In this rhetoric, the audience is invited to become "vulnerable observers" "witnessing" a place, willing to connect to people (30, 31; 145) and willing to "transform the tragic scenes they are presented" (47). The tour becomes "an inventive effort to create a greater sense of

communitas and serves as an act of mobility that attempts to negotiate social critique" (135).

The French beekeepers' protests follow this model of "inventive effort" in their instantiation of genre. Beekeepers develop a structure of feelings that negotiate social critique and invited a sense of witnessing. The beekeepers don't just march down a street, they protest at the Eiffel Tower. They don't just hold signs, they perform acts that lament their loss of home at Bayer CropScience's headquarters. They don't burn and loot other people's property; they burn their own property. The boxes aren't just arbitrary objects; they are former homes of dead bees. This is a rhetoric wherein "bodies are at stake" (Pezullo10). Material homes and lives are being violated. By applying rituals normally associated with the memorial of human death to the death of bees and beekeeping, they show genre "subvert[ing] assumed goals and expectations of [an] audience" wherein the "constraint may challenge language standards"—and in this case material conceptualizations as well (Devitt "Generalizing about Genre" 45,6). The Union of Beekeepers protest is no mere complaint and demand. The rhetoric is realized in place, time and embodiment.

As Morris and Browne note, the rhetoric of social protest is one where "symbols—words, signs, images, music, bodies—operate to shape our perceptions of reality and invite us to act accordingly" (1). Moreover, "nonlinguistic and non-symbolic presences and absences contribute to material conditions and lived experience" (1).

Underscoring the significance of "experience" Pezullo remarks that "bodies powerfully and undeniably do inform our experiences, our beliefs, and our judgments in socially meaningful ways" (11). Corporeality connects "thought, land, and humanity" and the "interdependent categories of the material and the symbolic, the organic and inorganic, the emotional and the reasonable" (11). The narrative of funeral rites in this protest shows the power of embodiment and emplacement as dynamic forces that invoke consciousness and promote interdependence.

Chapter 4: American Beekeeper's Discourse on CCD

As Cynthia Haller notes, with less than two percent of the U.S. labor force engaged in food production, most of the U.S. population is "far removed" from the farm (97). As a result, typecast narratives of rural America proliferate: that minorities are not present (they are; 1/5 are people of color); that most of its inhabitants make their living from the farm (only 12% do), and that small-scale farmers receive the lion-share of government subsidies (they don't; 30% goes to the largest 1% of producers) (Donehower, Hogg and Schell 3, 83 and 84).

Like the lead stereotype of the romanticized yeoman farmer (Donehower, Hogg and Schell 77; Lamberti 2; Peterson 1991; 290), the U.S. beekeeper has been cast in public media as a kind caretaker, innocent victim, and even a Dr. Doolittle "listening to the bees" (Langworthy and Henein). In all early news reports and for much of many of the documentaries, U.S. beekeepers were portrayed as silent victims walking through bee yards, the equivalent of ghost towns. Journalists and producers asked few if any questions of beekeepers about their field knowledge and interpretation of the crisis. Similarly, though he complicates the narrative at the end of his book, prominent nonfiction author Rowan Jacobsen elides the discussion of different types of beekeeping practices early in his book. He cites commercial beekeepers as having no choice but to pack up their hives and truck them from one site to another to pollinate crops (15), painting them as victims of the free market.

This chapter adds to the analysis of the use of crime-mystery and funeral protest narrative frames in Chapters 2 and 3 to an analysis of U.S. beekeepers' discourse, in part, to correct such monolithic assumptions and representations about beekeepers' identity and interpretation of the crisis and to further explore how claims of stewardship by beekeepers get manifested through narratives. As Haller notes, given stereotypes of rural places and how few Americans work on farms, "it is doubly important to interrogate representations of farm places, to ensure policies are informed by legitimate understandings of agriculture" (97). Charting beekeepers' narratives importantly chronicles their perception of the crisis, augments and challenges the pathogenic and protest narratives about CCD, and corrects societal assumptions that as Haller notes, have a serious bearing on public policies (97). Examining beekeepers' narratives better defines the crisis, extends scholarship on agricultural discourse, and underscores how narratives framed this environmental crisis.

Method and Terms

Over the period of a month, I conducted eight extensive personal interviews with beekeepers whose practices ranged from non-migratory and relatively small operations (300 hives) to migratory larger operations (3000 hives). The interviews were done in person with beekeepers at their homes in western New York and Pennsylvania and varied in length between 45 minutes and four hours. I especially chose to interview

beekeepers that lived in the same region in order to keep certain variables more constant. For example, I could assume variables such as weather and nectar flows were similar. I also chose different kinds of beekeepers: I interviewed both large and small-scale commercial migratory beekeepers who make their living more from pollination contracts with vegetable and fruit farmers and beekeepers who do not move their bees to pollinate crops but instead make their living more from the sale of honey. Lastly, I recorded a question and answer session at the NY Honey Producer's Association meeting as yet another means to gather beekeepers' perception of the crisis.

I chose to pursue an ethnographic methodology for the interview process; I rarely asked questions. Instead, I announced that I wanted to discuss with them their beekeeping and views on the CCD crisis. This was intended to invite beekeepers to share what they perceived as important for us to discuss. I sought to document but not "dilute the experiential insight and intuitions that immersion in another social world can provide" (Emerson, Fretz and Shaw 18). I limited my questions to those that helped me define terms and constructs they brought up. Such interviewing was intended to encourage beekeepers to pursue topics that arose spontaneously given the situation and our walking through, for example, a barn that housed their honey extracting equipment. To allow for more eye contact and exchange between us, I digitally recorded the audio from these interviews.

I used a microphone and recorder attached to their lapel. All interviews and the method of electronic recording and follow-up transcription were with participants' permission and IRB approval.

I interviewed eight “key” informants with intimate knowledge of the communities and beekeeping practices in which they participate. I transcribed the interviews and interpreted excerpts based upon theoretical constructs that Tarla Rai Peterson established in her analysis of farmer and rancher discourse. More specifically, I analyzed them for “mythemes”—narrative structures through which beekeepers express values. By charting their narratives, I aim to add to the definition of the rhetoric employed by U.S. beekeepers and to extend the taxonomy of narrative structures of U.S. agriculture identified by Adrienne P. Lamberti, Tarla Rai Peterson, Christi Choat Horton and Eileen Schell. I aim to confirm and further differentiate prominent patterns of discourse I found among U.S. beekeepers and thus further identify how narratives beyond the crime mystery (chapter 2) and funeral protests (chapter 3) shaped the CCD crisis.

Lamberti, Peterson, Horton and Schell provide foundational terms for this chapter’s analysis. In her book *Talking the Talk: Revolution in Agricultural Communication*, Lamberti identifies rhetorical patterns of communication in U.S. agriculture by analyzing interview transcripts with small-scale farmers and by examining documents published by the Agricultural Extension System of Iowa State University.

She argues that rural society's oral tradition does more than entertain; it maintains community memory and values. Since communal memory cannot be fully erased, rural residents perceive the telling of stories as more secure than written documents. Furthermore, since such oral tradition requires a constant retelling of a tale or lesson to preserve it, the telling often focuses on essential values and knowledge for sustenance and survival (7).

Notwithstanding the powerful role orality has in preserving memory among rural Americans, as Peterson and Horton note, government agencies often overlook narratives as irrelevant. In their landmark essay, "Rooted in the Soil: How Understanding the Perspectives of Landowners Can Enhance the Management of Environmental Disputes," they define Texas landowners' perspective of themselves in the "acrimonious debate" between them, environmental groups and the U.S. Fish and Wildlife Service over efforts to protect the golden-cheeked warbler. While the project differs from Lamberti's project in that Peterson and Horton chronicle ranchers' discourse in response to an environmental dispute, Peterson and Horton also note the contrast between professional communication and rural oral communication. They label the United States Fish and Wildlife Service communication as problematic because it "fail[ed] to ground itself in local cultural practices" (167). The USFWS had not instituted any programs to involve the public in its decision-making practices. Peterson and Horton strongly point to the need for collaborative-decision making to

rectify this situation. Like Lamberti, they identify functional constellations of metaphors used by the ranchers and claim the analysis of the mythic dimensions of the farmers' discourse defines values and "sanction[s] proposals and counterproposals" to solve environmental issues (174).

Countering stereotypes and dominant hegemonic discourses, Schell also underscores the importance of agricultural discourse and further advocates for a dynamic understanding of farm rhetorics. In her book chapter "Rhetorics of the Farm Crisis," like Peterson and Horton, she defines prevalent myths of farmers. She states, that despite "shifts in agricultural production, a romanticized image of the small family farm still holds iconic sway in American life" (Donehower, Hogg and Schell 78). As a result, agricultural production and life are "often shrouded in mystery or misinformation—one might even say 'myth information'" (78). Extending Jaqueline Edmondson's critique that rural life too often gets interpreted nostalgically, Schell identifies public rhetorics of tragedy and smart diversification. Tragedy rhetorics depict farmers as victims and prescribe the preservation of a presumed idealized version of the family farm. Smart diversification rhetorics on the other hand laud "how farmers can survive by 'thinking outside the box' through implementation of technology and innovations" (79). Both rhetorics often cast farmers in false and singular terms and thereby reduce their agency. As a counterproposal to these forms, Schell proposes an "alternative agrarian rhetoric and literacy grounded in discourses of rural sustainability"

wherein rural people are allowed to "imagine their options and alternatives" and urban and suburban residents can make conscious consumer choices and support policies that honor such rural sustainable development (81).

Some conclusions from these sources apply to this chapter's analysis of U.S. beekeepers' rhetorics. First, oral tradition is not just a record of stories. It's an embodied form of communication that preserves memory and values. Similar to the farmers that Lamberti interviewed, the beekeepers I interviewed shared stories that strongly express their values. Though very different than the French beekeepers' embodiment of the protest that included props and the story-line of a funeral (as studied in Ch. 3), the oral tradition of U.S. beekeepers nonetheless has the power to shape perceptions of the crisis—at minimum among U.S. beekeepers themselves. By analyzing their narratives, we can also better understand what was missing from the stereotypes and representations of CCD and beekeepers as told by the media in Chapter 2. We can also further define how variables such as the lack of applied science, the practices of migratory beekeeping, and free market economics were represented in beekeepers narratives.

Second, these three sources note that stereotypes reduce farmers' agency to problematic monolithic representations. This, too, is confirmed in how beekeepers were portrayed in the public media. U.S. beekeepers' practices rarely got differentiated in public news media as organic, commercial, migratory or non-migratory, and most

often they were only cited for anecdotal reflection about their losses (see Chapter 2). Like the discourse about U.S. farmers, such "dominant narratives" of beekeepers prevents full discourse and "fail[s] to create a rhetorical situation" in which the reader or viewers can understand the tremendous impact of how food is "grown, harvested, distributed, and marketed" (Donehower, Hogg and Schell 81). Not situating beekeepers' discourse in the discussion of CCD acquiesces to the dominant narrative of them as nostalgic keepers of creatures and mere victims of a purely pathogenic crisis.

Defining the discourse of beekeepers not only corrects this misrepresentation, it also helps further explain the crisis and the need to consider farmers' "field knowledge" when considering agricultural environmental crises. The extensive personal interviews I conducted with beekeepers of different ages and practices show them negotiating the pressures of the CCD crisis with much the same complexity that Lamberti, Peterson and Horton and Schell show farmers negotiating their challenges. Like the farmers Lamberti chronicles, the beekeepers I interviewed are agents that implement a diverse range of agricultural and economic practices and "viable" narratives (Lamberti 6). U.S. beekeepers have to manage bees that battle parasites, chemicals and microscopic diseases as well as conduct their business in an ever-evolving industrialized "free market." They manage complex relationships with industrial crop growers and fellow beekeepers. Often joking sardonically about why

anyone would ever want to do their job (add in stings & sweat, too), they nonetheless harken to their "love" for keeping bees. Given the complex biological and economic forces they negotiate and given their immediate field knowledge of bees and CCD, it is important to engage their narratives as a vital component of analyzing the rhetoric of CCD.

As Lamberti found with the rural agricultural discourse and as is specifically pertinent to my dissertation project that analyzes narrative frames, I found that beekeepers communicate thematically, using narrative structures. Lamberti defines narratives as depiction sequences of events to illustrate truths, create shared meaning, and elicit an audience's involvement (8). Such narratives operate as structures that order time and experience to "interpret unnarrated life" (Foss 400; Booth 14). As structural "presences," they shape seemingly unconnected messages. They often too contain mythical frames used by agents to justify and make sense of events (Jasinski 401; Peterson 173). In my rhetorical analysis of the interview transcripts, I found that the beekeepers' discourse of analogies and their invocation of values are used to interpret their circumstances and justify their actions. Furthermore, like the jeremiad, they use collective metaphors to "evoke beauty," instate confrontation, and attempt reconciliation (Opie and Eliot 35). Like Lamberti and Peterson and Horton, I found that their discourse addresses market forces, a value for "the land," and the environment as an indicator of health. Just as the bees have to navigate a complex, chemically laden

environment, U.S. beekeepers have to navigate a range of discourses —from those of crop-and chemical science to those of business and industry; from regional to national discourses; from discourses of government policies to those of communal stewardship—and they use narratives to make sense of them, narratives that shed light on the CCD crisis and how American beekeepers are able to understand and intervene—or not—in the crisis in ways that differ from the strategies deployed by the French beekeepers.

The Narrative Frames

To identify these narrative structures, I consult two existing frames offered by Lamberti and Peterson and Horton. From her extensive interviews and rhetorical analysis of documents, Lamberti found that small-scale farmers' narratives emphasize 1) a suspicion of "outsiders," 2) a valorization of personal experience as authority, and 3) an emphasis on first-hand observation. Peterson and Horton also helpfully identify frames. They find ranchers' self-identify as "stewards, or protectors of the land, and [they] identify the essential dimensions of stewardship as common sense, independence, and a unique human-land dimension" (174). My analysis of U.S. beekeepers' discourse qualifies and confirms these findings.

Like Lamberti's finding of farmers' "emphasis on first-hand observation," I find beekeepers' emphasize experiential knowledge that gets results. In the first section of

discussion to follow, I share how U.S. beekeepers' narrated the disconnection they felt between themselves and scientists. Since scientists have not resolved the causes of CCD, beekeepers suspect they are disinterested or oblivious to the economic cost beekeepers bear. I explore the pattern of relationship between the binaries of "doing vs. talking" as indicative of the tension between beekeepers' pragmatism and the reigning U.S. scientific paradigm of falsification that requires a lengthy longitudinal process before government actions are taken to prevent chemical products can be sold or regulated. Beekeepers also link science to politics and in doing so qualify a second narrative frame that Lamberti, Peterson and Horton, and Schell all identify: independence or individualism. The beekeepers I interviewed qualify their "independence" as vocational autonomy that is vulnerable to market and pathogenic threats. At times they express their identity as interdependent stewards of the environment; at other times, they express an "abandonment" of their needs by a consortium of government, science and society. Such (in)-dependence gets further complicated by the contrasting practices and values of beekeepers that keep their hives in one region versus those that ship their hives to multiple locations across the United States to pollinate huge fields of monocultures. In the second section of this chapter, I illustrate and qualify Tarla Rai Peterson's finding of independence as a dimension of a rancher's stewardship identity. While many U.S. beekeepers celebrated their self-employment, they also mentioned their dependence upon Big Ag farming

subcontracts for pollination and the difficulties they encountered in brokering fair market prices for honey or pollination services.

Beekeepers also underscored their vocational independence relative to whether they practiced migratory beekeeping or not—a phenomenon not present in France.[19] A prime possibility for why U.S. beekeepers did not collectively protest could be a preoccupation with market survival and this conflict of identities between non-migratory and migratory beekeepers. While non-migratory beekeepers sympathized with the plight of migratory beekeepers, they also portrayed migratory beekeepers as "running" from crop to crop and propagating CCD through the stress that transit and multiple chemical exposures from different locales impose on bees. Few mainstream news reports acknowledge this divide of opinion and practice among U.S. beekeepers or the ways beekeepers mitigate the boom and bust economics of such commodity-driven pollination. In this second section of analysis, I define how beekeepers' independence was relative to their participation in migratory practices, while considering how such a narrative motivates beekeepers to find entrepreneurial solutions to CCD.

In the third and last section, I explore what both Lamberti and Peterson identify as the farmer's emphasis on an emplaced land ethic, an ethic almost all beekeepers

[19] The practice of hauling hives on flatbed trailers to then place them next to fields of blueberries and other crops is not practiced in Europe.

referenced as the touchstone of their identity and the one that helps explain why beekeepers choose to stay in the business. Lamberti notes that farmers invoke the value that land prevails and people accommodate. Peterson quotes landowners as vouching for conservation not preservation. They would "never knowingly harm their land" and extend their land-steward connection to "the interdependence of all life forms" (179, 180). Beekeepers likewise reverenced the land and, by extension, also the bees. Citing the bee as the symbol of core human interdependence, U.S. beekeepers referenced the relationship between uncontaminated soil, healthy bees and a sense of satisfying stewardship.

These three narrative constructs show attempts by beekeepers to negotiate rhetorics within an industrial system that challenges their values of stewardship and often reduces their sense of work to a subservient business wherein their hives are always hours away from literally being abandoned by the bees. As organic beekeeper Dee Lusby notes, migratory beekeeping is a product of a "Big Ag" system that has beekeepers falling down the rabbit hole of unforeseen consequences (Langworthy and Henein). Such beekeeping indentures beekeepers: the constant movement of bees and beekeepers tires them both; foraging bees on monocultures thwarts bees' nutrition; disease, collapse, and replacement of hives ensues; and, every year becomes a gamble in a commodity market of pollination services. For the majority of migratory beekeepers, such a living hinges on precarious pollination contracts, particularly those

issued by California's almond growers. 1400 commercial beekeepers maintain 80% of the nation's 2.1 million hives. It's a double bind with great pay-offs and great risks—as commercial beekeeper John Gibbs says—it's a constant dance with the devil (Personal Interview). As former president of American Beekeeping Federation Dave Hackenberg further notes, without almond pollination contracts, most of these operations would go bust, and with them, the U.S. grocery supply of U.S. vegetables and fruits (Personal Interviews).

Doing vs. Talking; Beekeepers' sense of Abandonment by Science

In my observations at a convention and interviews with beekeepers, I found U.S. beekeepers frustrated with scientists for not clearly explaining CCD or offering solutions for it. They often labeled scientists as self-serving and inept: "talkers" rather than "doers." A question and answer session between beekeepers and scientists at a beekeepers' conference illustrates this narrative construct. At the Fall 2011 conference of the Empire State Honey Producers Association, after scientist Mary Ann Frazier ended her presentation, the floor was opened to questions. The first comment was offered by Judy Doan, a woman beekeeper, who wondered aloud with Frazier, how "we can convince the federal government about what is going on with our beehives" if science and beekeepers don't consistently single out a culprit. Frazier replied, that she didn't think "anyone doubts that there are a lot of pesticides in the hive or that the

data we collected is real. The problem is whether this is what is killing the bees." She further explained that because the cause of CCD was most likely sublethal and because CCD deaths occurred over time, a culprit was hard to single out. She mentioned that her own studies showed hundreds of chemicals from various pesticides accrued in hive comb; furthermore, neonicotinoids represented a low percentage of the chemicals found, possibly because they are water soluble and break down quickly. She added scientists might need to focus on the nectar being gathered by bees. She gave a lengthy answer that alluded to the scientific process of falsification—that one had to falsify findings or information in order to eventually come up with a solution to the crisis. Acknowledging the current gaps in research, she empathetically stated, "It has been a frustration, a frustration. We see pesticides at such high levels . . . Trying to understand that tipping point has been difficult with pesticides" (Empire State Honey Producers Association Fall Meeting).

Though her answer was factual and acknowledged Doan's frustration, the exchange illustrates how beekeepers' epistemology differentiated from that of scientists. Beekeepers were frustrated because, as they expressed, they needed a timely, practical outcome; their livelihood depended on it. Scientists, on the other hand, needed to pursue solutions to CCD through lengthy comparative analysis of data

sets, all relative to consistent measurements[20], technology and funding. Perhaps recognizing the lack of satisfaction beekeepers had with Frazier's answer [then, a few years into the crisis], a colleague of Frazier added in second and third person vernacular, that funding was an issue. "We need funding to keep samples frozen for future work. Scientists work hand to mouth. They write one grant, they get a grad student for six months, and they work as fast as they can. By the time they finish, the grad student has already gone on to work on another project. You have to go find the kid to ask specifics as you write the paper. The money to keep samples, just in case there is a need for verification—the money ain't there. It's a funding thing" (Empire State Honey Producers Association Fall Meeting). Both beekeepers and scientists then shared how funding was a root problem, but beekeepers further expressed that they couldn't wait for science to have the answer. Most beekeepers I interviewed respected Frazier's work and recognized the problem her colleague raised about scientists' research not being funded for a long enough period of time. Nonetheless, they faulted scientists and the university system for not defining a probable main cause of CCD that could lead to clear solutions.

At times beekeepers expressed this disconnection between themselves and scientists in even more forceful terms. Beekeepers believed scientists needed to stop

[20] Frazier and her colleagues noted that there was no standard for methods and data collection systems to be able to compare data sets.

talking and start "doing." This belief and beekeepers' experience of the crisis as an economic maelstrom accompanied by political neglect was expressed in frustration. In my interviews, beekeepers mentioned they did not believe most scientists understood their predicament. They doubted whether scientists had enough incentives to find a solution, and whether they even cared to help beekeepers

Commercial beekeeper John Gibbs confirmed this view. About a month after the meeting, I interviewed Gibbs, then a 55 year-old migratory beekeeper who lives in a rural area southeast of Buffalo, NY. Gibbs keeps 3000 hives in NY with the exception of taking them on an annual trip to pollinate the almond groves in California for two weeks in February. This part of the interview took place near his honey storage tanks in one of his barns with three other western NY beekeepers present. It was a lively interchange. Here he encapsulates a view shared at least in part by all the beekeepers I interviewed:

> You can have the state or Cornell [Cooperative Extension] do research and then you wake up one morning and realize then they're saying, "Hey, you're on your own sucker." You have to get your own microscope. That's called being on your own. All these places get all this research money and I don't know what they do with it. You would think that if they [the scientists] didn't produce, they

> [agencies] would say screw you; we're not going to give you the research money because you didn't step up to the plate. But I don't know how they go about it.
>
> You can write this down, this is one of my pet peeves: scientists will always talk about and discover the problem but they will not come in with a solution. Scientists, all they do are study things. Solutions? If I gave you the solution, I wouldn't have a job, would I? . . . I have to say it the way it really it is. That's the way it is.

For Gibbs, Cornell [cooperative extension] had abandoned beekeepers. According to him, scientists and the government were supposed to serve agriculture. A beekeeper having to own a microscope was symbolic of scientists leaving beekeepers "on their own." Furthermore, scientists were not being held responsible for the lack of clear data that pointed to a cause of CCD. Scientists could afford to study a situation outside the exigence of an economic crisis. Gibbs even suspected scientists of not pursuing solutions to maintain their jobs, a sentiment echoed in Gibb's barn by semi-retired commercial 71 year-old beekeeper and former state bee inspector, Art Gerber. While all other beekeepers I interviewed did not go so far as to suspect that scientists purposefully avoided finding solutions, all expressed disappointment with the lack of government help (none had been directly contacted by mail or otherwise), and most

expressed a sense of abandonment by government entities. Gary Pilatek, a non-migratory organic beekeeper with 300 hives, said he understood there could be viable "disagreement among the scientists" about CCD's cause but that "working with Cornell Cooperative Extension has been very dissatisfying," adding that "after Roger [Roger Morris[21]] died, the interest in beekeeping waned at Cornell. Beekeeping is becoming less of a concern to New York as far as I can tell." Though different in the size of their operations and somewhat in their methods, Gibbs, Gerber and Pilatek express that NY state government sponsored cooperative extensions and scientists were not in touch with them, and when representatives from these groups were asked questions by beekeepers, they were not forthcoming with helpful information. Frazier's presence at the Honey Producer's Association was seen as an aberration. Beekeepers named only a few scientists as responsive to their crisis (usually Mary Ann Frazier and Jerry Hayes; the latter now working for Monsanto's *Beelogics* business). All beekeepers I interviewed implicated either state governments or the EPA for not communicating with them and for obstructing a pragmatic reduction of probable causes of CCD.

Given this sense of abandonment, some beekeepers felt compelled to pursue their own science, with one beekeeper at the Empire State Honey Producers

---

[21] Many beekeepers cited Roger Morris for his eccentric style and own keeping of bees as one of their own. He published numerous books on beekeeping and was noted by Al Dixon, also keeper of 300 hives, as a "guy that went out of his way to meet with me one time at one of my bee yards." Such "hands on" outreach seem valued by beekeepers. (cf. Lamberti 11).

Association Fall Meeting (2011) berating others for not having microscopes and not adopting technology fast enough. The incident depicts a call for beekeepers to take the situation into their own hands:

> Woman beekeeper [? Doan}: We as beekeepers can't spend our day in a lab.
> Beekeeper: You can't afford not to. I had 600 colony operations in Virginia. I have my own HPLC-MS (high performance chromatography-mass spectrometry microscope). It was used, it was old, but it was mine. And I don't know of another beekeeper in the country that had his own HPLC-MS. Let me tell you that thing has answered a lot of questions for me. People that aren't willing to capitalize, learn the technology, you're living in the eighteenth century.
>
> Mary Ann Frazier (Entomologist, University of Pennsylvania): That's unreasonable.
> Beekeeper: No [cutting Frazier off], it's not unreasonable.
> Attendee 1: I don't know even what you just said. [laughter from the crowd].
> Beekeeper: Well, we should, goddammit. Get with it.
> Attendee 1: Well what's an HPLC-MS?
> Beekeeper: It's a high performance liquid chromatography microscope. It finds things in things.

Attendee 2: Personally I use a magic 8-ball.

Attendee 3: Did you have a lot of losses?

Beekeeper: Oh no, I did a whole lot of stuff with that.

Attendee 3: But did you have losses?

Beekeeper: Well, of course I still had some losses.

Attendee 3: So why have all that information?!

The beekeeper went on to explain that the microscope helped him find mites and isolate tainted pollen that could prove when growers sprayed the orchards. He touted the microscope as not only answering "a lot of questions" but as a symbol of a willingness "to capitalize, [and] learn the technology." Technology becomes a bulwark, a protection mechanism, a means to save oneself from CCD.

This discourse of neo-liberalism with its insistence on progressive technology-driven change gets defined in the rhetorics Schell observed. She notes that in U.S. agriculture, the public rhetorics of "smart diversification" insist that farmers "can pull themselves out of poverty and ruin" through innovative practices, marketing and precision. The narrative structure is one of "Yankee ingenuity" and the "quintessential American narrative of the underdog or bootstrapper" (96). Schell notes that while such rhetoric can be constructively wed to a discourse of sustainable agriculture, too often it is used outside such context, lauding the lone warrior and his Yankee ingenuity. The

"narrative" does not entertain or "question the systemic forces" (97) of government and industry. In this case it fails to even bring up the question of the economic and political forces that inform CCD. Instead every beekeeper was to now be his or her own scientist. Magic 8-ball anybody?

This desperate attempt at science and berating of fellow beekeepers for their lack of technological prowess seems to connect with Gibbs's expression of beekeepers being "abandoned" by science and indicates an epistemological gap between scientists and beekeepers. Sociologists Sainath Suryanarayanan and Daniel Lee Kleinman helpfully chart scientists' bias against beekeepers' types of knowledge. From their analysis of extensive interviews they conducted with U.S. commercial beekeepers and their analysis of the history of U.S science, they conclude that, "researchers in academia, agro-industry, and federal agencies reject or, at best, equivocate on the beekeeper's knowledge, citing the lack of conclusive evidence from scores of public field experiments by academic and agrochemical industry toxicologists" (e.g., Bayer CropScience, 2010; Ratnieks and Carreck, 2010) (17). Beekeeper's field knowledge was deemed anecdotal and therefore inconclusive. It was outright rejected.

Furthermore, "since the mid-1980s, the EPA has moved to a non-precautionary 'sound science' approach toward pesticide regulation" wherein the EPA permits chemicals on the market "in the absence of definitive evidence" of harm to human or environmental health (17). Regulatory officials "privilege the toxicologists knowledge to

justify the continued commercialization of the concerned insecticides" (4). Suryanarayanan and Kleinman helpfully identify the forces in play: the social structures of epistemic domination that dictate the methods and knowledge and even "who can produce this knowledge" (4,5). Beekeepers' expertise gets dismissed in large part because in the United States pesticides are prioritized: they are not banned before they are "conclusively" proven unsafe, and only toxicologists' data can do so.

Relative (In)dependence: "Somebody has to pay the bill"

A second prominent narrative among beekeepers was their celebration of independence, albeit one often challenged by CCD and the economics of having to replace dead hives. Gary Pilatek notes, "It's the one thing about being self-employed— you can't ever work for anyone else again. As my friend Bob Brachmann [fellow beekeeper] says, we're voluntarily unemployable." He adds, even on a bad day when "the bees pouring out and you try to put them back together and you've got 400 bees on your wet back and they nail you like crazy" he "reminds" himself that "the worst day in beekeeping [laughs] is far better than the best day of working for somebody else." My brother, Martin Stavenhagen, a commercial beekeeper in Florida, and Gerber, a commercial migratory beekeeper, similarly laud aspects of self-employment, seasonal employment and the a choice-driven lifestyle of a beekeeper [though my brother also works for another beekeeper]. In separate conversations, both

however also qualify such economic independence as relative to their symbiotic relationship with bees and their plight.

Art Gerber states, “if you take care of the bees, they take care of you” (Personal Interview). Such interdependence seemed an outgrowth of beekeepers’ observation of and bees. Working with half-wild, half-domesticated creatures and the chemicals, nectar and pollen they collect makes beekeeping more like “supplication” (Jacobsen 53). Gerber joked that when coworkers caught his attention drifting, he’d say, “my head is in the hive” and explained that this meant he was thinking about what more he could do to help his bees survive. He further explained, “Bees can no longer take care of themselves. Their throats are cut by what’s being put on vegetation. Then there are the mites. If you don’t take care of the mites, you’re not going to have bees either. If you just take care of the mites, the bees will die from other causes. I have my head in the hive all the time.” Most beekeepers I interviewed qualified their vocational independence as relative to managing various threats to their bees.

Most also qualified their independence relative to whether or not they transported hives to pollinate crops. Non-migratory beekeepers earned more money from selling honey, while migratory beekeepers earned more money from renting hives to pollinate crops. The interviews showed migratory beekeeping was deemed the only viable means for full-time employment as a beekeeper, at the cost of having to

manage more variables and risk greater losses. Economic independence came at a price.

Though ill-defined in most media accounts, the differences between these two beekeeping practices greatly framed the crisis. Migratory and non-migratory beekeepers make tradeoffs between income, health and time. Non-migratory beekeepers claim they trade lower income for greater health for themselves and their bees. Unlike migratory beekeepers, they don't risk enormous economic losses from higher rates of hive mortality. Gary Pilatek states, "Commercial beekeepers have 50-80% losses. We have never seen that. Moving them adds stress. By trucking them thousands of miles you're just pushing these poor little creatures to the limit. Their immune system is not that strong to start with. Temperature, vibration, constantly working them, moving their hives in and out of monoculture crops that are treated with chemicals. That's where the majority of the difficulty lies . . ." Yet since they don't get paid for pollination service, non-migratory beekeepers are more dependent on yields of honey and a good market price for honey, which usually makes this type of beekeeping less lucrative. Even with 300 hives, to remain in business, Pilatek claims he has to work another job during the off-season (November-April). He admits, "You work like crazy all year and there's just not that much money. Especially with what we're doing, we're just honey producers. And I guess that's why these other guys chase all

over—to make big money. You can make big money but I don't want to lose 90% of my hives because of that."

Both Pilatek and Gibbs use similar phrasing when referring to full-time migratory beekeepers—"chasing" and "running." Pilatek further explains, "We don't have any ambition of moving them around or chasing after pollen. I know some guys that do it and it's nonstop. It's two or three weeks of craziness. They have them up in the apple orchards. They have to get up at two or three in the morning to move their bees so they don't get sprayed [by orchard growers]. It's nuts. That's part of the deal if you want to do that. I'm not into that." Gibbs concurs even as he mitigates a compromise by still taking one annual trip—to the almond "gold rush" of California. "They run to Florida or Georgia and then run up here [the Northeast] for their blueberries and cranberries and apples. They have the price of fuel, trucking and everything else. Yes, they get their pollination money but they also get a little of this and little of that [disease] and it's over, it's done. They did it all for fifty, sixty bucks a hive . . .Ruins your whole business." Gibbs compromises instead. Following the example of Canadians, he built a barn to house their bees in a ventilated barn during the winter months. Not only does this lessen winter losses, but it also allows him to load the bees on three semi-trailers to haul them out to California the first week of February for two weeks of almond tree pollination. He explains he gets "a little more cash" and still trucks his bees back by early April, "the same time they would start flying out." He admits he

loses more hives by transporting them to California but says the economic gains are worth it—and because of the barn, he doesn't have to risk losing them to the cold or truck his bees south in November to keep them in Georgia.

Regardless of practices, beekeepers had to deal with many common challenges. All the beekeepers I interviewed identified market, pathogenic and political forces that affected their vocation. All noted that their incomes varied according to the price of honey, pollination and/or replacing hives; all noted the expense of treating mites; Gibbs added the need for supplements; Gary Pilatek also noted the weather. Gary's son and partner Mike underscored the dependence of even stationary beekeepers upon contracts (in their case positive) with honey distributors.

Yet as migratory beekeeper Dave Hackenberg emphasized in his interview with me, migratory beekeeping is the only way to "make it" financially. Perhaps because of his service on the National Honey Board Advisory group, his former presidency of the American Beekeeping Federation or the hundreds of interviews he's granted (hundreds of newspapers, three documentaries, three nonfiction books and *60 minutes*), he most thoroughly defined economic and political forces that impinge on beekeepers' independence. He noted that before CCD and the pollination business, he "packed honey"—up to three million pounds a year—for about twenty-five years, mostly for bakeries, adding that "compared to the big boys that's a drop in the bucket." In 1994 new safety rules went into effect that were costly for honey packers to implement.

Hackenberg noted that national distributor, Sue Bee Honey, tried to take advantage of the change in regulations to “beat” him out of business by underselling, “packing for less than it was costing.” Sue Bee “picked off” some of his accounts. When Pillsbury was acquired by General Mills in 1995, he lost his contract with them. It was then he decided to pursue migratory beekeeping.

Changing markets and corporatization had repercussions. He said that out of hundreds that graduated in his era in the 1960s, probably only three or four are still in agriculture. He claimed the secret to his staying power was not to undersell himself: “If you’re self-employed you better be generating enough business to live off of. Unfortunately in this bee business and in farming in general, we’ve cut ourselves short on what it costs and we don’t pass it on . . . It’s like this pollination business. It costs more to operate than it did ten years ago. Somebody has to pay the bill.”

Here the narrative of economics, of “somebody having to pay the bill,” dictates the often-conflicting relationships that Hackenberg must maintain with farmers, fellow beekeepers and the bees. Migratory beekeepers spend weeks negotiating contracts with brokers for pollination services. While in the past few years, the law of supply and demand has made it lucrative enough for both pollinators and growers to make a living, millions of bees die. Hackenberg is dependent on farmers whose chemical sprays and single source of pollen weaken and often kill his bees. Hackenberg said beekeepers “don’t want to rock the boat because they are working for the guy.” He

adds there is no policy in place that protects beekeepers from the losses of such massive aerial lethal kills. "If a neighbor sprays a crop and it blows over and kills my crop, insurance is going to fix that. But for the beekeeper?" Beekeepers sign a contract with a grower that stipulates that the grower not spray during day-time hours. However, without conclusive evidence they cannot prove if the grower's sprays killed their bees or not. They're at the mercy of the growers, and often pay in losses of hives.

Nonetheless, competition for pollination contracts is great and can lead to a situation where the beekeeper with the most hives that survive the previous year's pollination of crops fetches the most money.[22] The relationships between growers and beekeepers are tense and the relationships between migratory beekeepers are complicated. Growers often have the upper hand and can play beekeepers off each other. Beekeepers have little leverage as individuals. Though in a play of irony, some beekeepers, like my brother, make a living from supplying others with replacement queens or starter hives. [23] As well, Hackenberg manufactures and sells pollen supplements to fellow beekeepers, many of which experienced these losses. Each

---

[22] Beekeepers call the California almond groves a brothel because different hives' proximity to each other almost guarantees they will cross-contaminate each other with diseases. Also, the price per hive varies year to year based on how many new almond trees growers plant, how many beekeepers split hives to make new hives, and the judged strength of each hive upon inspection. The inspection takes place after the beekeeper has brought his or her hives to California. While base prices are negotiated in advance, the inspection can alter the final price offered per hive by as much as $40 at the time of this interview. A bad inspection can cost beekeepers thousands of dollars.

[23] My brother raises nucs or small starter hives as a means of income; many sell "replacement" queens; CCD has spawned businesses based on planned obsolescence.

beekeeper has to negotiate a complex identity with growers, fellow beekeepers and consumers, ensuring "somebody pays the bill."

Common Ground?

Given the differences between non-migratory and migratory beekeeping and the conflicting relationships beekeepers maintain with growers and at times with each other, it's no wonder that U.S. beekeepers had difficulty in collectively organizing. To capture how this narrative is similar between all the beekeepers I interviewed, I juxtapose summaries of four beekeepers' statements about their relationships with each other, growers and the government to understand why they may have avoided or eschewed embodied collective protests.

Non-migratory beekeeper Gary Pilatek stated emphatically,

> No I don't think beekeepers are organized enough. I would say most beekeepers are individualists and kind a rogue-type people. They have to be eccentric to even get into the business. It would be good if there was one voice when it came to beekeepers addressing this issue but I think the migratory guys, as far as I can tell are the ones taking it on the chin the worst when it comes to this, so the guys that are non-migratory are saying they're doing it to themselves.

Pilatek clearly connects the lack of organization between beekeepers as tied to how non-migratory beekeepers think that migratory beekeepers are more affected by the crisis and more to blame for it as well. Later in the interview, he also said that migratory beekeepers tacitly endorsed the EPA's policy of allowing chemical companies to issue their own studies on pesticides because the beekeepers were beholden to the growers for pollination contracts.

Like Pilatek and all beekeepers I interviewed, John Gibbs thought some organization among beekeepers would be helpful but unlike Pilatek, he did not put the blame as squarely on migratory beekeepers and thought beekeepers should only get together to inform farmers about the potential harm of pesticides. He thought the reason beekeepers do not organize is because they are beholden to growers and because "we're kind of all in competition with one another too. We're not union members." Gibbs further suggested that unions would lead to price fixing and instead advocated for a laissez faire approach. While critical of a purely migratory beekeeping operation, since CCD affects both types of beekeepers, he pans, "there is no wrong or right way to do it. You just do what you think is best for your bees. There are many who ship the bees everywhere to get them to pollinate as much as possible, others who raise queens, others who just raise honey. CCD is still everybody's problem, not just one for the migratory beekeepers." In the competitive marketplace of beekeeping, Gibbs claims one needs to constantly evolve in one's use of technology, and not rely

on “welfare” or policy but rather work for overall agricultural results. Gibbs and his son Josh see this as a necessary compromise:

> Me: Given what you said, at what point does the GMO boat get tipped over? At what point does Bayer get challenged? Is it too far gone? Is there anything to do?
>
> John: Well people want to do it [use GMOs] and you can’t crush that because without that spirit we can’t do anything. Everyone has to farm.
>
> Me: So what you’re saying is you’re going to have to dance with that devil.
>
> John: You’re going to have to dance with him all the time. You can’t have everything perfect.
>
> Josh: Everyone else has to still make their living too. Yeah, it sucks that they’re coating this seeds and poisoning everything but . . . [doesn’t finish sentence]

Even though Gibbs defines GMOs as bad for bees, he doesn’t think they should be banned and he doesn’t fault migratory beekeepers, pesticide manufacturers or farmers. “Everyone has to farm.” He believes he must compromise his relationship with farmers and the system.

Beekeepers pollinating crops especially stress the constant “dance” Gibbs admits. Unlike Pilatek’s small business non-migratory view and Gibbs’ semi-migratory

view, Dave Hackenberg presents a view of himself more as a "provider of services," adopting the language of business with growers, freight contractors, and fellow beekeepers in a free market system that does not compensate him for hive losses. Mentioning how after CCD he had to double his price per hive for pollination services, he adds, "You've got to keep up with the growers." Like Gibbs, he admits he competes with fellow beekeepers even as he sells pollen supplements to them. Hackenberg sees himself as a business contractor that has to make a living. He notes even though non-migratory beekeepers "don't have to beat their head on the wall like me" and "have a good lifestyle," even they "still they have to get a crop."

Hackenberg notes the market distinction between migratory and non-migratory beekeepers but definitely does not fault his practices for the propagation of CCD or for a lack of collective organization. He seems to instead champion an individual spokesperson's role to educate people more than collective organization. Benjamin and McCallum cite Hackenberg as saying, "Big Ag has control of the USDA from the Secretary right on down to the lowest guys on the totem pole" (151). Hackenberg is "among beekeepers that position themselves as the small guy against the system" and compares himself to the activist and whistle blower, Erin Brockovich (152). In our interview, he lauded fellow commercial beekeeper Rick Smith as "brilliant" and told the story of how Smith spoke up at a national Public Pesticide Dialogue Committee:

> The pesticide guys were talking. There were forty around the table. Brett and him were on one side of the table, hanging on it. I was thinking, he's getting ready. Some applicator said you can't spray at night because it doesn't work. After a couple of other guys said stuff that is full of crap, he didn't even introduce himself and says, I'm not only a beekeeper, I'm a farmer, I farm 8,000 acres. I'm a certified pesticide applicator. He went through the list of insults and then said, I'm one of three soil fumigators left in the state of Arizona. You're cutting down your liability if you spray at night . . .furthermore there are repellants that can be added to sprays that can keep the bees off the crops. We did this back in the 1970s, my Dad and I. This stuff can be done. There needs to be education. The problem today is that people don't want an education.

Hackenberg emphasizes individual testimony and education about pesticides as a prime means to solve the CCD crisis. Furthermore, he states that while he is wary of getting "in bed" with environmental lawyers, he admits they "have the money" to build a case and that EPA officials have told him personally, "If you want something, you're going to have to sue us. That's the way they operate."

Hackenberg was not alone in thinking that the U.S. government was not responsive to the crisis and that there were problematic ties between U.S. government

agencies and the pesticide industry. Art Gerber, part-migratory beekeeper (Florida and back)'s remarks are indicative of what I heard from all those I interviewed. He said, "they [government and industry] don't want to hear what we're saying. They want to make their money. The doctors get rich. The hospitals get rich. The undertaker gets rich. The casket maker gets rich. Drug companies." Unlike Gibbs and all but two others, he put the blame on a rigged industrial system that did not allow "enough" distribution of equity to all people, beekeepers or not.

Still U.S. beekeepers have not yet organized protests connected to the CCD crisis. At most, it seems they joined two main organizations: the American Honey Producers Association (AHPA) and the American Beekeeping Federation (ABF). Though these organizations contributed to the national conversation on bee pollination in Congress, their low membership seems indicative also of a lack of cohesiveness among all U.S. beekeepers. The AHPA has about 550 members and the ABF has about 1200 members; most estimate over 100,000 beekeepers in the United States. While beekeepers like Dave Hackenberg sit on advisory boards and while these organizations lobby Congress, U.S. beekeepers seem too preoccupied with making a living and perceive themselves as differentiated too much from each other in order to organize larger efforts together.

Good Soil, Good Bees, and Living by the Seasons

A third narrative is stewardship. In her appraisal of the discourse of small-scale farmers in Iowa, Lamberti identifies that they "privilege an ideology where the demands of the land prevail, and the people accommodate" (10). Such an ideology is not just a love for place, but also a respect for "all its personalities, good and evil." It's a "pragmatic awareness" and "pride" in one's "physical locatedness—and separateness" (10). Peterson quotes a rancher who seems to embody this ideology when he says, "I feel like I have roots growing right out of my feet right into this land out here, and if you think I'm going to do something to it that is going to be environmentally catastrophic . . . that's a joke" (178, 179).

In my interviews with U.S. beekeepers, I notice they often began and concluded the interviews with a narrative of stewardship. It seemed they did so to validate themselves, much like Lamberti and Peterson noted that farmers claimed the narrative of respecting the land. Beekeeper John Gibbs summarized CCD as "all go[ing] back to contamination of the soil. Insecticides, pesticides, fungicides and GMOs. Every corn plant out there will kill seven different things that attack it. It will kill them. GMOS. They're in the melons, they're in the squashes, they're in the cucumbers, they're in the pumpkin they're in every one of them all the way down through." For Gibbs and four other beekeepers present, soil is deemed the foundational building block of the environment. Whether migratory or stationary, all beekeepers mentioned their ties to

bees were ties to the nectar flows, and therefore, ties to forage and soil. For beekeepers, this was more than just vocational awareness of nectar and pollen sources, it was often a source of lengthy discussion. The five beekeepers I met with in John Gibbs' barn discussed this first, before all other topics.

When I first arrived with Art Gerber and two other beekeepers to meet with John and his son, they greeted each other heartily and immediately talked about the current crop of goldenrod honey, their love for the taste of basswood honey, and the diverse "uncontaminated" source of pollen from the hardwoods. Then Gibbs turned and looked at me and said [as he did three times that day], "you can write this down, the hardwoods are one of the last places you can get untainted pollen because it's one of the last places in the United States with uncontaminated soil."

Without prompting or mention of Gibbs' comments, Hackenberg also emphasized the contamination of the soil:

> We've ruined our bee forage. Round-up is causing bad soil conditions and in the bee business it's wiped out our bee pasture. The bee business is going from being a honey production/pollination/whatever business to a year-round pollination business because of California. If you take California out of the picture, the bees business would go away tomorrow, other than a bunch of hobbyist beekeepers. That's what's driving the

> economy. The honey prices in this country are good but the problem of it is the production numbers aren't good enough. It's going downhill. The reason it's going downhill is because we don't have enough pasture and corn is taking over everywhere.
>
> The bees are telling us this out on the field. They are the barometers of the environment. You can't build a fence around a beehive. If a bee flies two miles it's twenty-seven thousand acres. If a bee flies five miles, it's eighty thousand acres[24]. We don't stop to think about that. Yeah a few parts per billion [of pesticides] aren't that much, but it doesn't take much.

For Hackenberg and the five beekeepers, bees indicate the environmental health of an ecosystem. Bees have to fly farther to get nectar and pollen and in the process also are more exposed to chemicals. Bees therefore tell of vast chemical flows in the "bee pasture" and CCD points to a need to "return" to a simpler treatment of the soil and a symbiosis with bees—where beekeepers can serve as guardians of the surveyors of environmental threats. As Gerber intoned, "you take care of the bees, they take care of you."

[24] Hackenberg is alluding to the radius of land a bee can fly over from the starting point of the hive.

In this narrative, ideally one lives by the seasons. Pilatek states, "I got into the bees because I wanted to live by the seasons and not by the date . . . It's a lot of work but nonetheless there is a solace in the late fall . . .This past summer I pulled into a yard surrounded by trees on two-and-a-half sides and the farmer has some round bales in the hayfield right there and there was a red-tail hawk just sitting on a round bale, just looking at me. It was so cool. And he didn't fly off. I just stood there for minutes." Surmising a very similar identification with the land among Texas ranchers, Peterson states this "enables them to operationalize important symbolic values." In Pilatek's case, he invokes values associated with solace, seasonal work and interdependence with bees. He shares regard with the farmer who harvests hay and a wild hawk. As Peterson notes, such work is "rewarding" because the farmer goes "through the seasons that present birth and death as integral to life, rather than presenting life and death as opposites" (179, 180). Death informs life. Peterson illustrates this by referring to a rancher whose voice broke as he described having to drag dead lambs from mother sheep. It's not a stretch to say beekeepers grieve as well when they clear out old hive boxes bereft of bees. They too embody an emotional and circumspect view of life and death, wherein they invoke an understanding of seasonal harvest but also unforeseen loss. Many told me of how the loss of bees felt very personal, as if they had failed the bees by not preventing their death.

Yet as this chapter has shown, such narratives of husbandry and stewardship were mitigated by other discourses. The symbiosis of beekeepers with the "land," the bees, and seasons gets challenged by a discourse of migratory beekeeping and by the narrative of "somebody has to pay the bill." This discourse emphasizes inputs and outputs. Migratory beekeeping undercuts the narrative of stewardship. In her analysis on how an agricultural web site creates literacy, Haller cautioned if "local material conditions of specific agricultures" are "glossed over," an "ecology of place" couldn't be optimally applied (106). As Wendell Berry further notes, the most lasting bonds for a farmer are not "merely those of economics and property, but those, at once more feeling and more practical, that come from the investment in a place and a community of work, devotion, knowledge, memory and association" (143-144). We are "the place worlds we imagine" the keeping of which "is essential to the continuity of a people" (Said 116).

Without more definitive emplacement of their narratives, U.S. migratory beekeepers forfeit constitutive identity. Migratory beekeeping and its discourse emphasize the norm of a rhetorical economic culture, one that "require[s] all individuals . . . make informed decisions that require economic understanding" (Iden & Cyphert 93). Stationary beekeeping, in contrast, locates their discourse in a husbandry of mutual care between humans, species, and places. Their narrative of good soil and "bees on

the flow" constitutes identity, subjectivity and emplacement. Stationary practices seem to allow beekeepers to self-validate their husbandry.

CCD: Out-Dodging Forces, Hoping for Stewardship

Living both the narrative of "on the flow" and "somebody has to pay," beekeepers extend the central tension revealed in the media that covered the CCD crisis: the tension between stewardship and business. While the U.S beekeepers saw the crisis as partly pathogenic and were upset with science not coming to conclusions, they quickly underscored other variables as co-causative of the crisis. They pointed to having to negotiate pollination contracts and the complex compromise that migratory beekeeping represents. Rather than dwell on the unclear causes of CCD as the media reports had emphasized, they chose to dwell on suspect causes that could be addressed: better bee forage and less intensive agricultural beekeeping practices, among them. They also expressed the possibility of their own empowerment: that given the tools, help of science, and fair markets, they could steward a solution to the crisis.

Yet for the beekeepers I interviewed, few outsiders, even fellow beekeepers could be completely trusted by them. Beekeepers did not perceive themselves as collectively powerful enough nor unified enough to mount a protest that would be taken seriously by the EPA or other governmental institutions. Besides, they believed

these institutions were partially, if not entirely, corrupt. Hackenberg spoke for most when he cited the sense the EPA and government officials were "bought off," whether by money or by other interests. In the interviews and popular media, beekeepers cite themselves as the ugly stepchild of Big Agriculture. Such distrust of corporations and government coupled with an individual survival mentality also correlates to their lack of "abiding by the rules" and sharing information. Journalist Rowan Jacobsen notes that beekeepers do not follow reporting or treatment protocols. In fact, "beekeepers seem to be allergic to doing things by the rules" (60). Even at the inception of the crisis, he underscores that Hackenberg didn't know that that CCD was decimating U.S. honey bees because beekeepers did not report the problem. He explains that it's considered a "social stigma" to report lost hives and accentuates in the second person, "Your colleagues assume you have a condition knows as PPB--piss poor beekeeping. Why bother reporting it?" (61).

Though these interviews did not indicate such an extreme competitive or secretive stance was in play, beekeepers defined the crisis relative to their beekeeping practices. At times they blamed other beekeepers for contributing to CCD. They also expressed optimism that they could individually dodge the crisis by getting pollination contracts and find field solutions. Though they clearly identified the complex network of forces they were up against, they still seemed, in the end, to think they would have to fend for themselves and find their own solutions.

With their inward focus and adherence to a model that somebody has to pay the bill and it better not be them, beekeepers drew lines of demarcation—lines between migratory and non-migratory beekeeping practices. Non-migratory beekeepers talked about how migratory beekeepers spread the problem. Migratory beekeepers talked about how they *had* to truck bees. While all wanted a return of "good soil" and honey "on the flow," most claimed non-migratory beekeeping was barely economically viable, short-term and long-term. CCD was relative to practices forced by economic realities: beekeepers could not successfully keep bees and pay all their bills if they did not migrate and pollinate crops.

What narrative can move beyond this impasse? In the final chapter, I explore a trope of stewardship that accentuates embodiment and emplacement and that is focused on reflection, a quality not present in the powerful social protest ethic exercised by the French beekeepers. Referring to the trope "listening to bees," this rhetoric asks that people be responsive to what the behavior of bees indicates. I use the theory of rhetorical listening and Salvador and Norton's theory of mimicry to analyze this rhetoric and explore to what extent the trope encourages an assessment of systemic economic and cultural forces. I also analyze how it brings to the fore a reframing of humans in relation to indicator species such as bees.

Chapter 5: Listening to Bees

As the prior chapters demonstrate, French beekeepers successfully organized and embodied a protest within the larger cultural frame of French culinary pride whereas American beekeepers were mostly bifurcated into two groups by the free market: either into a migratory pollination service for industrial agriculture or a stationary producer of honey. This chapter concludes this project's appraisal of such rhetorical frameworks by examining how journalists and directors took up the trope of "listening to bees" in prominent nonfiction works. Like the genres of the crime mystery, funeral lament, and the narrative structures used by U.S. beekeepers, the trope narrates the crisis. More so, it's used as an ethical rejoinder to discuss systemic causes of CCD and promote an ethos of animal husbandry. This reflective narrative trope serves as the opening touchstone and thematic climax in the key and bestselling nonfiction works of Rowan Jacobsen's book *Fruitless Fall,* Allison Benjamin and Brian McCallum's book *World Without Bees,* and Langworthy and Henein's documentary *Vanishing of the Bees.*

I begin by appraising Benjamin and McCallum's use of the trope as a means to make people aware of CCD's systemic causes. I then examine how like the U.S. beekeepers, the nonfiction works claim that larger cultural and economic forces correlate with the practices of migratory beekeeping. Some go so far and claim that by not "listening to the bees," those running the industrial agricultural system put

migratory beekeepers on a "road to hell" (Langworthy and Henein). As the analysis of previous CCD narratives suggests, much is to be gained when narratives are invoked as emplaced and embodied, especially this narrative of "listening to the bees" that shifts the focus from pathogens (CCD as a crime mystery) to the stewardship of bees and the ecosystem they represent. This shift represents a type of rhetoric that values responsiveness to cues from the environment. In my conclusion, I define this idea by citing Krista Ratcliffe's concept of rhetorical listening, Michael Salvador and Tracy Clarke's *weyekin* principle, and Phaedra Pezzullo's idea of embodied witnessing.

A Systemic Crisis

All of the nonfiction works about CCD use the trope of listening to bees to prompt their audience to tally the complex causes of the crisis and get their audience to appraise the Western agricultural system. They use the trope as a form of apocalyptic rhetoric to alert their audience of a cataclysmic problem (cf. Killingsworth and Palmer; Salvador and Norton, Opie and Elliot). Benjamin and McCallum specifically pose a series of rhetorical questions that prompt readers to consider the Western agricultural industrial system as responsible for killing billions of bees. They chide, "Is this what the honey bees are telling us? That our industrialized farming with its monocultures, pesticides and increasingly unreasonable demands on honey bees themselves is not sustainable? With their limited resistance to poisons and pollutants,

are they the canary in the coal mine warning us that if our lifestyles are killing them, we are not far behind?" (262). Benjamin and McCallum implicate intensive industrial farming and U.S. consumer lifestyles and imply connections between them. Bees are the canaries in the mine. Listening to them here means recognizing their deaths could be a precursor to our deaths. Plying apocalyptic rhetoric, they surface and challenge the hegemonic discourse of short-term affluence at the cost of the long-term impoverishment of nature (cf. Killingsworth and Palmer "The Discourse of Hysteria" 24).

Throughout their book, they detail an industrial system bent on profit and efficiency that degrades ecosystems: 40 billion honey bees pollinating 60 million almond trees across 400 miles of the Central Valley of California is "not a natural phenomenon. They are guided neither by the position of the sun, nor by the Earth's magnetic fields. Instead they are driven thousands of miles on the backs of huge trucks from the far corners of the United States, 500 hives at time, stacked four high" (2; 216; 4). Half of the 2.4 million honey bee colonies in the United States are driven to California each year to work for an almond industry whose worth is a billion dollars (4; 238). Instead of their flight guided by the sun and magnetic fields, bees are trucked and "stacked" like droids engineered for a gargantuan profit-driven industry.

According to Benjamin and McCallum, consumer lifestyles and beekeepers' migratory practices are problematically driven by a system that insists on mechanization in service of efficiency, even if that means mechanizing bees. Scientists

pursue technological solutions such as engineering a new virus-resistant "Frankenstein bee." Migratory beekeepers in turn, haul bees from monoculture to monoculture and work them as nonstop foragers. Bees "never have a chance to rest"—until they die (212). Benjamin and McCallum use the trope "listening to bees" to critique and call attention to throwaway economic models that mechanize and trash bees like obsolete cell phones because they are based on efficiency and speed. They furthermore warn, "if we put our faith in a hi-tech fix, we are ignoring the bees' environmental wake-up call" (Benjamin and McCallum 12).

For Benjamin and McCallum the primary culprit of CCD is not a pathogen, the inability of scientists to find a solution, or problematic beekeeping; the primary culprit is a system that prizes unlimited profit from unlimited mechanization of the environment. Benjamin and McCallum challenge a preoccupation with technology by invoking an apocalyptic rhetoric that implicates mechanistic and instrumental rationality as the primary cause of environmental degradation (Salvador and Norton 23). They employ the trope "listening to bees" to map the unsustainable industrial agricultural practices that kill bees. Unlike how the nesting genre of the crime mystery reduces the discussion to the search for a "criminal" pathogen as the smoking gun, the rhetoric of "listening to bees" exposes how scientists and beekeepers are beholden to an industrial agricultural system focused on monocultures.

The Road to Hell

The trope accentuates beekeepers and bees as bearing the brunt of the crisis. All nonfiction sources note that beekeepers problematically hauling bees and working them to death are pushed by an economic system that almost demands such practices. As one migratory beekeeper laments, "ideally I'd leave them in one location, but it's not profitable" (Benjamin and McCallum 212). As a result of migratory commercial beekeeping, the bees get overworked, undernourished and collapse. In the documentary, *Vanishing the Bees,* Dee Lusby, a leader in the organic beekeeping movement, states a lack of listening to bees puts them "out of sync with nature" and is the outcome of the downward economic spiral of industrial beekeeping:

> I think it's a combination that when the bee is out of sync with nature, nature is going to come in with all kind of types of parasites, viruses, fungi, and diseases and they're going to take down what doesn't belong there. It's a sad state because a lot of these people are forced to go migratory because they cannot sell their honey and make a living. And because by being forced to go migratory, they are forced to go into factory farming and once they're on the road where they don't have access to foraging, they're forced to artificially feed them. And if they artificially feed them and they're on the road and something happens,

> normally every move you make you have to buy 10% artificial queens, and once you're into the migratory you're forced into a path that's like going down a road to hell. (Langworthy and Henein)

Lusby emphasizes economics that force beekeepers to "go migratory" and the consequential industrial abuse of bees as livestock. Due in large part to the importation of low priced Chinese honey starting in the 1990s, commercial American beekeepers shifted from making a living from harvesting and selling honey to trucking bees around the country and collecting fees for pollination services. Beekeepers looking for a viable livelihood haul bees from place to place and put them out of sync with nature. Trapped in the system of industrial agriculture, beekeepers end up needing bees as economic inputs. Like Schell's American farmer who must act under the cultural aegis of "smart diversification" and "Yankee ingenuity and adaptability" to compete, American beekeepers pursue planned obsolescence with living creatures: they take out loans to replace a third of the bees each year, kill and replace queens every six months, and artificially feed bees because otherwise most of them would die (96). Beekeepers and their bees become indentured to the system.

CCD as AIDS: Synergistic Causes

Jacobsen and Benjamin and McCallum further allude to the trope listening to bees by making the analogy between pesticides' influence on bees to AIDS on

humans. Just as AIDS compromises the human immune system, pesticides weaken bees to the point where they get infected and die. Pushing personification again, in his chapter "Whodunnit," Jacobsen rifles through a series of questions and answers that eventually leads him to make the analogy between bees having CCD and humans having AIDS. Asking whether the improved health of radiated hives points toward pathogens being the cause of CCD, he answers that radiated hives did not indicate pathogens were necessarily causing CCD because "if you put AIDS patients in a sterile environment, they'll do better" (74). Later he adds more cynically, "just as AIDS doesn't kill its human victims—it simply knock their immune systems out so that pneumonia and other diseases can deliver the coup de grâce—it's possible that, as Bayer claims, imidacloprid isn't doing the killing; it lets fungi and starvation take care of that" (94). Here, listening to bees means considering the destruction of their immune system and a willingness to understand and sympathize with their plight as analogous to that of AIDS patients. It also implicates Bayer CropScience as representative of a pesticide-manufacturing industry that can claim their product does not directly kill the honey bees. Bees are being killed by a whole host of factors, some of which get elided.

That said, all three works claim listening to bees cannot simply mean implicating the pesticide industry as the cause of CCD. Benjamin and McCallum analyze French studies that have shown residues of the pesticide imidacloprid in sunflower nectar and pollen had affected bees' learning abilities and memory, particularly their ability to

orient their flight patterns. They further note that neonicotinoids were known to metabolize with other chemicals to "become a thousand fold more toxic" (126). They cite a Penn State study that found among 43 different kinds of pesticides in 93 samples of pollen, neonicotinoids were among the lowest in concentration. Also, they even note that CCD had affected areas where no neonicotinoids had been used, but that, nonetheless, the French "pesticides ban did appear to stem the massive bee die-offs" in 2006-2007 (139). They never claim pesticides as *the* smoking gun.

Instead, as they point out, synergistic combinations of pesticides, chemicals and migratory beekeeping practices seemed culpable. Analyzing a similar set of data, Jacobsen asks that readers consider complex interactive causes. He says trying too hard to find a single cause of CCD misses the point" (Jacobsen 181). CCD is a "symptom of a larger disease–a disease of fossil fuels and chemical shortcuts, of billion-bee slums and the speed of the modern world" (181).

Whose Plight?

Like most of the U.S. beekeepers I interviewed, these nonfiction sources not only underscore the cause of CCD as multi-factorial, but they also suggest it is a product of an industrial agricultural system that promotes a mindset that humans should master creatures. The U.S. industrial agricultural system constricts the agency of U.S. beekeepers and honeybees. Bees get labeled as "livestock" rather than respected as

half-wild, half-domesticated members of a complex ecosystem. Langworthy and Henein especially trace this trend of problematic constriction of agency and definition of bees to Western cultural history.

They underscore that Western culture has projected the values of hard work and selflessness upon bees. At the beginning of their film, the slow-motion capture of honey bees landing at a hive entrance is accompanied by soft keyboard music and narration by actress Ellen Page: "From the dawn of civilization the honey bee has represented hard work, unity, and cooperation. These furry insects live in a colony where every bee works for the good of the whole." The bee's ethereal beauty is sentimentally revered and their community lauded as a model for humans. Langworthy and Henein portray the bees' labor as relative to the honey they produce for humans: "The bee is more honored than other animals, not because she labors but because she labors for others." They show hives being transported on flatbed trucks, notes that bees provide $15 billion worth of pollination services in the United States, and cites beekeeper Dave Mendes imploring the audience to consider the bees as "an indicator of environmental quality" whose death will affect them. They end this section of the film by showing fifth generation beekeeper Rick Smith burning a pile of empty hive boxes after losses from CCD forced him out of business.

The bees' "cooperation" and "labor for others" is juxtaposed against scenes of them working for migratory beekeepers like Dave Mendes and Dave Hackenberg (see

Ch. 4), both former Presidents of the American Beekeeping Federation. After Ellen Page narrates the line "the workings of a beehive are beyond our comprehension," scenes are shown of scientists working in labs examining suspected CCD pathogens, followed by scenes of beekeepers replacing beehives for yet another year. Page wryly adds, beekeepers are "getting really good at replacing dead hives." Langworthy and Henein seem intent on exposing how science searches for solutions while bees die and beekeepers languish, caught within the system. Langworthy and Henein end this telling juxtaposition by cutting to interviews with Dave Mendes, followed by Jay Feldman, Executive Director of the nonprofit group *Beyond Pesticides,* followed by Michael Pollan, leader in the U.S. food movement.

> Mendes: When people ask me something, I say, I've got to ask the bees. They say, "What are you, Dr. Doolittle? Do you talk to the bees?" And I say yeah. It's not verbal. You can have all the theory in the world, but you have to go and ask the bees.
>
> Feldman: The bees are telling us that this is a complex issue. But the human problem says we know better and we can find the one factor, when in fact there are [sic] a constellation of factors that interrelate and create synergies, additive accumulative effects that the scientific process doesn't measure.
>
> Pollan: In one way we don't know exactly what's responsible: is it a particular

> virus? A particular pesticide? And there are many conflicting theories. But in larger sense we know exactly what's responsible and that's these huge monocultures. It makes them vulnerable to disease.

By stacking these excerpts from interviews, Langworthy and Henein suggest that CCD, while complex, can be addressed. While the disorder may be caused by a "constellation of factors," monocultures and huge doses of pesticides are known to contribute to the problem and more bee forage is needed. Like Benjamin and McCallum they note that both science and migratory beekeeping practices sustain this problem and the mindset of a technological fix is responsible for perpetuating the problem And while the documentary does not directly condemn migratory beekeepers as complicit, it juxtaposes scenes that clearly portray industrial agriculture as obsessed with commodities, animals be damned. The film and my interviews with U.S. beekeepers in Chapter 4 both note that, at minimum, diverse forage for bees and non-migratory beekeeping would go a long way toward solving the crisis. They beg the rhetorical question, is the crisis so complex that it cannot be at least partially solved?

Technological Fix or Resilience and Responsiveness?

While all of the sources I examined show bees as overworked, only Jacobsen fully articulates the related problem of too much faith in science and industrialism. Science cannot always account for multiple variables or different types of knowledge, like an

intuitive knowledge of the land and practices of animal husbandry. Jacobsen explains that studies control for only a few variables at a time and are limited by an epistemology of reductionism, small sample sizes, and a lack of field studies. As a result, we gain limited knowledge. For example, we know bits of knowledge about one class of pesticides but not the mix the metabolites that form after they break down in field conditions. Furthermore, studies often lack correlation. Like nutrition or weather, CCD is a construct (not just a disease) that cannot be tackled by a single technological fix. While "science's goal is to understand *why* something works so it can manipulate and control the system" this often leads to an "obsession with knowing and controlling, and disdain for more intuitive relationships with the world" (173). Add to this an obsession with industrial growth, and the solution is seen only through the means of "more." As all the nonfiction sources portray, science plus industry proposes the "fix of more industrialization and expansion: more forklifts, bigger trucks, more antibiotics, stronger miticides and fungicides, Australian bees, and supplemental 'MegaBee patties' for the bees" (151).

Yet as Jacobsen counters, "Sometimes it isn't necessary to master a system in order to work harmoniously with it" (174). Citing American beekeeper Kirk Webster, Jacobsen defines listening to bees as husbandry wherein we recognize the agency of bees. Webster uses natural selection and organic beekeeping practices. He raises Russian queen bees in isolated regions of the Champlain Valley (VT) to protect their

strains from being cross contaminated with weak commercial genetic stock and consequently builds a hive's resilience to the threat of varroa mites. Commenting upon his practice of natural selection he says, "I'm forever grateful to them. It's just a matter of changing the way you think and letting them show you the right way, instead of trying to make them be like some other bees you had in the past" (160).

Listening, here, means maintaining the equilibrium of nature and thereby gaining the mutual health of hardy bees, an ecosystem and beekeepers' livelihood (163). In such a paradigm, disease is no longer criminal but rather an indicator of imbalance in nature that cues beekeepers to allow for correction. Varroa mites, for example, laid bare the imbalances in the system even before CCD: too much transportation of hives from one state to another, too many hives placed too close together, too much work for the bees, and not enough variety of sources of food (164). In recent years, varroa mites and their host bees have not naturally been allowed to coevolve into states of endurable equilibrium. Breeding genetic strains of bees for honey production and gentleness, rather than more naturally evolving traits of resilience, has manipulated the "natural system" (166). Pushing the bees to survive a cross-country trip and pollinate in a period when normally they would be dormant has increased the system's imbalance. Jacobsen quotes Webster at length from his column in the popular trade journal *Bee Culture* to get at this "greater" issue of a loss of husbandry:

> Beekeeping now has the dubious honor of becoming the first part of our system of industrial agriculture to actually fall apart. Let's stop pretending that something else is going on. We no longer have enough bees to pollinate our crops. Each time the bees go through a downturn, we respond by making things more stressful for them, rather than less . . . We blame the weather, the mites, the markets, new diseases, consumers, the Chinese, the Germans, the (fill in your favorite scapegoat), other beekeepers, the packer, the scientific community, the price of gas, global warming–anything rather than face up to what's happening. We are losing the ability to take care of living things. Why? (167)

Webster claims U.S. beekeepers are in a state of denial. Rather than listening to bees and lessening their stress through organic beekeeping practices, they ask more from them, analogous again to whipping a racehorse for faster results. Rather than listening to them, especially "as they go through a downturn," they patch the current system and convince us that a single culprit causes CCD. Webster and Jacobsen propose a land ethic wed to economics. For them, to listen to bees is to listen for the way we treat them relative to the ecosystem and profits we make from them. For Webster and Jacobsen, listening ultimately demands a necessary ethical paradigm shift from profit and efficiency to stewardship and sustainability that has as its goal maintaining ecosystem balance. In such a system, ecology trumps commodity-based economics. Jacobsen goes as far as to say the ecosystem will not be balanced without this shift

(168). The shift is, ironically, ultimately one of human identity: rather than being "reliant on human intervention and technology," we must all be "caretaker[s], taking cues from the bees" (174).

To listen to bees is to shift from a commodity-based economic model to an ecologically resilient system. Bees—"fifty thousand individuals" with "*no one in charge*"—offer an incredible opportunity for feedback to humans (Jacobsen 41, original emphasis). Managing bees in a resilient system "focuses on a system's ability to recover from a disturbance," wherein multiple species inform and check each others' populations with little human interference, even at the cost of short-term, large-scale economic gain (Jacobsen 179). Either we chose, or the choice will be made for us: manage resilient systems or become the victims of a lack of management.

Toward a Rhetoric of Environmental Responsiveness

Jacobsen's tart appraisal serves as a fitting close to the narrative analysis and to this project. The tension between commodifying bees and managing them as part of a resilient system parallels the contrast between the narrative of CCD as a murder mystery and the trope of listening to bees. Both the economic model and murder mystery trope seek singular answers, apprehension of solutions, and a definition of crisis as fundamentally technological. In contrast, both the biological model of resiliency and the trope of listening ask the audience to begin first by considering

multiple causes for a crisis that is fundamentally environmental.

The close-ended resolutions prompted by the nesting genre of the crime mystery contrast the measured responsiveness prompted by the trope of listening to bees. The crime mystery demands a quick apprehension of the suspect and a closing of the case. It prods the audience to assign stakeholders roles, seek single solutions, and consign blame. By operating within news genres, the nesting genre of the crime mystery baits the audience to believe they are reading factual accounts. In addition, it defines the crisis as an act of violence (the smoking gun) by a pathogen that requires immediate apprehension by expert scientists. The genre standardizes elements of a criminal case to hasten the return to the homeostasis of the current system. In contrast, the trope of listening to bees advances a rhetoric of environmental responsiveness wherein CCD is defined as an informative malady of constant feedback from bees and the ecosystem. Such rhetoric underscores the agency of bees to tell us something about themselves, our environment, and ourselves. It beckons us to serve as stewards to an environment that is constantly self-correcting. Agency gets realized as distributed between nonhumans and humans. In this rhetoric, bees, pathogens, places, humans and even parasites inform each other. Citing Bruno Latour's terms, in such an ecological collective, bees are neither subjects nor objects, but rather actants in real-time associations with humans and other nonhumans. A realized ecological system reveals a "multitude of agents interact[ing] frequently and in which the results of interactions

feed back into the process" (Cooper 421).

Having defined this contrast, how does it advance environmental rhetoric scholarship? First, the trope of listening to bees further defines rhetorical listening as responsiveness to nonhumans and nonhuman language. In her landmark book, *Rhetorical Listening,* Krista Ratcliffe posits that rhetorical listening necessitates that all "have a stake in each other's quality of life," and the usurpation of simple binaries of guilt/blame logics (43). Such listening does not bludgeon for a mastery of discourse or pursue quick-fix non-contextual solutions; rhetorical listening negotiates an ongoing understanding between stakeholders. To do so, it constantly fronts the value of stakeholders' cultures and subjectivity (34). In CCD, "listening to bees" would mean the U.S. government holding regular forums and discussions with all stakeholders, including representation of bees' "discourse"; this might mean acute observations of their behaviors in various locations and an account of variables such as watersheds, exposure to farmland and applied pesticides and fungicides. It would mean inviting both migratory and non-migratory beekeepers to government policy tables. As Ratcliffe suggests, negotiation would come by way of recognition of cultures and subjectivities.

Such recognition of all stakeholders and their contexts—human and nonhuman—prioritizes responsiveness. Rhetorical listening would make incumbent the observation and chronicling of the "lifeworld" of an animal or plant, of their lifecycle and symbiosis

with their environment's watershed, of weather and of the flora and fauna present. It would necessitate, too, an ethic of responsibility in relationship to such responsiveness. Citing his Native American tribal culture, Scott Richard Lyons defines responsibility as "honor[ing] a call for response. And if there is no answer, if the exchange of language is finished, then so is the discussion, and so are the interlocutors; they cease to exist" (208). Lyons insists that either stakeholders practice responsibility by responding to each other or risk losing language—a way of knowing and doing. He cites how an elder in his tribe explained "using spiritual language" to explain why a lake was fished out. The elder stated that the spirits of the fish left because the tribe had stopped having feats for the fish. When a younger member of the audience protested by saying the reason the fish were depleted was because too many people took too many fish, the elder "answered, quite unfazed, 'That's what I was saying.'" Language—life—get preserved in proportion to our responsiveness to each other.

Within such a rhetorical, ethical paradigm, accounting for biosemiotics or biological nonhuman languages is no longer tangential. In their award-winning journal article on biosemiotics, Salvador and Clarke further argue that while social construction theories of discourse necessarily and helpfully emphasize the social and political nature of knowledge, they don't account for the materiality of nature and nonhuman language. Following Peterson and Condit's (2006) lead, Salvador and Clarke ask us to account for codes outside of human language—the codes of "the body and broader

ecologies in which we swim" for the reasons that rhetorical listening and an ethic of responsiveness would indicate (Condit qtd. in Salvador and Clarke 245). Specifically, they advocate for an adaptation of a practice of the Native American Nez Perce tribe called *weyekin*. In the Nez Perce culture, once confirmed, a tribe member stays with a particular species of animal for a time, eating what the animal eats and attending to the habits and patterns of the animal's existence. From interviews with tribal members, Salvador and Clarke clarify that the practice is not a mystical approbation of an animals' spirit guide, but rather a long demanding process of "close observation, experience, and learning" in which Native Americans receive insights from an animal by living for a short while with their weyekin and thereafter by consistently observing it and taking cue from its behavior (245).

Though they recognize the principle as embedded in Nez Perce culture and therefore not transferable outside that culture's context, Salvador and Clarke ask questions that advance the concept of responsiveness to ecosystems ensconced in the trope "listening to bees." They ask, how might the field of environmental rhetoric better account for "material connections experienced at the corporeal level of sensation and consciousness"? How might we account for "resonance"—the body experience often felt in the presence of other species? Like tourists resonating with the anticipation and the exhilaration of seeing a whale breech next to their boat, like bees being cared for by beekeepers, how might we account for the ambience of being

present with species that exchange energy with us in a given space? How might we also emulate aspects of another species, based upon the resonant "watching and feeling [of] a place, through all the senses"? (250).

The trope of listening to bees calls for a diversity of human and nonhuman voices to be heard and accounted for. Responsive rhetoric emphasizes embodiment and invites us to build a world of organic, linguistic and material congruity (47). It invites recognition of connections between humans and nonhumans necessary for both to thrive. It challenges the "toxic assault" of inorganic chemicals upon the soil and watersheds even as it celebrates and advocates for a stance of resonant presence with species within ecosystems. As Jacobsen has said, "To witness an orchard full of bees merrily nuzzling flowers and packing honey into the hive—'on the flow,' as beekeepers say—is to feel that all is right with the world" (Jacobsen 10). Responsive rhetoric is the material and ethical recognition of humans and nonhumans necessarily relative to each other.

Emplaced, Embodied Narrative Rhetorics

Ultimately this dissertation responds to Peter Goggin's call, in *Environmental Rhetoric and Ecologies of Place* (2013), that we "illustrate the concepts and practices of knowledge making and knowledge distribution at geographical and geospatial locations" (6). Goggin calls for analysis of "how and why they [variables] are situated"

and for further definition of "notions of situated, place-based rhetorics" (9). This dissertation has responded by analyzing how key narrative constructs have both been embodied and emplaced by beekeepers in significant events and locations and has set up lines of inquiry that can be further pursued.

First, emplaced, embodied narratives could be further compared with those that are not. In America, the crime mystery narrative makes the crisis a warring search for a singular criminal culprit. It also is rarely embodied or emplaced: no corporate or governmental agencies are identified and no large-scale protests are embodied by beekeepers. In contrast, French beekeepers, operating within their cultural frames of nationalism and agricultural pride, named Bayer CropScience as a perpetrator of the crisis and pushed for a ban on neonicotinoid pesticides by embodying the genre of a funeral lament underneath the Eiffel Tower and at Bayer CropScience's headquarters. Questions for further pursuit could interrogate the ethos of vulnerability and authenticity that such embodied and emplaced rhetorics seem to propagate. For example, do other protests portray the loss of interwoven agents (in this case bees, boxes, livelihood, regional agriculture and husbandry) and cultivate a similar form of Pezullo's "witnessing"? How are appeals of vulnerability and confrontation made in other environmental crises? Do narratives by field agents especially mobilize public sentiment and a structure of "feeling of presence"? Do such narratives build lasting communities of "vulnerable observers"? (Pezullo 170).

More reflection could also be applied to how contrasting narratives in environmental crises define problems, culprits, advance solutions and acknowledge agency. The crime mystery defines the problem of CCD as primarily pathogenic and criminal. The culprits are microscopic and can, therefore, be demonized, or they are macroscopic—as when Australia was blamed. Solutions are almost purely technological, and as such, their agents are scientists and dutiful journalists. Pesticide companies and government policies are often not cited. Beekeepers and bees are either victims or bystanders to the crime scene. In contrast, both the French funeral lament and the trope "listening to bees" define CCD as a systemic outgrowth of industrial agriculture and government policies. In these narratives, beekeepers are complex agents lending their field knowledge and sharing their embodiment of the crisis. The culprits are clearly pesticide manufacturers, monocultures, and economic models that privilege market-friendly commodities and short-term monetary gains. Solutions to pursue are new laws, a better chronicle of ecosystem feedback loops, and prioritizing such feedback over economic systems. Listening to bees here means agency is not limited to the domains of science and technology, but by necessity, includes bees and beekeepers as mutually informative agents.

As a third area of further study, genre methodology could be applied in analyses of environmental crises. In the Routledge Series on Rhetoric and Communication volume *Perspectives on Human-Animal Communication*, editor Emily Plec states that

authors within the collection wrestled with assumptions such as "ownership to describe human relationships with companion animals" in attempts to "broaden our critical horizons to include other species" (2). For example, though tailored to workplace communication, Spinuzzi's methodology could help make such assumptions more apparent, as it did in my analysis of the French beekeepers protests in Chapter Three. Spinuzzi's macroscopic analysis of "cultural-historical activity," his mesoscopic examination of "goal-directed action" and his microscopic analysis of genre enactment can helpfully delineate rhetorical situations vis-a-vis genre. His work can help rhetoricians analyze the presence of agents operating with intent, and responsiveness to "field specific conditions" (31-36).

The power of narrative tropes and genres to "site" a select assemblage of agents and construction of social action (Devitt 64) begs continued analysis for gaps of such admittance of human-nonhuman agency and for its portrayal of an environmental crisis. In the CCD crisis, identifying genres helps identify stakeholder's agency, cultural influences, and nonhuman variables are left unaccounted for in the crisis. Furthermore, genre analysis helps explain and identify the effects of the nesting crime mystery genre within presumably objective news stories. Such genre analysis and identification of narratives could helpfully define the agency and variables of other environmental crises as well.

Finally, this project underscores the need to account for narratives used by field agents to thoroughly and accurately define an agricultural environmental crisis. Suryanarayanan and Kleinman's sociological analysis of the crisis helpfully identifies the social structures of epistemic domination that dictate "who can produce this knowledge" (4, 5). Beekeepers' expertise was dismissed, in large part, because the United States practices the opposite of the Precautionary Principle. Beekeepers' knowledge was often mute in part since in the U.S. pesticides cannot be banned before they are "conclusively" proven unsafe, a task reserved for scientists. Yet without beekeepers' knowledge and without an understanding of their economic predicament, we cannot define a system that rewards commodification of bees and monocultures and one that easily disposes of bees and beekeepers alike. The U.S. beekeepers' narrative trope of "somebody has to pay the bill" explains why many of them choose migratory beekeeping practices and it explains, in part, why beekeepers in the U.S. did not mobilize organized protests. Migratory beekeepers insisted they had to pursue pollination contracts because they had to pay the bills. While all beekeepers wanted a return of "good soil" and honey "on the flow," most claimed non-migratory beekeeping was not economically viable. CCD was relative to practices forced by economic realities: beekeepers could not successfully keep bees and pay all of their bills if they did not migrate and pollinate crops.

In this analysis of CCD genres and narratives, the constructs not only helped explain events, they sequenced them, promoted beliefs and values, and confirmed “knowledge-making is a narrative endeavor” (Lamberti 8–9). Narratives became emplaced and embodied, and in doing so, define place as a constellation of interactive actants that influence human intent. The Eiffel Tower, beekeepers’ bodies, and the bees themselves cannot be subsumed as objects devoid of rhetorical standing. Building upon Goggin, Salvador and Norton, Killingsworth and Pezullo’s definition of environment as materialized sites of communication, this project has shown how emplaced and embodied narratives communicate a sense of conscience and a circumspect evaluation of human-ecosystem health.

Works Cited

"About Us." *American Honey Producers Association*. 2015. Web. 21 May 2015.

Applegarth, Risa. "Rhetorical Scarcity: Spatial and Economic Inflections on Genre Change." *College Composition and Communication* 63 (2012): 453-483. Print.

Bauers, Sandy. "Mystery Killer Silencing Honey bees If the Die-off Continues, It Would Be Disastrous for U.S. Crop Yields." *Philadelphia Inquirer* 5 Feb. 2007: n. pag. *Philadelphia Inquirer*. Philadelphia Media Network, 5 Feb. 2007. Web. 12 Nov. 2012.

Barrioneuvo, Alexei. "Bees Vanish, and Scientists Race for Reasons." *The New York Times* 23 Apr. 2007: n. pag. *The New York Times*. New York Times Company, 24 Apr. 2007. Web. 12 Nov. 2012.

---. "Honey bees Vanish, Leaving Keepers in Peril." *The New York Times* 23 Feb. 2007: n. pag. *The New York Times*. New York Times Company, 27 Feb. 2007. Web. 12 Nov. 2012.

Bawarshi, Anis. *Genre and The Invention of the Writer.* Logan, Utah: Utah State UP, 2003.

Benjamin, Alison, and Brian McCallum. *A World without Bees*. New York: Pegasus, 2010. Print.

"Bee Shortage Threatens Farmland." *NBC Nightly News*. 6 May 2013. *NBCNews.com*. 6 May 2012. Web. 7 May 2012.

Benjamin, Allison and Brian McCallum. *A World Without Bees.* New York: Pegasus, 2009. Print.

Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke UP, 2010. Print.

Bishop, Wendy, and Hans A. Ostrom. *Genre and Writing: Issues, Arguments, Alternatives*. Portsmouth, NH: Boynton/Cook-Heinemann, 1997. Print.

Blankenship, Jane. "The Works of Kenneth Burke." *The Legacy of Kenneth Burke.* Simons, Herbert and Melia Simons, Eds.. Madison, WI: U of WI P, 1989. Print.

Bogost, Ian. *Alien Phenomenology, Or, What It's like to Be a Thing*. Minneapolis: U of Minnesota, 2012. Print.

Bowen, Tracey, and Carl Whithaus. *Multimodal Literacies and Emerging Genres.* Pittsburgh, PA: U of Pittsburgh P, 2013. Print.

Bradbury, Stephen. Letter to Coalition. 18 February 2011.

Burke, Kenneth. *A Rhetoric of Motives*. Berkley, CA: U of California P, 1969. Print.

---. *Language as Symbolic Action: Essays on Life, Literature, and Action.* Berkeley, CA: UC Berkeley P, 1966. Print.

Campbell, Karlyn Kohrs. "Agency: Promiscuous and Protean." *Communication and Critical/Cultural Studies* 2.1 (2005): 1–19. Print.

—. "The Rhetoric of Women's Liberation: An Oxymoron." *The Quarterly Journal of Speech*

Campbell, Trisha. "Digital Experiential (Review) of Thomas Rickert's Ambient Rhetoric." *Enculturation 8 April 2014. Web. 20 June 2015.*

Cantril, James. "A Brief History of the Conference on Communication and Environment." *IECA* Spring 1996. Web. 8 February 2011.

Cathcart, Robert. "The Rhetoric of Confrontation." *Quarterly Journal of Speech* 55.1 (1969): 1-8. Print.

Charland, M. "Constitutive rhetoric: The case of the *people Québécois*." *Quarterly Journal of Speech* 73 (1987): 133-150. Print.

Clark, Gregory. *Rhetorical Landscapes in America.* Columbia, SC: U of South Carolina P, 2004.

Clark, Gregory and S. Michael Halloran. "National Park Landscapes and the Rhetorical Display of a Civic Religion," 141-156. *Rhetorics of Display*. Ed. Lawrence Prelli. Columbia, SC: U of South Carolina P, 2006. Print.

"Clothianidin Registration." Memo to Branch Registration Division, EPA, Washington, DC. 2 November 2010.

Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. *The Rhetoric and Ideology of Genre*. Cresskill, NJ: Hampton P, 2002. Print.

Cooper, Marilyn. "How Bruno Latour Teaches Writing." *Thinking with Bruno Latour in Rhetoric and Composition*. Lynch, Paul and Nathaniel A. Rivers, Eds. Carbondale, IL: Southern IL UP, 2015. Print.

- -. “Rhetorical Agency as Emergent and Enacted.” *CCC* 62.3 (2012): 420–449. Print.

Court, Andy and Keith Sharman, producers. "What's Wrong With the Bees?" *60 Minutes*. CBS. 24 Feb. 2008. Web. 14 December 2012.

Cox, Robert. *Environmental Communication and the Public Sphere*. Thousand Oaks, CA: Sage Publications, 2010. Print.

- -. “The Die is Cast: Tropical and Ontological Dimensions of the *Locus* of the Irreparable.” *Landmark Essays on Rhetoric and the Environment*. Waddell, Craig, Ed. Mahwah, NJ: Hermagoras, 1998. Print.

Crane, Ethel Eva. *The World History of Beekeeping and Honey Hunting*. New York: Routledge, 2013. Print.

Csergo, Julia. “The Emergence of Regional Cuisines.” *Food: A Culinary History.* Flandrin, Jean-Louis and Massimo Montanar, Eds. New York: Columbia UP, 2013. Print.

Czerniak, Julia. “Challenging the Pictorial: Recent Landscape Practice.” *Assemblage* 34 (1997): 110-120. Print.

Davies, Lizzy. "French Farmers Bring Rural Reality to Champs Elysées." *The Guardian* 23 May 2010, Main sec.: 15. *The Guardian*. Guardian News and Media, 23 May 2010. Web. 04 June 2012.

"Definition of Ecology." *Cary Institute of Ecosystem Studies*. Cary Institute of Ecosystem Studies, 2013. Web. 07 May 2013.

Delicath, John W. and Kevin Michael DeLuca. "Image Events, The Public Sphere and Argumentative Practice: The Case of Radical Environmental Groups." *Argumentation* 17: 315–333, 2003. Print.

DeLuca, Kevin. *Image Politics: The New Rhetoric of Environmental Activism.* New York: Guilford Press, 1999.

Devitt, Amy. *Writing Genres*. Carbondale, IL: Southern IL UP, 2004. Print.

- -. "Generalizing about Genre: New Conceptions of an Old Concept." *Relations, Locations, Positions.* Vandenberg, Peter, Su Hum and Jennifer Clary-Lemon, Eds. Urbana, IL: Urbana Free Library, 2006. Print.

- -. "Genre as Language Standard." *Genre and Writing: Issues, Arguments, and Alternatives.* Bishop, Wendy and Hans Ostrom, Eds. Portsmouth, NH: Boynton Cook, 1997.

Devitt, Amy J; Bawarshi, Anis; Reiff, Mary Jo. "Materiality and genre in the study of discourse communities." *College English* 65 (2003): 541–558. Print.

- -. *Scenes of Writing Strategies*. New York: Longman, 2004.

Dobrin, Sidney. "Writing Takes Place." *Ecocomposition.* Weisser, Christian I. and Sidney I. Dobrin, Eds. Albany: SUNY P, 2001: 11–26.

Dobrin, Sidney I., and Christopher J. Keller. *Writing Environments*. Albany: State U of New York, 2005. Print.

Donehower, Kim, Charlotte Hogg, and Eileen E. Schell, Eds. *Rural Literacies.* Carbondale: Southern Illinois UP, 2007. Print.

Eilperin, Juliet. "Study Points to Virus in Collapse of Honey bee Colonies." *Washington Post* 7 Sept. 2007, Regional ed.: n. pag. *The Washington Post.* The Washington Post Company, 7 Sept. 2007. Web. 12 Nov. 2012.

Ellis, Hattie. *Sweetness and Light: The Mysterious History of the Honey bee.* New York: Three Rivers Press, 2004.

Empire State Honey Producers Association Fall Meeting. “Nancy Frazier Question and Answer Session.” 19 November 2011. Syracuse, New York. Digital Recording.

Entman, R. “Framing: Towards clarification of a fractured paradigm.”*Journal of Communication* 43 (1993): 51–58. Print.

Eubanks, Phillip. "An Analysis of Corporate Rule in Globalization Discourse: Why We Need Rhetoric to Explain Conceptual Figures." *Rhetoric Review* 27.3 (2008): 236-58.

Fahnestock, Jeanne. *Rhetorical Figures in Science.* New York: Oxford UP, 1999.

Freadman, Anne. “Uptake.” *The Rhetoric and Ideology of Genre.* Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

Freedman, Aviva and Peter Medway. *Genre and the New Rhetoric.* London: Taylor & Francis, 1994.

"French Farmers Bring Chaos to Champs Elysees." *The Telegraph*. 17 Oct. 2009. Web. 27 May 2015.

Gamson, William. *Talking Politics.* Cambridge: Cambridge UP, 1992.

Gerber, Art. Personal Interview. 22 November 2011.

Gibbs, John. Personal Interview. 22 November 2011.

Goggin, Peter N., Ed. "Introduction." *Environmental rhetoric and Ecologies of Place.* New York: Routledge, 2013. Print.

Goggin, Peter N. *Rhetorics, Literacies, and Narratives of Sustainability*. New York: Routledge, 2009. Print.

Hackenberg, Dave. Personal Interview. 10 November 2011.

Haller, Cynthia R. "Conjuring the Farm: Constructing Agricultural Places in U.S. Schools." *Environmental rhetoric and Ecologies of Place.* Goggin, Peter N., Ed. New York: Routledge, 2013. Print.

Herndl, Carl. "Introduction."*Green Culture: Environmental rhetoric in Contemporary America.* Herndl, Carl and Stuart Cameron Brown, Eds. Madison, WI: U of Wisconsin P, 1996. Print.

Huckin, Thomas N. "Context-Sensitive Text Analysis." *Methods and Methodology in Composition Research*. Kirsch, Gesa, and Patricia A. Sullivan, Eds. Carbondale: Southern Illinois UP, 1992. Print.

"Interview with Henri Clement." *Serbian Internet Bee Journal*. March 2008. Web. 3 March 2014.

Jacobsen, Rowan. *Fruitless Fall*: *The Collapse of the Honey Bee and the Coming Agricultural Crisis*. New York: Bloomsbury USA, 2008. Print.

Jasinski, James. *Sourcebook on Rhetoric: Key Concepts in Contemporary Rhetorical Studies.* Thousand Oaks, CA: Sage Publications, 2001. Print.

Johnson, Laura. "(Environmental) Rhetorics of Tempered Apocalypticism in An Inconvenient Truth." *Rhetoric Review* 28.1 (2009): 29–46. Print.

Johannesen, R.L. "The Jeremiad and Jenkin Lloyd Jones." *Communication Monographs* 52.2 (1985): 156-172. Print.

Killingsworth, M. J.. From environmental rhetoric to ecocomposition and ecopoetics: Finding a place for professional communication. *Technical Communication Quarterly* 14.4: 359-373. Print.

Killingsworth, Jimmie and Jacqueline Palmer. *Ecospeak*. Carbondale, IL: Southern Illinois P, 1992. Print.

- -. "The Discourse of Environmental Hysteria." *Landmark Essays on Rhetoric and the Environment*. Waddell, Craig, Ed. Mahwah, NJ: Hermagoras, 1998. Print.

- -. "Millennial Ecology: The Apocalyptic Narrative from Silent Spring to Global Warming." *Green Culture: Environmental rhetoric in Contemporary America.*

Herndl, Carl and Stuart Cameron Brown, Eds. Madison, WI: U of Wisconsin P, 1996. Print.

Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge, MA: Harvard UP, 2004. Print.

- -. *Reassembling the Social: An Introduction to Actor-Network-Theory.* Oxford: Oxford UP, 2005. Print.

Luke, Allan. "Editor's Preface." *Genre and the New Rhetoric*. Freedman, Aviva and Peter Medway, Eds. London: Taylor & Francis, 1994. Print.

Lynch, Paul. "Composition's new thing: Bruno Latour and the apocalyptic turn." *College English* 74.5 (2012): 458-476. Print.

Martin, J.R., Frances Christie, and Joan Rotary. "Social Processes in Education: A Reply to Sawyer and Watson (and others)." *The Place of Genre in Learning: Current Debates*. Reid, Ian Ed. Melbourne, Australia: Deacon University Centre for Studies in Literary Education, 1987: 58–62. Print.

Maxcy, David J. "Meaning in Nature: Rhetoric, Phenomenology, and the Question of Environmental Value." *Philosophy & Rhetoric* 27.4 (1994): 330-346. Print.

McKerrow, Raymie E. Corporeality and cultural rhetoric: A site for rhetoric's future, Southern Communication Journal, 63:4 (1998): 315-328. Print.

Miller, Carolyn. "Genre as Social Action." *Quarterly Journal of Speech* 70 (1984): 151–167. Print.

Morson, G.S. and Emerson, C. *Mikhail Bakhtin: Creation of a Prosaics*. Stanford, CA: Stanford UP, 1990. Print.

Myerson, George and Yvonne Rydin. *The Language of Environment*. London: Routledge, 1996. Print.

Opie, J. and Elliot, N. "Tracking the elusive Jeremiad: The rhetorical character of American environmental discourse." *The Symbolic Earth*. J.G. Cantrill & C.L. Oravec, Eds. Lexington, KY: U of Kentucky P, 1996.

Owens, Derek. *Composition and Sustainability: Teaching for a Threatened Generation*. Urbana, IL: NCTE, 2001.

Pare, Anthony. "Genre and Identity: Individuals, Institutions, and Ideology." *The Rhetoric and Ideology of Genre*. Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

Patrick, Amy. "Sustaining Writing Theory." *Composition Forum* 21 (Spring 2010). Web. 18 December 2013.

Pezullo, Phaedra. *Toxic Tourism*. Tuscaloosa: U of Alabama P, 2005. Print.

Pilatek, Gary. Personal Interview. 22 November 2011.

Pilatek, Mike. Personal Interview. 22 November 2011.

Pilatic, Heather. *Pesticides and Honey Bees: State of the Science*. San Francisco: Pesticide Action Network North America, 2012. Print.

Price, Roger. *A Concise History of France (Cambridge Concise Histories).* Cambridge: Cambridge UP, 2005. Print.

Propen, Amy D. "Reading the *Atlas of the Patagonian Sea:* Toward a Visual-Material Rhetorics of Environmental Advocacy." *Environmental rhetoric and Ecologies of Place.* Goggin, Peter N., Ed. New York: Routledge, 2013. Print.

Ratcliffe, Krista. *Rhetorical Listening: Identification, Gender, Whiteness.* Carbondale, IL: Southern Illinois UP, 2005. Print.

Reynolds, Nedra. *Geographies of Writing.* Carbondale, IL: Southern IL UP, 2007. Print.

Roberts-Miller, Patricia. *Deliberative Conflict.* Carbondale, IL: Southern IL of UP, 2004. Print.

Rice, Jenny Edbauer. "Unframing models of public distribution: From rhetorical situation to rhetorical ecologies." *Rhetoric Society Quarterly* 35 (2005): 5-24. Print.

Rickert, Thomas. *Ambient Rhetoric.* Pittsburgh: U of Pittsburg P, 2013. Print.

Russell, David R. "Rethinking Genre in School and Society: An Activity Theory Analysis." *Written Communication* 14 (1997): 504–54. Print.

Salvador, Michael and Tracylee Clarke. "The Weyekin Principle: Toward an Embodied Critical Rhetoric." *Environmental Communication* 5 (2011): 243-260. Print.

Salvador, Michael and Todd Norton. "The Flood Myth in the Age of Global Climate Change." *Environmental Communication* 5 (2011): 45-61. Print.

Schacker, Michael. *A Spring Without Bees*. Guilford, CT: The Lyons Press, 2008. Print.

Schell, Eileen. "The Rhetorics of the Farm Crisis: Toward Alternative Agrarian Literacies in a Globalized World." *Rural Literacies*. Donehower, Kim, Charlotte Hogg, and Eileen E. Schell, Eds. Carbondale, IL: Southern Illinois UP, 2007. Print.

Schlectweg, Harold P. "Media Frames and Environmental Discourse: The Case of 'Focus: Logjam.'" *Symbolic Earth: Discourse and the Creation of the Environment*. Cantrill, James and Christine Oravec, Eds. Lexington, KY: University of Kentucky Press, 1996. Print.

Schryer, Catherine. "Genre and Power: A Chronotype Analysis." *The Rhetoric and Ideology of Genre*. Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

Schwartz, Ariel. "Timeline of a Bee Massacre: EPA Still Allowed Hive-Killing Pesticide." *Grist*. 15 December 2010. Web. 22 March 2011.

Shultz, Doug, dir. "Nature." *Silence of the Bees*. PBS. 28 Oct. 2007. Web. 12 December 2012.

Segal, Judy Z. "Problems of Generalization/Genrelization: The Case of *the* Doctor-Patient Interview." *The Rhetoric and Ideology of Genre*. Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

"Silence of Bees Interview." *Nature*. PBS. 28 Oct. 2007. Web. 12 December 2012.

Spinuzzi, Clay. *All Edge: Inside the New Workplace Networks.* Chicago: U of Chicago P, 2015. Print.

- -. *Network.* New York: Cambridge UP, 2008. Print.

- -. *Tracing Genres Through Organizations.* Cambridge, MA: MIT Press, 2003. Print.

Stavenhagen, Martin. Telephone Interview. 28 November 2011.

Suryanarayanan and Kleinman. "Be(e)coming Experts: The Controversy Over Insecticides in the Honey Be Colony Collapse Disorder." *Social Studies of Science* 7 Jan. 2013. Web. 28 Jan 2013.

Theobald, Tom. "Tom Theobald's Comments on EPA's Evasive Response." *Organic News.* 20 February 2011. Web. 22 February 2012.

Thompson, William. "'The Symbol of Paris's: Writing the Eiffel Tower." *The French Review* 73.6.: 1130–. Print.

Trubek, Amy B. *A Taste of Place: A Cultural Journey into Terroir*. Berkeley, CA: U of CA P, 2008.

USDA. Agricultural Research Service. *Colony Collapse Disorder Progress Report.* Washington D.C.: USDA, Agricultural Research Service, 2012. United States Department of Agriculture, June 2012. Web. 3 Jan. 2013.

USDA. Agricultural Research Service. *Fact Sheet: Survey of Bee Losses During Winter of 2012/2013.* By Kim Kaplan. United States Department of Agriculture, 6 May 2013. Web. 8 May 2013.

USDA. Agricultural Research Service. *Honey Bee Health and Colony Collapse Disorder*. United States Department of Agriculture, 5 November 2015. Web. 3 Jan. 2016.

Vandenberg, Peter. “Review: Animated Categories: Genre, Action, and Composition.” College English 67 (2005): 532–545. Print.

Vanishing of the Bees. Dir. George Langworthy and Maryam Henein. Narr. Ellen Page. Hive Mentality Films, 2009. DVD.

Velasquez-Manoff, Moises. "What's Happening to the Bees?" *Christian Science Monitor* 4 April 2007, Features, Currents sec.: 13. *LexisNexis Academic*. Web. 4 Nov. 2012.

Waddell, Craig. “Perils of a Modern Cassandra: Rhetorical Aspects of Public Indifferenre Systems: Chronos and Kairos in Communicative Interaction.” *The Rhetoric and Ideology of Genre*. Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

Yates, JoAnne and Wanda Orlikowski. “Genre Systems: Chronos and Kairos in Communicative Interaction.” *The Rhetoric and Ideology of Genre.* Coe, Richard, Lorelei Lingard and Tatiana Teslenko, Eds. Cresskill, NJ: Hampton P, 2002. Print.

VITA

NAME OF AUTHOR: W. Kurt Stavenhagen
PLACE OF BIRTH: Smithtown, New York
DATE OF BIRTH: May 27, 1967

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:
Southern College—Collegedale, TN
Pacific Union College—Angwin, CA
La Sierra University—Riverside, CA

DEGREES AWARDED:
Master of Arts in English, La Sierra University, 1997
Bachelor of Arts in Theology, Pacific Union College, 1990

PROFESSIONAL EXPERIENCE:
Interim Chair, The Environmental Writing Program, State University of New York College of Science and Forestry, 2014-present
Professional Writing Instructor, Syracuse University, 2003-present
Teaching Assistant, La Sierra University,1995-1997