Colony Collapse and the Global Swarm to save the Bees: Sacred Relations with Bees in Film and Literature

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ABSTRACT
Colony collapse disorder—the dominant term describing massive global bee die-offs—has garnered significant international attention and regulatory intervention. While dominant responses to anthropogenically imperiled bees can be interpreted as economic or narrow self-interested, the global response arising from a spiritual register is less discussed. Artistic expressions of the bee crisis—such as Starhawk’s novel *The Fifth Sacred Thing* and the film *Queen of the Sun*—illustrate spiritual resonances with bees, evoking emotions which lead to commitments of interspecies solidarity more compelling than most contemporary scientific and popular conversations around the issue. By examining these forms of artistic expression as closing the resonance and intimacy gap between our and their species, I argue that to pragmatically aid bee population regeneration, we must fundamentally reconfigure lifestyles to instantiate our spiritual commitments to ecological justice. As contemporary scientific analysis alone has failed to motivate this ecological reorientation, embracing the political and personal power that comes from acknowledging spiritual connection and commitments presents an alternate possibility.

KEYWORDS
Bees; environmental resistance movements; ecological justice; interspecies ontologies; sacred

Many are familiar with the apocryphal Einstein quip that if bees disappear from the earth, within four years humanity will surely follow. The
disappearance of bees has devastating economic and environmental effects, threatening the global human food supply and ecosystem functions ultimately resulting in ecosystemic collapse (Vanbergen & The Insect Pollinators Initiative, 2013). Gregory Bateson points out that a collapse of this magnitude would be preceded by a breakdown in our communicative order, the ability for organisms to make sense of their world and signal to each other in meaningful ways about their thoughts, feelings, and intentions (Harries-Jones, 2009). Bateson’s thinking is that the disruption of a species’ communicative order would be impacted by the same factors that left unnoticed, would later lead to the dysfunction of physical ecosystem processes. As bees’ meaning-making or semiotic systems have been disrupted by anthropogenic chemicals, delayed plant-bee seasonal timings due to climate change, endured habitat destruction, and subjugation as test subjects of instrumental human “management,” their ability to fight back against common parasites has declined (Watson & Stallins, 2016). And as bee decline has become legible on human radars, something beyond mere instrumental concern has emerged. The plight of bees in the 21st century has added to the disruption of many humans’ communicative order, creating a loss of innocence and disorientation, even if such effect has yet to create effective large-scale supporting interventions.¹

Colony collapse disorder—a technical and catch-all term describing recent mass global bee die-offs—is as much a disruption of bees’ semiotic ordering of their world (e.g., their diminished abilities to navigate and fight off mites) as it is a disorder of globalized agribusiness systems which represent dominant unsustainable human values. Framing colony collapse disorder not merely as a matter of agricultural inconvenience, but of multispecies solidarity and biocultural justice, suggests the symbolic value and emotional attachment the deaths of these crucial creatures hold. In this article I contrast in the first section the dominant framing of colony collapse disorder within technocratic reductionism, while in the second section this framework is contrasted with the burgeoning nature-based spirituality of apiarists especially in various pagan traditions.

The first section disputes the conventional notion in popular and scientific discourses that knowledge of the problem is regarded as a sufficient catalyst for political action—the so-called “information deficit model” of science driving belief changes (Suldovsky, 2017). If information, knowledge and skills alone are the whole affair of environmental crises, then surely, we would be experiencing environmental recovery by now, considering the discussion has been ongoing for decades (Palmer & Finlay, 2003). Regrettably, this has not been the case. I will argue that additional research or knowledge alone has failed to motivate action; rather, the most effective campaigns to motivate action adopt affective
discourses (Protevi, 2009). Emotional catharsis is bound up with belief systems, and only artificially, with much repression, are deep emotions barricaded from concomitant shifting cosmologies. The metaphysical framework one operates in directly corresponds with the attending affective frameworks modulating belief and action, against the background of our inherited human physiology. If we wish to address colony collapse disorder—or the ecological destruction driving it more broadly—attending to the affective relationships with the natural world through acknowledging how different metaphysical practices regenerate or denigrate not only the material natural world but also our linked inner nature of visions and beliefs, is key.

Here, I offer an example of this process through emphasizing the importance of interspecies symbiotic and semiotic exchange between humans and bees, developed over millennia, rather than abstract information, as motivating resolute and creative action (Brier, 2008; Lestel, 2002). Secular ideology prevalent in westernized societies proscribes frank expression of emotional upset stemming from bees harms, especially that conveyed in spiritual relational-ontology terms in depicting the life of hives as a superorganism; such practices are almost exclusively avoided in scientific writing, the most highly regarded form of contemporary wisdom (Seeley & Levien, 1987). Fallout from reproducing the “two cultures” divide splitting science and spirituality is increasingly discussed by climate scientists who understand that when we fail to tap into our own grief and existential anguish when facing ecocide, we forgo our strongest medicine which could be a source for action and the thoroughgoing behavior change necessary to accurately respond to and halt worldwide dysbiosis (Macy & Brown, 2014; Kimmerer, 2015; Kalmus, 2017; Hayhoe, 2019). Appealing to existential loss in a spiritual register often generates substantial results in conservation efforts, exceeding the returns accredited to the scientistic and instrumental vernacular of managers and policy makers—especially for organisms, such as insects, that do not measure up to the allure of charismatic megafauna (Samways, 2005). I will also argue that in endorsing a single-solution “silver bullet” perspective—like addressing colony collapse disorder only through banning neonicotinoids—NGO campaigns and commercial incentives, like certain reductionist scientific discourses, fail to account for the overriding loss of interspecies relating both resulting in and from colony collapse disorder.

The second section analyzes two examples of bee-inspired spirituality framing the current tumultuous human relationship with bees as foremost a spiritual crisis: Starhawk’s novel The Fifth Sacred Thing and the documentary film Queen of the Sun. Through the queer lens of entertainment, documentary film and fiction are empowered with the jester’s privilege, enabled to point out obvious (but socially dangerous) aspects (regarding
their drastic implications to the prevailing order) of our reality, which other social domains such as business and science are quarantined from broaching (Roffet-Salque et al. 2015). In these stories, art imitates life, with bees becoming a synecdoche for an array of ecological and spiritual phenomena that have a common source in relational ontologies beset by militarized ontologies of separation (Kronfeldner, 2018). Through examining these works, I argue not that art, let alone these specific texts, can shift the spiritual Overton window;\(^2\) rather, that they represent the sort of approaches, that will lead to more effective macro outcomes because they are more integrated, resilient, and steadfast. That the fate of bees exposes our current spiritual crisis as well, provides alternative modes of revealing the complexities our dynamic relationship with bees beyond prefabricated commercial or scientific narratives. Overcoming the industrial imaginaries of control and compartmentalization that optimize for profit alone and undermine the ecological source of wealth, necessitates accounts and actions of spiritually-infused activists and ecologically-activated people of faith, offering a template for regenerating the fuller meaning and potential for our connection to the bees.

Rather than claiming that these examples of documentaries and fiction highlighting the spiritual dimension of beekeeping and the human-bee relation to be universals or panaceas, I aim to point out their utter difference from industrial commodified forms of human-bee relations. This juxtaposition serves to offer more than just feelgood reformism, but aims to address the underlying yearning for reconciliation with bees which from other frames might seem irrational. Comparing industrial beekeeping to relational approaches based on love, care, and mutuality provides a path forward not only in reconciling our relationship with bees, but offers a portable environmental ethic of connection that can move environmentalism forward through centering psycho-emotional ecological needs.

**The Scientific Puzzle of Colony Collapse Disorder**

Colony collapse disorder can be regarded as a spiritual crisis in human-bee interaction. Thus, to grasp its severity it is of relevance to examine the histories of human-bee interactions. Records of such interactions can be traced back to before homo became sapiens—archeological excavations covering Neolithic Europe found remnants of beekeeping which suggests the importance bees held for these prehistoric humans (Roffet-Salque et al. 2015). The sweet honey, useful wax, and medicinal propolis, all were rare but coveted treasures to humans up until when synthetic alternatives became abundant in the last century (Ransome, 2004). Until then, bee products were considered so salutary and sacred, that bees have occupied an intermediary role in many human cultures between work animal and
beloved ally (Gould & Gould, 1988; Seeley, 2010). In modern society bees are intimately bound to contemporary patterns of production and human sentiments or interests which have fundamentally altered the very physical and social life of bees to the point that it can no longer be regarded as fully nonhuman but rather more on the evolutionary order of an insect shaped by humans as the wolf morphed into dog (Kosek, 2010). This central role of bees has, by virtue of their sympathetic if not phylogenic proximity, led the New York Post to refer to bee die-offs not as a passive accident, but as a bee “genocide” (Editors, 2018).

That bees have been the subject of more scientific research than any other insect (even surpassing the ever-researched Drosophilia) indicates their centrality not only to human economies, but also to the curiosity and wonder of the human scientific mind (Gould & Gould, 1988; Seeley, 2010). Research covering colony collapse disorder are, much like the science of climate change, in strong consensus of its existence, but its causes diverge. It is as if the bees have caught a flu which has wiped through the bee population, but it remains yet unknown what has caused the weakening in bees’ immune system (vanEngelsdorp, 2012). The confluence of factors cannot so easily be pinpointed to a single chemical or agent, since, as one study shows, a single grain of pollen collected in North America contained, on average, residues of 7.1 different pesticides (Mullin et al., 2010). Moreover, many of the toxicity studies have not taken into account the multiple anthropogenic exposures and stressors bees actually experience (Kearns et al., 1998; Pettis et al., 2013; Woodcock et al., 2016). When toxicology studies occur in tissues only, or in the isolation of the lab, the threshold amount of the chemical needed to induce disruption and disease is much greater than organisms living in real-world environments. Outside the laboratory environment exist multiple health threats including normal environmental stressors or other chemicals (cf. Relyea’s 2003; 2005; Relyea & Mills, 2001 work on the discrepancy in measured toxicological impact on gray treefrog tadpoles in a lab compared to the wild).

Instead of exploring the possibility of interaction between a myriad of causes and pesticides—or situating colony collapse disorder in the historical, political and economic relationships between bees and humans: posing the fundamental question of how our relationship with bees changed to make the modern bee more vulnerable to new threats (Kosek, 2010)—the science behind declines in bee populations has jumped from one perceived cause to another, with eroding habitat, neonicotinoids, glyphosate, and a slew of other anthropogenic sources all posing as contributing culprits (Watson & Stallins, 2016). The notion that there is a single cause for colony collapse disorder, whether a genetic problem, an ecological problem, or a chemical problem, fails to see the forest for the trees. The
notion of syndemics—synergistic, or more accurately, dysergistic epidemics manifesting via intersectional causes—developed by Merril Singer (2009), captures the structural violence of multiple stressors and exposures to a single population leading to their systemic overburden of disease. Multiple exposures to different chemicals, and other stressors such as more polluted water sources, degraded habitats, less diversity of plant species due to industrial agriculture, and chemical-laced molecules riding in the air, in addition to increased global temperatures, may together contribute to a physiological burden far more harmful than any one of those risk factors alone. Such holistic perspectives are rarely applied in the conventional science of colony collapse disorder. Additionally, not only does this one-sided focus on “natural” causes of colony collapse disorder result in a disproportionate emphasis on developing technical solutions to arbitrate this crisis, but it also completely obscures the social character of anthropocenic nature, which could illuminate the latent motivations for the social responses to colony collapse disorder (Melathopoulos, 2010).

While neonicotinoids, a class of neuro-active insecticides, were first identified in the current wave of bee die-off mania as the guilty party (Rundlöf et al., 2015), this only comes historically after changes in bee-handling practices to a more “factory” approach already instigated significant population losses and impoverished bee health. Neonicotinoids use cannot be considered the whole story, since in areas where neonicotinoid spraying has stopped the same declining trend in bee populations continues (Steinhauer et al., 2018; Woodcock et al., 2016). The most cynical businesses have seen this unexpected outcome as an excuse to reintroduce neonicotinoids—if, in fact, removing them from use for a few years in sparse selected areas was never enough to begin with to really free bees of the residual chemical in the myriad plants they interact with (Entine, 2014; Henein, 2015). Moreover, any temporary rebound in the honey bee population is taken as a sign by interested skeptics that there was no actual crisis to begin with (Entine, 2014). All this provokes a call for “more research” into the cause of colony collapse disorder, similar in tenor to the call for more research on climate change: a delay tactic, deliberate or not, to stave off necessary action to reprioritize bee lives.

Bee lives and hives, even in sympathetic scientific work aimed at providing evidence of the mechanisms of their collapse, have nonetheless continued to be framed in rationalistic and often instrumental terms (Ponti, 2017; Watson & Stallins, 2016). Rather than addressing the underlying causes for colony collapse disorder that would seek to improve bee-welfare and a thriving biodiversity, significant resources have been invested in developing techniques for artificial pollination either by human hand or bee-like drones. Such research has been criticized not only in its failure to take into account pollinator-specific flight patterns
but also for overlooking the importance of protecting bees and biodiversity for its own sake. In the words of entomologist Quinn McFrederick “I would not like to live in a world where bees are replaced by plastic machines. Let’s focus on protecting the biodiversity we still have left” (Ponti, 2017). A topic for its own paper, the scientific paradigm of colony collapse disorder has perpetuated the notion of narrow, piecemeal interventions (Boehm, 2012; Moore & Kosut, 2013; Shukraft, 2019; Suryanarayanan & Kleinman, 2013; Watson & Stallins, 2016); this has partly been due to corporate-funded science aimed at minimizing pesticide company economic losses (Clunies-Ross & Hildyard, 2013; Fang, 2020; Henein, 2015; Miller et al., 2019), rather than in a holistic or precautionary view confronting the underlying problems of industrial agriculture.4

As the growing list of endangered species attests, it is not only bees that are facing yearly decline in numbers: species such as Monarch butterflies, polar bears, and pandas are close to extinction. Our track record so far is such that the more we fetishize the saving of a species, the more we imperil them. Seeking for a single definitive “natural” cause for the steady extinction of bees, a prevalent method in science, disregards the question of how our relationship with bees has changed to make them susceptible to new threats. Colony collapse disorder attests that there is a crisis in human-bee relationship caused by the material and symbolic reconstruction of the bee, a growing gap between the real lives of bees and our representations of what is minimally needed for their survival (Kosek, 2010). Nature deficit disorder doesn’t just mean that humans suffer from our lack of understanding of and contact with the more-than-human world (Louv, 2008), but also that the gap between the rational and the real precipitates a remainder of pollution, contamination, damaged subjectivities and ontologies (Serres, 1995). By viewing bees solely from a rationalist viewpoint or merely as an instrumental commodity, or singling out a lone cause for colony collapse disorder, external from human fates, increasingly distances bees from our understanding of our human ontologies, further endangering their health.

**Framing Bee Deaths**

While colony collapse disorder has no clear beginning, by 2006 the precipitous fall in bee colony health in many regions started to form a recognizable pattern. Beekeepers across the United States and Europe raised the alarm. The trend persisted with again significant drops, a little more than 30%, over the following winters (vanEngelsdorp et al., 2007, 2009, 2010). As the scientific evidence confirmed bees were under threat by human activity, like any commodity or endangered species in a scarcity-
based economy, their preciousness increased, as people increasingly noticed and cared about bees in their everyday lives. Concurrently, as media coverage breached the tacit prohibition on mobilizing against the agrichemical industry, civilians realized that things must be bad—invoking both fear and fascination, occasionally bordering on hysteria, in a broad strata of society (Melathopoulos, 2010). Resonating with the extent of bees’ peril, activists and citizens have mobilized an array of responses, attacking the problem from every angle with remarkable policy success, if not ameliorated outcomes. In civil society, responses have taken the form of supporting companies capitalizing on the sentiment to sell products through “bee-washing”—a form of greenwashing (MacIvor & Packer, 2015)—while others donated to ecological organizations or planted pollinator-friendly gardens. Groups of citizens have even taken up bee keeping as an act of political resistance against polluted ecosystems (Neville, 2017). Activist organizations have further pressured companies like Home Depot and Lowes—intermediaries between the chemical manufactures and the farmers applying these deadly pesticides to their crops—to stop selling neonicotinoids (Morrell, 2016). On a governmental and international policy level, citizen and NGO organizing pushed to reduce the use of pesticides in their districts—resulting in mandates for bee-friendly plant covering on government grounds in several cities and municipalities, with a flood of communities banning glyphosate-based herbicides and neonicotinoids. Professional beekeepers and consumer groups sued the US EPA for insufficient oversight in allowing neonicotinoids (Gillam 2013) and the EU voted in 2013 for a two-year restriction of bee immune system-weakening chemicals in the neonicotinoid family of nicotine synthetic analogs including clothianidin, imidacloprid and thiamethoxam (but not acetamiprid) (Commission Implementing Regulation, 2013).

In like manner, various artists utilize their craft to channel and communicate to a wider audience the emotional upset colony collapse disorder elicits. Dead bee bodies, as apiarist-turned-artist Sarah Hatton discovered, provide powerful visual and material signs that move people out of apathy and inaction. Indeed, Hatton conveys that her Bee Works were “created as a way to cope with the sense of loss and frustration that I had felt when I lost my own beehives” (Jozuka, 2015). By making the dead bee bodies of her hives public to art world elites, Hatton’s work catalyzes compassion by making the seemingly distant bee deaths intimate (Figure 1). Her art stylizes the everyday realizations of people everywhere where pesticides are used, of the collective failure of responsibility to the larger out-of-control processes and structures that pollute, weaken, and undermine ecosystem health, for bees, humans, and all life. “Even in death,” she shares about her bee body art, “there is a palpable sense of
respect for the bees’ greatest instinct—that each individual works for the greater good of all” (Jozuka, 2015).

The common denominator in these campaigns, lawsuits, community initiatives and artist renderings is their appeal to human emotions to bring the seemingly distant life and death of bees closer to human existence. In so doing, it is possible to note a comprehensive escalation of visionary action and involvement to lend a hand to bees—reaching out in realization of the genuine care and anguish many felt learning about and experiencing these bees’ fates.

Corporations are cognizant of public sentiment and eagerness to respond to the predicament of bees. In an attempt to retain their firm hold over consumer appeal, innumerable businesses now make (unverifiable) claims to bee-friendly practices and conspicuously advertise donating a portion of their proceeds to “save the bees.” Even if it appears as if these companies are taking their environmental responsibility seriously, such bee-washing measures are one of capitalism’s defenses to metabolize
risk and harm and override the concerns and harms of those injured, to pretend that the problem is localized rather than an epiphenomena of multiple core processes of a sick system of domination (Fisher, 2009). By overly narrowing the specificity of such problems, market-based solutions serve as a simulacra of social caring: throwing money at the problem without producing the promised results, which would require an entire re-inventorying of the ideological and material structures that generated such problems. By marketing a product as “bee-friendly”, safeguarding the bees is reduced to the private realm of moral life-style choices (Melathopoulos, 2010). The story told to consumers that opting for bee-friendly products protects bees, lulls their moral conscience—granting a morally complacent existence, content in the belief that they, at least, are not killing bees. These market-based solutions fundamentally overshoot the mark by not addressing the elephant in the room—our relationship with bees has changed from one of ontological intimacy to utter detachment and alienation. Bees showing up on the anxiety radar of consumers is a symptom of tethered wicked problems with ecological and social inequalities, not straightforwardly parsed.

While many of these community and industry gestures may be more opportunistic marketing or feel-good activism than fundamental shifts in business practices and politics, the ubiquity and entrenchment of bee-protecting normative stances is remarkable—in some regions these charismatic microfauna have become as commercially visible and fawned over as campaigns for pandas, polar bears, or other charismatic megafauna (cf. Griswold, 2020; National Recreation & Park Association, 2019; Small, 2012). The denormalization of bee-harming pesticides has deeply permeated globally. As one Japanese beekeeper relates regarding the use of neonicotinoids and pesticides, “You’re not just killing us (bees), you’re killing yourselves, too” (Little, 2012). The cathexis of fear of one’s own death projected onto the real deaths of bees harnesses a powerful emotional driver for political change.

Yet, the seeming success of activist-citizens to galvanize media and politics, as well as those (economically) complicit in colony collapse, nonetheless must be cross-examined. Ingolfur Blühdorn’s (2000) pronouncement that we live in an age of “post-ecological politics” when environmental concerns only play a role in political decision-making in order to perpetuate unsustainability, which rejects bees as ends unto themselves, is evidenced in chemical firms defending their bee-killing products and in tech firms developing robot bee drones and methods of artificial pollination, shrugging their shoulders at pollinator collapse as a technical problem requiring an engineering solution rather than existential problem (Ponti, 2017). Reductive notions that colony collapse disorder hinges on a single chain of harms treatable cosmetically without
altering human political economies, have quickly unraveled in the 21st century. Most activists, organizations, and companies (such as General Mills’ Cheerios infamous campaign #bringbackthebees bee-washing campaign despite their ingredient sourcing from glyphosate crops (Keyzer, 2020)) are bandwagoning on the cause célèbre of bee die-offs as a particularly recognizable instance of human injustices against nature. Banding behind bees allows a policy focal point to elicit pro-environmentalist sentiments and political action, among the simultaneous co-opting of bee crisis popularity for personal gain (whether this be financial (for corporations), visibility (for NGOs), or political action through their own platform (for other NGOs). Most public bee actions fall somewhere between authenticity and instrumentality.

Society, like science, has largely failed to grasp the deeper wisdom of syndemics, that declining bee health is the product of countless sources—death by a thousand cuts. Rather than searching for a select pathogen (e.g., varroa mites), or a silver bullet reason for these mites’ proliferation in killing bees (e.g., weakened bee immune systems due to a particular industrial pesticide in isolation that could then be removed from use), slowly it is dawning on attentive apiarists and systems scientists that the rapid decline of these canaries in the farm land signals to humans the growing anthropogenic dysbiosis affecting all planetary complex life (Prescott, Logan, et al., 2018; Prescott, Wegienka, et al., 2018). More than science or facts alone, to confront the syndemics of colony collapse disorder requires new foundational mythologies for our culture and revised customs with the earth to enact and uphold redemptive counter-narratives honoring bees as symbionts and keystone species.

**Economic Costs**

Gallai et al. (2009, p. 810) estimate that the “total economic value of pollination worldwide amounted to €153 billion, which represented 9.5% of the value of the world agricultural production used for human food in 2005.” While these somber statistics might suggest governments would spring into action to forestall massive potential food insecurity, unfortunately, this has not been the case. Despite resolutions to control and rebuild honeybee health, their numbers and condition continues to deteriorate, as fundamentally the trimming around the policy edges have done little to address the underlying patterns of harm (Buckner et al., 2019; Office of the Press Secretary, 2014).

Recent policy intervention reactions only intervene insofar as bee health shows up on economic balance sheets for farmers, agribusiness, and agrochemical manufactures, providing system relevance for bees as part of the scientific-economic-political process (Latour, 2004; Luhmann, 1989; Scott, 2004; Luhmann, 1989; Scott,
The default economic, and in many respects, scientific, standpoint on policy intervention against the factors contributing to colony collapse, is to make as few changes as possible to the status quo while still achieving the desideratum of mollifying the worst effects of humanity’s systematic war on nature—especially those effects that impinge on economic activity (e.g., Luhmann, 1989). Bee die-offs put a spoke in the wheel of the otherwise smoothly operating business of monoculture mega-agriculture—prompting representatives for agribusiness to capitulate against their usual resistance to scientists as some farmers sounded the alarm (Amadeo, 2019; Monsanto, 2016).

The result of the breakdown of reliable bee labor has exposed the very fact of its existence; that we have let our relationship with bees degenerate to one of utter exploitation (Spiegel & Walker, 1997). Only when our mechanisms of production become threatening enough to their existence that they can no longer do the “job” we have reduced them to, does the materiality of the mirage actually shake us from it.

**Portrayals of Our Spiritual Connection with Bees**

In the above section I have critiqued the dominant scientific, business, and NGO perspectives and solutions to colony collapse disorder as too narrow, failing on their own merits to reverse this complex tragedy. By excessively focusing on determining the natural causes, technoscientific single-metric solutions neglect emotional responses to worldwide bee decline which until made explicit hamper progress to reconsider other courses of action—scientific information alone (the information deficit model) does not sufficiently spur action to address the underlying human system harms to bees’ habitat. In the same manner, market-based solutions serve largely to seek economic work-arounds that further deplete long-term bee health and soothe consumers’ moral consciousness without producing results meaningful for bees. Similarly, the dramatized emotional appeals of bee-washing merely exploit our pathos and yearning to support bee life.

In contrast to these prevailing approaches, I argue that there is also a parallel but less recognized method focusing on integrating the repressed emotional and spiritual elements accompanying ecocide and bee die-offs. This current of thinking and action perceives acknowledging our shared fate with bees, and perceives intertwined ontologies as something to be cultivated and harnessed rather than disdained and evaded. A ritualistic approach to colony collapse disorder certainly aims to discontinue pesticides, restore ecologies, and engage in practical apian activities; but it also infuses into these actions an embrace of the magic, wonder, and reverence of these creatures—a metaphysical embrace of the same awe Nobel
Laureate Karl von Frisch must have felt when he deciphered the mathematical calculus of meaning in the bee waggle dance.

This section of the article examines two forms of alternative narrative that paint fantastical yet aspirational templates for how to embrace interspecies connection with bees. Both works connect to the harms to bees through pathos first, logos second. The works imply that resolving the bees’ plight germinates from becoming more bee-like, rather than doubling-down on using traditional forms of rationality to address the issues. These approaches makes peace with the necessary sacrifices of ego required to endeavor to join the hive mind of the bee superorganism. Starhawk’s novel *The Fifth Sacred Thing* and Taggart Siegel’s documentary *Queen of the Sun* offer rich descriptions of types of religious experiences with bees that lead to direct engagement with bees as well as working with the bees for larger social and ecological remediation. These works serve as vignettes of spiritual remedies to a disenchanted science and politics of environmentalism, providing windows into the most successful forms of environmental activism today, devotion which fuels the hard pragmatic work combining heart, head, and hands.

**Starhawk’s The Fifth Sacred Thing**

Ecofeminist and earth-activist, Starhawk’s futuristic novel *The Fifth Sacred Thing* places bees as protagonists, responsible for the apex event in the book. A work of fiction, the novel condenses into fantasy form the intuitions and yearnings behind the traction colony collapse disorder has garnered in the popular imagination. The interspecies solidarity with bees that has galvanized the public to act beyond the economic impacts or scientific diagnoses of illness—which precipitated this wave of care—allocates this surplus of fervor for protecting the bees in the sort of relationships Starhawk describes in her book. Set in a futuristic California of the 2040s after ecological and political meltdown, San Francisco has thrown off the slavery of the “Stewards,” a techno-feudal racist, sexist, decayed war culture based in Los Angeles; but as the Stewards prepare to conquer the enlightened earth-worshipping people of Califia (the Bay Area), the denizens must fight back [spoiler alert: some of the passages discussed below involve the climax scenes of this book].

The mistress healer Madrone, in the voyage from her home in San Francisco down to Los Angeles to run reconnaissance and search after her beloved Bird, meets “the Melissas,” a bee cult, in the Santa Monica Mountains. The bees send for Madrone, initiating her into the hive mind of the swarm. In her initiation, Madrone relates how the buzzing sound of the bees works by “cancelling thought and memory,” attuning her to other frequencies (Starhawk, 1993, p. 224). A bee stings the center of her forehead, opening Madrone up to their world, bee consciousness.
To Madrone’s newly awakened bee senses, the generalized swarming buzz transforms into “music to her, operas and symphonies and oratorios, and at the same time [sounding] like a crowd of gossiping friends, telling her everything she needed to know” (p. 227). The language of words now “seemed awkward, clumsy, unnecessary when a molecule of scent could convey the same thing” (p. 227). In her transformation into bee priestess, Madrone sluffs off the post hoc justificatory apparatus of human language to open to simultaneously a more precise and concise mode of conveying meaning.

At the climax of her induction in the cave hive, the reigning human bee priestesses or “Melissa” carves out a small “flowerlike wound” in Madrone’s forehead where the bee had stung, and the bees feed on the blood she offers as nectar back to them. The wound is packed with propolis, and thenceforth Madrone communicates with the bees through producing a phermonally potent bead of sweat from that spot on her third eye, just as she can pick up on their sounds, dances, and activity as a sixth sense, giving her more information sometimes than her other human five combined.

Becoming bee, Madrone experiences Nagel’s (1974) famous question of species proximity in his essay “What is it like to be a Bat?” But rather than Nagel’s skepticism at bridging the species hermeneutic divide, in the skillful imagination of Starhawk, through ritual, proximity, love, devotion, and initiation, Madrone does get to become bee—at least partly so, and when the situation calls her into her bee state of consciousness. For instance, Madrone soothes a swarm alarmed upon encountering their Califahome environment unfamiliarly desiccated resulting from the Stewards’ invasion and damming of their river, as she offers emotional permaculture to the bees through secreting calming phermones (Howland, 2019), Madrone also asks for their help, recognizing in them, “[y]ou are part of our powers, our forgotten powers. Help us, please, sisters…” (Starhawk, 1993, p. 457). Seeing her own fate and the bees’ as bound together, they understand that her intentions and requests always have their welfare in mind.

And the bees answer her call by finding her mate, Bird, broken and half-dead, who had been thrown in the Stewards’ “pens”—the army prison brothels; the bees offer Bird comfort and companionship, ultimately revitalizing him from his captor’s drugs and beatings through their hums of hope.

Just as Bird is emerging from his daze and remembering his love for song, thanks to the bee song, prison guards drag him out. When Bird is unwilling to deflect and exchange his own torture and let them torture the adolescent Rosa, who was captured with him and he views as a little sister, the General of the Orwellian-named Stewardship army drugs Bird, dresses him as one of their soldiers, and places him in the center of town...
with all watching, instructing him to kill the town matriarch, his abuela Maya. Like a MKUltra experiment, between the mind-numbing drugs given to him by the General, and the threat that if he fails to kill his grandmother Maya strapped in tattered rags to a pole that the army will fire into the crowd, Bird cannot help but comply. As he raises the gun to shoot her, out of nowhere a bee circles him, lands on his forehead, and stings him squarely between the eyes, sacrificing its life, but giving life to the interspecies hive.

Instantly, a golden pain, a good pain, shot through him like a shaft of sunlight breaking through the fog. A myriad of Mayas swam and danced before his eyes, but each one was clear and perfect. Bees walked his murderous wrists with thread feet, and he wanted to caress them. They had reached for him; they had not abandoned him. Not because he deserved compassion, but because by their very nature they were emissaries of a power that was always and everywhere offering itself, asking nothing in return, a force that set the bees in motion and colored the blossoms and made them sweet. That was the real gift, the true grace: not death, but love, the fifth sacred thing. (pp. 472–473)

The self-sacrifice of the bee frees Bird from his stupor, allowing for the freeing of the people of Califia so dedicated to the four sacred things of water, air, fire, and earth. With newfound clarity and connection, Bird sets down the rifle, and begins to sing—“to his grandmother and his lover and his enemies and his executioners” (p. 473), giving his people inspiration to resist and awing his would-be murders into disobeying their shooting orders. In the ringing refrain of insurgency against the command and control violence of the army, soldiers begin defecting to the side of the dehumanized “witches,” reflecting the leitmotif of Starhawk’s book of inclusion and acceptance, even of would-be enemies: “There is a place set for you at our table, if you will choose to join us.” (p. 235)

The interspecies friendship woven throughout The Fifth Sacred Thing brings bees and humans together on equal footing in the struggle against climate chaos and ecosystem destruction of war and systemic violence. The offer to the invading army—“There is a place set for you at our table, if you will choose to join us”—also serves as the more-than-human world’s invitation to humans: embrace our interspecies ontology and you will find renewed power to fight for ecological harmony. The saving sting of the bee, liberating Bird’s consciousness and the land of Califia for all beings, enacts an “invitational rhetoric” where “alternative feminist rhetoric encourages transformation through dialogue and non-coercive speech acts” to open a “constructed potentiality” able to shift hegemonic systems of violence and closure (Lozano, 2013, p. iv). Maya, Madrone, and Bird, understand themselves as extensions of the bees, and the bees as extensions of themselves,
committed in their hive-like relational ontology to ecological and metaphysical solidarity.

Starhawk’s illustration of bees as sacred keepers of memory, remembering our fragmented visions of the world, finds plentiful analogs in testimonies of companion animals knowing just when to intervene or support (Bekoff, 2008; Bekoff & Pierce, 2010; Haraway, 2003; Magnus, 2014). By conveying so clearly the esoteric ways in which bees participate as companion species and message bearers beyond their extractive labor of pollination and honey-making, Starhawk taps into the same pulse of communion and connection animating current concern for bees, if with more fantastical elaborations. The interdependent ontology with bees Starhawk evokes provides an inspiriting somatic guide for rituals and practices of interspecies solidarity with bees for non-fictional activists experiencing similar poetic responses to colony collapse.

**Queen of the Sun**

Director Taggart Siegel’s *Queen of the Sun: What Are the Bees Telling Us?* (2012), a Collective Eye production, like *The Fifth Sacred Thing* paints an erotic and sensuous story of the history of bees and humans, but here in documentary rather than fictional form. In concentrating on the communicative ways of bees, the film takes Karl von Frisch’s Nobel Prize-winning insights on apian semiotics and expands them into the spiritual realm, exploring the interspecies eroticism that intertwines our fates. Similar to how Herbert Marcuse (1974) imagined the future of science to be infused with eros, *Queen of the Sun* explores how the spiritual and sensual aspects of apiarists and other bee-lovers galvanizes their collective and individual praxis.

Many films in the 21st century have tackled the topic of colony collapse disorder. *More than Honey* (2013), *Vanishing of the Bees* (2009), *Bee People* (2014), and *The Mystery of the Disappearing Bees* (2010) all address how corporations have created an array of harms to bees, and how farmers, apiarists, NGOs, and others are fighting back to navigate the regulatory, social, economics, and political hurdles preventing swiftly managing colony collapse and getting food systems back in order. As much as dealing with factual aspects of the bee genocide is absolutely necessary, these films chiefly create feelings of panic and provide information, intending to motivate action against the epidemic—the information deficit model of science and politics. Uniquely, however, *Queen of the Sun* confronts the spiritual dimensions of what systematic harm to bees does to the human psyche and being through exploring the intimacy of human-bee relations.
The film’s undulating narrative conveys that our love for bees matters. That this gratitude and reverence impels us to throw ourselves on the machinery of agribusiness to stop harm to our insect symbionts, and to take it as a personal commitment to protect the bees through caring for them directly. While the film’s director Siegel previously directed other ecologically-oriented films such as *The Real Dirt on Farmer John*, the interspecies connection displayed in *Queen of the Sun* aims for the mystical. Like Starhawk’s novel, Siegel’s documentary taps into an obscured undercurrent of ecological and political energies waiting to be unleashed.

One reoccurring theme in the film is that western civilization has to our detriment taken the work of bees for granted, like air or water. Over the last 150 years, people shifted from seeing bees’ honey and wax production as gifts from nature, and came to expect their labor to produce commodities which could then be bought and sold on the market. Until the late eighteenth century, honey was considered so sacred a gift from the bees that it was not sold—it was only given as the gift it is. One beekeeper in the film compares buying bees for a hive to “cattle ranching” bees. The sacred apiarist instead seeks to find a wild swarm in need, and serve it through providing shelter, thus interacting with the bees as an act of service from the very beginning.

The film opens zooming out from a close-up of bees swarming and making a hive on what looks like a Christian cross, as an androgynous bee-covered priestess naked except for thousands of bees covering and swarming them from the waist up, cautiously yet confidently promenades the bees in butoh-like dance unison. This scene follows an epigraph from the acclaimed Spanish poet Antonio Machado (1875–1939), famous for his lyrics “caminante, no hay camino, se hace el camino a andar” (traveler, there is no path, the path is made by walking):

Last night as I was sleeping,  
I dreamt – marvelous error! –  
that I had a beehive  
here inside my heart  
And the golden bees were making  
white combs and sweet honey  
from my old failures

Without getting caught up in the ephemerality of a flower’s short lifespan, the bee goes to the nectar, makes love with the flower, and immortalizes that flower, long gone, in honey and pollen. The heart too, Machado intimates, can be a beehive, and this alchemical process of turning flower semen into food, all the while endlessly giving back to the plants themselves in a reciprocal offering of pollination, opens
the interstices of the heart otherwise cauterized in emotional forms of decay.

“Colony collapse disorder is just a name that has been given to a hive that has been found empty. The wax is there, the honey is there, but the bees are gone,” laments biodynamic beekeeper Gunther Hauk.

The first thing we look for [as a society] is the cause for that: who is responsible. We are not going to solve the problem by us killing a virus or a bacteria or a fungi, because the problem is an inner one. Personally, I am grateful for a crisis. A crisis will give us the possibility to learn something, if we are willing. If the heart opens up enough to tell the mind something. (Siegel 2012, 2:24–3:36)

Hauk’s notion of crisis according to the classical notion of the turning point in a disease, from which either recovery or death is the outcome, interprets the “colony collapse disorder of the human being” not just a preview of what’s to affect us, but also a moral failing of humanity. He sees the nurturing of bees, their thriving, as quintessential for our living in our full human(e)ness. Hauk discusses how swarming is a vital practice for the bees, and speaks of the joie de vivre bees experience during a swarm—a rare and peak experience of their lives. Hauk’s interest not just in the health but wellbeing and sensuous experience of hive life goes far beyond the scientific reductionism of what colony collapse disorder typically means in discourses centering on world economies and food security. Bee thriving includes joy, not only bare life.

Hauk’s humble wisdom and deep reverence for the spiritual dynamic of beekeeping is palpable. He sees the bee-human relationship as one of reciprocity based on consent, warning that if we fail to hold up our sacred role as protectors, that they too will withdraw their goodwill—with their lives. Of the great civilizations that emerged two to four thousand years ago in the Middle East and Europe, many connected reverence to the bees with reverence to the gods. That bees sustain us, and not the other way around, provides practical grounding for this reverence.

The epistemological humility represented in the film, that nature is more complex than we can comprehend, draws on the piety of the subjects interviewed. The idea that beekeeping is a spiritual practice that should be treated with respect and fierce protection of that relationship threads throughout the film. A New Zealand Manuka honey beekeeper draws inspiration from Maori traditions, where the culture looks attentively to changes in nature as important signs, harbingers that analogous shifts will occur in their own society.

Beekeeping can also be a perfect training grounds for what it means to live in a community, on a planet not fighting endless wars, but as a superorganism (Woolley-Barker, 2017), according to philosopher Horst Kornberger. “Monasteries are actually imitating a beehive,” believes
Michael Thiele, of Melissa Gardens. “There is this formalized striving for selflessness, for letting go of the ego, for working for the greater good of all of life.” The worker bees who are all female, give up their sexual life, and Thiele sees this as a sort of nunnish “renunciation” in service toward the queen, which lives and procreates for the entire colony. As the queen can lay more eggs per day than her entire body weight, the delicacy and precision of the entire hive concentrate around feeding the queen and brood to ensure the legacy of the hive. Bees cannot live alone; instead beeives truly function as superorganisms.

Icons of reverence for nature such as Michael Pollan, Vandana Shiva, and president of the Slow Food Movement Carlo Petrini populate the film’s apiary narrative, sharing the marvel of plants and the sacrament of food. Pollan evocatively muses that evolutionarily, “bees are the legs of plants,” commenting how the genius of flowers was to recruit bees to spread their genes around. Like Michael Thiele’s hypothesis, sacred scientist Vandana Shiva also views an “economy of sharing” between pollinators and plants. Monoculture, then, becomes the “original sin” of agriculture, for Pollan, as it requires pesticides to compensate for the lack of insect pest diversity that otherwise often keeps populations balanced in their feasting on a given crop. The entire system of input-dependency which is the so-called “green revolution” in agribusiness, begins with monoculture, even if it regrettably did not end there.

The California almond crop—the biggest agricultural export of the United States’ biggest state—requires 80% of all the bees in North America to be trucked in to pollinate this 600,000-acre monoculture around March-April every year, a bee food desert without pollen for the bees the other 50 weeks out of the year when the almond blossoms are dormant. One apiarist in the film calls this event a “bee bordello” mixing all the viruses and diseases from the visiting bees together. These port conditions for the bees is likened to the spread of chlamydia by sailors in harbor cities. These bees are too often treated as expendable farmed animals, the diminutive slaves of modern agriculture. The migratory business of beekeeping is an inevitable product of mega-scale agribusiness monoculture.

An additional oversight of this factory-farm method of agriculture, is that bees’ electrostatic bodies are designed to pick up small particles of pollen, but also can pick up pesticides, which they lack the enzymes to break down, according to the film’s entomologist May Berenbaum. Here, science is employed for empathy to drive action and understanding. Carlo Petrini argues that “pesticides on bees has the same effect as nerve gas has on humans,” destroying the “center of memory” of the hive. Even if bees live on, their ability to cooperate and build a
hive deteriorates, creating perversely formed, dysfunctional hive structures.

Queen of the Sun methodically describes the seemingly endless threats to bees, but always through the lens of a sacred reciprocal love and the desire to understand bees on their own terms. It identifies colony collapse disorder as a syndemic of genetically engineered plants, monoculture, the mechanization of beekeeping, neonicotinoids, glyphosate, the overbreeding of queen bees and artificial insemination, using pesticides to treat the Varroa mites plaguing bees in a pesticide treadmill of increasing inputs and pesticide-resistant mites, and numerous other anthropogenic causes known and unknown that together pose a complex threat requiring fundamentally reducing the economic pressures on bees rather than piecemeal reforms. And yet, the film shows how the apiarists and bees persist. Their faith in the sacred relationship they renew daily with their bee family they tend waxes rather than wanes with crisis.

Conclusion

The global response to colony collapse disorder has been narrowly construed by scientists, governments, companies, and mainstream activists, frustrated that these bee deaths disrupt their models of how the world should operate; but their ineffectual actions also have stimulated opportunities for widening the aperture on the underlying causes confronting this crisis in meaning and relating. Failing to account for the history and development of the mutual ontology altering relationships between human and bees, science alone cannot provide results that can address colony collapse disorder, nor can it convince the public without recourse to honoring the grief of our emotional world, lighting desire to experience our lived erotic ecology, and creating awe for the mysterious complexities of our Earth.

Spiritual connection to nature as exemplified through the bees and their decline is a crucial but often overlooked factor influencing some of the most influential activism. While local activism has dovetailed with tear-up-your-lawn initiatives and the need to develop a patchwork of “rambunctious gardens” (Marris, 2013) to woo back those beneficial organisms pushed out of urban areas, popular discourses uniting for bees have demonstrated that the majority of collective actions have amounted more to displacing the problem of agrochemicals and agribusiness to new less-tested chemicals than achieving a large-scale shift in the assumptions of pest-management. Yet, even in recognizing the political and business spectacle as failing to achieve healthy ecologies for bees, the fact that bees have created a rallying point for environmentalist actions—based on a perception of bees as more than dollar signs with wings—emerges in part
from the spiritual bonds that many share with them, even if they might not be able to self-report exactly their fervor in such articulations.

Decolonizing acculturated westernized, industrial, human perspectives not only liberates ourselves but also others around us—human and more-than-human—scientists, naturalists, and those reverent of creation. Those who so choose, can go some ways in becoming indigenous to a species, committed and intertwining our fate with another organism’s way of being and seeing, a sort of “melissamorphism,” just as Robin Wall Kimmerer (2015, p. 9) invites us to become “indigenous to a place.” One clear message from the failure of the information deficit model of science and policy to move action on colony collapse disorder as much as climate crisis, is that rationality shying away from the power and necessity of magic and spirituality for fear of being judged, has been used against reason in our age of spectacle. In our current era, political actors are slowly becoming less afraid of showing their spiritual and religious basis for their worldly commitments to the planet and its organisms—and in doing so, have elicited public admiration. We as humans can either claim our spiritual power as ecological beings, or lose to charlatans and zealots claiming divine authority for corrupt ideologies but doing so convincingly with verve.

Using the popular cultural media of documentary film and fiction literature, Queen of the Sun and The Fifth Sacred Thing provide glimpses into the power of connecting to feelings of sacredness, through transcending viewing humans and bees as separate species. These media serve as examples of how communities can inspire each other to act on colony collapse disorder by understanding this as a symptom of larger disorders in human actions, and take fundamental steps (like moving rapidly to local, organic, zero- or low-input farming methods) to de commodify and reconnect with their food systems. Even though their audience might be limited, they represent the tip of a much larger iceberg susurrating into formation.

Just as bees have a hive mind, so too the collective intelligence that can occur between loving humans and bees creates its own sort of interspecies hive mind, unlocking modes of flourishing for both species. By transforming Madrone into a bee priestess, capable of becoming a human-bee, Starhawk encourages us to initiate into cultural practices attuned to the rhythms and biosemiotics of other creatures. Rather than mere fiction, this speculative realist work offers far more satisfying and arduous rites of humbling oneself to the sweetest insects both so foreign and familiar than bee-washing consumerism. The spiritual reciprocity many apiarists attest to sows the possibility for an epistemic and ethical listening to the needs of bees beyond the reductionist, piecemeal policies—it cultures a deeper understanding of the ecosystemic processes supporting the lives of collective organisms. Far from
ancillary, these narratives of love and connection with bees, becoming-with-bees, provide a panacean apian perspective essential for calming us sufficiently to make sense of the impressive ecological shift required by humans to respect and honor the role of bees in our lives, and in so doing, recognize our own flourishing as interdependent beings.

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**Notes**

1. The current loss of communicative and material order in our own lifetimes mirrors what Stephen Toulmin (1989) describes in Europe during 1610–1640 as the breakdown material order created a zealous quest for certainty in universal and generalizable principles rather than attending to context and particularities. As we destroy the regenerative capacities of nature, our material ecology and culture also fragments, leaving us with a loss of grand narratives as well as pragmatic material scaffolds on which to erect meaning (Hendlin, 2019).

2. The Overton window describes the range of policies deemed politically tractable by general society at any given period. Policies that are not socially accepted become difficult to implement, but the range of approved policies can often swing widely due to updated circumstances (as witnessed during the corona pandemic).

3. An indication of human action as contributing to declining bee population can be illustrated in a quote by Nate Donley, a senior scientist for the Center for Biological Diversity likening the widespread praxis of transporting bee hives to almond plantations in Central Valley, California, for pollination as “sending the bees to war” (McGivney, 2020). This intentional act exposes bees to the unfamiliar setting of a monoculture, radically different from their natural habitat of diverse landscapes.

4. As an article in The Intercept (Fang, 2020) discloses: “Lobbying documents and emails, many of which were obtained through open records requests, show a sophisticated effort over the last decade by the pesticide industry to obstruct any effort to restrict the use of neonicotinoids. Bayer and Syngenta, the largest manufacturers of neonic, and Monsanto, one of the leading producers of seeds pretreated with neonic, cultivated ties with prominent academics, including vanEngelsdorp, and other scientists who had once called for a greater focus on the threat posed by pesticides.”

5. Neville analyzes the rhetoric of online beekeeping forums in the United States, noting that beekeepers describe this hobby vocation as an act of political resistance against, for example, the use of pesticides and climate change. It was common for members of the forum to participate in public demonstrations and sign petitions both online and offline. Beekeeping became part of their identities.

6. Before it was desecrated by patriarchy, traditionally “mistress” signifies the feminine equivalent of “master.”
7. In her acknowledgements, Starhawk notes that David Abram of *The Spell of the Sensuous* gave her the idea to include bees in her book (p. 485).

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