

# 11 Resisting Monsanto

## Monarch butterflies and cyber-actors

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### Introduction

Wouldn't it be incredible if she could talk and tell us where she was born, what her flight to Mexico was like, whether she flew across the heartland or down the east coast, the threats and ravages that she had to endure along her journey, what her winter was like, where she stayed for the winter . . . The stories this lady would tell!

(Bill S., posted on March 15, 2015, Dplex-L)

Bill, from New Jersey, hosts a virtual classroom to enable learning about monarch butterflies. In his post he is responding to a photograph a fellow enthusiast, took and shared through Dplex-L, an online forum to connect people interested in monarch butterflies (see Figure 11.1. In order to protect the confidentiality of participant identities, all user names in this chapter have been changed).

Part of Bill's enthusiasm stems from the fact that most annual generations of monarchs lead ephemeral lives of under a month, but the fall generation may survive up to nine months and thus these monarchs are able to perform the famed Eastern migration from the northern prairies to the central mountains of Mexico. Dplex-L serves as a means of sharing information about the migration with users located all over North America. The argument of this chapter is that non-humans can mobilize and be mobilized to resist power configurations. I expose this claim through the contrasting discourses and practices regarding Monsanto shared among a monarch butterfly amateur group that is part of the network society. My analysis is an invitation to consider these actions as a ramified form of contesting agribusiness practices that relies on the amalgamation of monarchs, communication infrastructures, and humans. By using the term "rhizomatic" (Deleuze and Guattari 1987: 9–12), I aim to demonstrate how this form of resistance is unruly and articulated through the sum of more than just human agencies. Rhizomes are subterranean stems that grow horizontally and that have nodes (bulbs) that mark the 'end' and 'beginning' of other plants. It is a totality formed by the sum of nodes and stems. It lacks a 'central' system. Deleuze and Guattari use the rhizome's structure as a proposition to overcome what they call "arborescent systems" (1987: 16). They believe that rhizomatic formations are suited for resisting structures of domination. In this chapter, I use rhizomatic resistance to describe a contestation movement that is an outcome of human practices enabled by and embedded in cyberspace and the landscape

itself. The chapter argues that what makes this movement successful is the possibility of matching ideas shared in cyberspace with on-the-ground practices, and that these are rhizomatic associations precisely because they emanate from different actors (human and non-human) working together. The article discusses the recent incorporation of Monsanto as a partner in monarch butterfly conservation. I elaborate on this partnership, showing that unregulated amalgamations such as this one give rise to contradictions that may constrain or change the movement's current interests.



*Figure 11.1* Photograph of a re-migrant Butterfly in a Texas field.  
Photo by Carol Clark “*Tom monarch in Texas photo from April 19th, 2014.*”

The complexity of the butterflies' long migration prompts devotional interest and study on the part of scientists and butterfly amateurs, such as Bill. Though there are small populations of monarch butterflies in Australia, New Zealand, Hawaii, and Spain (Agrawal 2017), these populations do not migrate very far nor do they display the remarkable lifespan extension of the East Coast monarch, which lives in Canada and the United States and migrates to Mexico. The West Coast monarch migrates to California for the winter. Both populations begin their journeys when the temperatures begin to drop on the northern prairies (Commission for Environmental Cooperation [CEC] 2008). While both the East and West Coast populations have experienced a decline, the East Coast population is larger and as such is the subject of prominent and tri-national conservation efforts. Some monarch experts claim that the cause of this decay in the northern habitat can be attributed to the decline of milkweed, which is the butterfly's host plant. These conservation scientists argue that massive use of glyphosate (the active ingredient of Monsanto's herbicide Roundup®) in the Corn Belt region led to milkweed decline and the lack of the host plant led to the decline of monarchs (Pleasant and Oberhauser 2013). Although there is skepticism among scientists of the causal correlation between the loss of milkweed and monarch decline (Agrawal 2017; Zaya, Pearse, and Spyreas 2017), since these findings reached the public, the loss-of-host-plant hypothesis has dominated amateur, media, and partnership efforts to halt the insect's decline. Schools, cities, and Dplex-L's cyber-activists participate in what is known as the 'plant-milkweed-solution' and this is also the theme that became the main focus of cyber-lobbying against Monsanto in this Dplex-L community. The recent call to citizen-scientists and monarch enthusiasts to plant milkweed is enabled by communication infrastructures such as Dplex-L. Monarch butterfly experts rely on this network of informed butterfly amateurs to accomplish conservation programs targeting the butterfly, such as the plant-milkweed-solution. Butterfly amateurs who use Dplex-L are ideal for this task as they already have an affective relationship with the butterfly. Many Dplex-L users plant and care for milkweed areas near their homes so they can rear monarch butterflies themselves. The practice of caring for milkweed and monarchs in the intimacy of the home promotes an affective bond with the insect, making users of this communication infrastructure prone to taking actions to protect the butterfly. This care is reinforced by a broader sense of the butterfly as "iconic," as described by Gustafsson, Agrawal, Lewenstein, and Wolf (2015). In this view, the monarch is a charismatic insect, a "vehicle connecting broader concerns about genetic modification, the ecological effects of herbicides, land-use change, and climate change" (2015: 6).

The practices of Dplexers involving monarchs and Monsanto demonstrate that the monarch connects actors that otherwise would be disconnected. I argue that, in adding complexity to the network that Gustafsson and colleagues (2015) describe, the channel that allows this connection-making – cyberspace – is also central to understanding these emergent practices in relation to Monsanto. Moved by the direct correlation they see between herbicide use and the insect's decline, Dplexers participate in cyber and grounded activities against

agribusiness that can be summarized as: 1) questioning agribusiness' practices and cyber-lobbying against them, 2) questioning conservation science's practices that incorporate Monsanto as a partner in conservation, 3) changing their local ecologies through milkweed planting, and 4) moving from anonymous forms of protest in cyberspace to lobbying for environmental regulation to protect monarch habitat. All together, these actions are effective in consolidating a network of experts and amateurs who share a concern about the effects of Monsanto's Roundup® (glyphosate) on monarchs, and who as a result of this concern push for policies, partnerships, and habitat restoration to counteract habitat loss. I argue that the effectiveness and limits of this outcome can be seen in the recent incorporation of Monsanto as a partner in butterfly conservation, in particular with Monarch Watch which is the organization that regulates the online forum. As I will develop further, Monsanto's inclusion in monarch conservation efforts reveals the complexity of rhizomatic resistance. It is a twofold process in which the expert-amateur cyber-resistance becomes solid enough to attract Monsanto's attention, an attempt to decode structures of power (in Deleuze and Guattari's terms), and then the corporation attempts to recode the network by becoming part of it. This incorporation reflects the unruly aspect of this resistance, as the rhizome's open and horizontal structure allows the featuring of diverse actors, even controversial ones. Along the same lines, it is this unruliness that becomes the movement's vulnerability. In this sense, the movement is open to the co-optation of agencies and actors that at one time were taking a critical stand and promoting contestation. These co-optation mechanisms seek to halt the creative potential of the rhizome, and signal the possible re-emergence of hierarchies. For example, by allowing the corporation to have indirect 'ruling' in the monarch conservation policies at large. Co-optation can also increase frictions that may disconnect amateurs from the unified goal of *saving* the monarch, which is also the biggest strength of this cyber-community. Although these effects are not necessarily totalizing, they reveal the possible pitfalls of unstructured contestation movements such as this one.

### **The contingencies of agribusinesses' practices and monarch decline**

Dplex-L political activity regarding monarchs and milkweeds is related to a broader recognition of insect pollinator decline in North America and its association with the neoliberal agricultural regime (Fletes and Ocampo, this volume). In 2014, President Obama created the Pollinator Health Task Force. Among its goals, the organization seeks to "Increase Eastern monarch butterfly populations to 225 million butterflies by year 2020" (The White House President Barack Obama Archives 2014). The White House public acknowledgment of pollinator decay directed attention to a scientific community that for years has been searching for the cause of the decline of monarchs and other insects such as bees. Monarch Lab, located in and studying the Midwest Corn

Belt, has correlated the decline of the insect to agribusiness practices (Pleasants and Oberhauser 2013) that arose and intensified under the North American Free Trade Agreement (NAFTA). Milkweed is a rhizomatic plant that propagates easily, so it poses a challenge to corn monoculture. Killing the weed while preserving the corn was not possible until 1996 when Monsanto genetically modified (GM) crops were developed. These crops were specifically designed to resist Roundup®. The loss-of-host-plant hypothesis suggests that the Corn Belt is the largest breeding habitat for the East Coast population (Pleasants and Oberhauser 2013: 2) and as such, the switch to GM crops has had a significant and negative effect on this population. Monarch amateurs who have monitored the migration in the adjacent ecologies for decades noticed this shift as well, and some of them brought the topic of the dramatic population decline to the online forum and quickly keyed in to Monsanto's possible role in it.

### **Theorizing networks, rhizomes, and resistance**

The contingent association between agribusinesses' effect on milkweed, conservation science, and butterfly amateurs' employment of communication infrastructures to mitigate the claimed effects of Roundup® arose in the midst of what Castells (2010b) calls the "Network Society," meaning a society "whose social structure is made of networks powered by microelectronics-based information and communication technologies" (3). Dplex-L practices and ideas about Monsanto occur in a cyber-specialty, a site that is in a state of constant change between the efforts of codifying and decodifying (Deleuze and Guattari 1987), forming rhizomatic networks through that tension. Parr's elaboration of Deleuze and Guattari's rhizome concept is that it "can serve to overcome, overturn, and transform structures of rigid, fixed, binary thought and judgment" (Parr 2010: 233). As mentioned, the rhizome metaphor is an invitation to shed the genealogical tree metaphor that conceptualizes human presence on earth in linear and "well branched," deep-structured terms (Haraway 2008). For Deleuze and Guattari, humanity enmeshes with non-human earth beings through different 'becomings' that are always in a state of change. A rhizomatic network therefore embodies the forces that at a certain moment can move or immobilize diverse bodies. It is a notion of amalgamated agencies of vital and self-organized matter (Bennett 2010; Braidotti 2013; Haraway 2008) that exceeds the human. The rhizome is unruly because the ability of these self-organized forces to enter into networks; meshing together is not constrained to human agency and, more importantly, occurs in relations with other matter and beings. The current milkweed presence in North America – often in urban territories – attests to this form of agency. The butterfly's complex life cycle and migration, which both inspire the planting of milkweed, also demonstrate rhizomatic agency. Through these lenses one can consider the contestation of agribusiness practices via an amalgamation of Dplex-L users, butterflies in migration, and milkweed growth in urban, interstate, or 'buffered' agricultural land.

***On agency, bodies, and resisting***

The action of resistance and the questions it poses have inspired prolific debate in the social sciences. In anthropology, resistance figured prominently in the 1970s, this is a first wave of resistance studies that inquiries into the conditions that prompt social change focused on land dispossession and concentration of ownership, embedding within the tradition of a Marxist lens (Bonnano and Constance 2007; and for a Latin American perspective see Palerm 2008). Emphasizing how capitalism tied resistance to domination through time, this tradition is attentive to the collective capacity to *act* against the social structure that reproduces domination. A second wave of resistance studies is characterized by efforts to capture emergent forms of social construction through resistance in individual and (less often) collective arenas (it finds roots on James Scott's (1985) propositions on everyday forms of resistance). Rather than attending to macro-structural change and investigating collective forms of resistance, anthropologists focused on subjective and subtle forms of resisting. Human agency became the analytical category with which to understand everyday forms of formative and transformative-emergent-structures. Although these analyses are critical to revealing how social protest worked or still works in different settings, to authors interested in networked movements the approach of agency-structure leaves unattended the possibility of seeing agency in more distributed, contingent, and unpredictable forms (Courpasson and Vallas 2016; Kurik 2016). For these scholars there is an urgency to enlighten resistance studies through a more open understanding of contestation. It's a view that calls for appreciating the forms in which resistance may be less massive and/or coordinated, and in which opposition may be non-human and entrenched with entities such as technology and software – and for the purposes of this chapter, with technology, plants, and butterflies. In this context, the rhizome metaphor is an invitation to see these power configurations as the result of distributed agencies that as such are undirected and in a constant process of transformation by being in the encountering (becoming state) of human and non-human agencies (Bennett 2010; De la Cadena 2010; Latour 2004).

***Utopian and dystopian cyber-politics***

Researchers of cyberspace (Kitchin and Dodge 2011; Malecki 2017)) argue that the virtual is directly tied with a “real world spatiality fixity” (Kitchin and Dodge 2011: 1–2). This is to say that cyberspace is enabled by material infrastructures that follow capital accommodation. It is an extension of capitalist relations that – as Castells (2010a) suggests – has changed the form in which we do and make research about political organization. Cyberspace connects humans around the world through an effective time-space compression. To some, this capacity to bypass spatial and social divisions is what mainly endows it with political significance (Graham and Khosravi 2002: 219). From political parties that connect members in cyberspace (Lusoli and Ward 2004), to

electronic forms of e-governing (Henman 2010), to reimagined communities in previous diaspora (Graham and Khosravi 2002), the consensus seems to be that political organization may not be in crisis due to cyberpolitics; rather, it is in a fluid and ramified state. These authors argue that such fluidity does not equal being un-situated. On the contrary, although scholars of resistance suggest that “the center, put simply, no longer holds, or at least not to the extent that it once did” (Courpasson and Vallas 2016: 1), to resist remains a *situated* activity. This complexity between tangible and intangible forms of ‘de-territorializing’ spaces signals that the often ungrounded nature of networked movements works in favor of the movement but also, occasionally, against them. The lack of earthly connections, or, as Deleuze and Guattari would term it, “arborscent territorialization” (1987: 295), has been highlighted as an obstacle to correlating the “tweet and the street” (Gerbaudo 2012), the cyber to the official petition or the cyber-adepts to the registered and political active party members (Lusoli and Ward 2004). This chapter supports the premise that environmental activism is effective as far as it is grounded. In this case, this effective feature occurs through the practice of planting and caring for milkweed in local ecologies and the possibility of sharing those observations and experiences through the cyberspace.

However, it also calls attention to the cyber and on-the-ground practices through which corporations target dissident consumers and co-opt buyers’ choices once aimed at contesting those same corporations (Bonnano and Constance 2007). In a parallel move to co-opt ethical consumer practices, we repeatedly see how big corporations grant money to citizens as a form of ‘greening’ the industry, turning it into a “green capitalism” (Bellamy Foster, Clark, and York 2010) as an attempt to secure once-dissident consumers. This is a topic that touches on the authenticity of resistance movements (Courpasson and Vallas 2016: 13). The question of authenticity has been particularly poignant in environmental resistance movements where participant profiles have been transformed from cutting-edge activists into insiders in governments and corporate circles adopting “a different, less fatal and more positive” approach to solving environmental crises (Castells 2010a: 234). Food activism – the topic that we are focusing on in this volume – faces similar tensions: on one hand it gains its power from being a shared concern for humans across the globe that mobilizes people to take online and on-the-ground action (Wright and Middendorf 2007). But, on the other hand, being a matter of public and private health also poses challenges to its cohesiveness as a movement with a unified agenda and a clear target (Counihan and Siniscalchi 2014). Finally, the addition of actors to the ‘net’ and expansion of its reach can tame or halt the duration and effectiveness of these forms of resistance. In this case, being a heterogenic collective moved by the butterfly is the source of the movement’s strength, yet it is also what opens the movement to co-optation practices.

### **Methods: a listserv as a field site**

In 2012, I registered for the Dplex-L email listserv as a means of contacting future research participants for a multi-sited ethnography on the social

networks and knowledge politics that characterize the tri-national monarch butterfly conservation program. *Danaus plexippus*, the scientific term for the monarch butterfly, inspired the list's name. Monarch Watch is the host institution of Dplex-L, and its director is the promotor of the 'Bring Back the Monarch' campaign. Monarch Watch promotes milkweed restoration and at-home monarch rearing, tagging, and tracking. The online forum was created as a tool to enable communication among monarch amateurs and experts to facilitate rearing and tagging.

Through the listserv, I met people whom I later interviewed face-to-face in Minneapolis, Minnesota; Toronto, Ontario; Point Pelee, Ontario; Chicago, Illinois; and Estado de Mexico and Michoacán in Central Mexico. After a year of following users' activities around butterfly migration at these sites, I documented how my interlocutors often referred to Dplex-L as the site where they 'go0'" ideas not only on rearing but also on the monarch decay problem at large. As such, I turned to Dplex-L not only for forging research networks but also to document the discourses people were sharing about monarch butterflies in cyberspace. I particularly followed user posts that stated political positions regarding strategies to conserve the butterfly from 2014 onward. My documentation revealed a transformation in the content and intent of the messages shared in the forum that occurred when users correlated Monsanto's use of Roundup® and its harmful effects on milkweed with the decline of monarchs. Two elements propelled this shift: on the one hand, a sector of conservation science recognition of the damaging role of GM crops and herbicide use for milkweed and, allegedly, monarch survival, and on the other, the empirical observations of the decline of the monarchs in the sites where Dplexers live.

### **Resisting through grids of knowledge and milkweed roots**

To make a case about what Dplex-L enables in the saving of monarchs requires a perspective that considers the materialities that make the resistance possible. I ask the reader to regard the physical things through which Dplexers gain access to the cyberspace as palpable infrastructures. The cables, electricity, and satellites that make the World Wide Web accessible are all things that are granted to Dplex-L users. The easy access of Dplexers to what in other geographies is still privileged infrastructure gives us a hint of the contradictions of the everyday more popular environmental cyber-resistance. This contradiction is something Dplexers themselves sometimes reference as well. The existence of Dplex-L is enabled by the same infrastructures that have also depleted monarch habitat: cities, cables, electrified houses, and chemical pollutants. Yet, the forum enables users to gain and share knowledge and empirical evidence of the impacts of food production and prompts them to take action through micro-milkweed restoration and other public arena actions aiming at restoring habitat. As the excerpts of some users' trajectories show, their care for the butterfly acquires political relevance through the forum and their actions. Anonymity, as well as temporal and spatial compression, gives



Dplexers a platform that reshapes their views towards monarch decline and propels them to take action. I trace the emergence of this shift from caring to action through communications that followed the Monarch Watch director's reply to a thread in Dplex-L, where he commented on the role that Monsanto has had in the decline of milkweed.

I followed a transformation in the online activity of users who, for years, had only started conversations directly pertaining to raising monarchs at home but over time became interested in the role of agribusiness in monarch population decline. Users posted information with the aim of raising awareness on how food arrives at their houses. As a consequence, some expressed their surprise at discovering that their own family members managed their land with Roundup®, or that the land adjacent to their 'milkweed patch' was sprayed with the herbicide by the city, or that their life savings were invested in Monsanto's stocks. In other words, the exchange of posts reflected how users acknowledged a new understanding of a problem they were witnessing in their own localities. This new understanding led to an awareness enabled by the flow of knowledge that Dplex-L offers in addition to the empirical knowledge of not seeing monarchs around. Through this knowledge exchange, many Dplexers learned that they themselves contributed to the same agribusiness model that is destroying monarch habitat but simultaneously were encouraged to counter this by participating in the "plant-milkweed-solution".

This shift acquired consistency through broad discussion in Dplex-L. To elucidate this point we will follow the trajectory of Janice on Dplex-L. Janice is a 77-year-old woman living in Minneapolis who rears and releases monarchs with the goal of increasing their numbers in the wild. During 2013, Janice's online activity was limited to the sighting of monarchs, eggs, and milkweed in her yard and neighborhood: "I saw my first monarch this afternoon. It landed briefly on a milkweed, but I did not find any eggs." In 2014 her posts were about the lack of monarchs in Minneapolis. Janice claimed that even though milkweed was widely available for the insect to feed and lay eggs on, she wasn't able to see them around: "In Minneapolis, I have only seen two monarchs and have not found an egg. Last year at this time with milkweed blooming there were several in my yard much of the time." Many of her posts from that year and the following summer were about how to take care of her monarchs at home and querying how other Dplexers experienced bonding with monarchs. For example, she relayed her everyday experience of watching the insects growing at home through stories of caterpillars fighting, or inquiries on how to fix the damaged wing of a newly enclosed male. In sum, Janice's posts were centered on details about bonding with butterflies and on acquiring advice on how to cure them, feed them, and provide them a habitat.

In late 2015 the tone and content of Janice's posts changed. Her online activity the day she shared a video on the damages of Monsanto to the American prairies, and later shared a petition to make politicians accountable for their efforts in regulating the corporation's practices over land use, marked a significant shift in her participation. Dplex-L conversation threads offered Janice a

venue to explore the linkages between ‘White House’ politics protecting agribusiness in the Corn Belt and the lack of monarchs in her yard. She and other users exercised this form of cyber-resistance by signing online petitions and sharing information with other monarch enthusiasts.

During those agitated months, at least eight petitions regarding monarchs and Monsanto were circulated. One of them requested that users sign a petition to join a group of Monsanto’s shareholders to demand accountability from the corporation’s CEO. The reply of another user showcases how online petitions mobilize users to other forms of lobbying: “I signed the petition and since we hold stock, I also wrote a letter to them.” Some users expressed surprise that a member of the group could also have *stock* in the corporation, and this incited awareness among users who owned mutual funds. Those interested in the post reached the conclusion they should supervise where their money is being directed, since one could easily own stock in Monsanto unwittingly. This awareness mobilized other forms of resistance through the client–business partnership accountability model targeting the corporation from the inside. The impact of other petitions can be seen in the creation of herbicide-free milkweed areas at different scales. The circulated petitions boosted the creation of butterfly-friendly parks and entire cities that adopted a full monarch-friendly policy such as St. Louis, Missouri, or the private adoption of medium-sized land plots that re-create prairies. All of these cases, with the exception of the petition to list the monarch in the Endangered Species Act (ESA), were actively lobbied for in Dplex-L during their initial stages and all revolved around lack of habitat or/and glyphosate’s effects on monarchs. The ESA petition was probably the most controversial for Dplexers since it was also understood as a means of restricting butterfly farm rearing and at-home rearing. It was not endorsed by Chip Taylor, the creator of the online forum, but more than once long-term recognized monarch scientists such as Lincoln Brower used the online forum to advocate for support on this petition.

Let us turn to other cases. Last year, a user named C.S. started a post with the sentence “Obama is in bed with Monsanto/toxic chemical companies. Unless that changes, the chemicals will continue to be conveniently ignored.” She added a long description of the problems of such an alliance, and described how she is observing the results of not banning pesticides in her yard:

I just found a bumblebee in my garage today. It was belly up in the floor. It was active a couple of days ago, building a nest. I took it inside and fed it with organic honey. I don’t know if it did good or not, as I couldn’t tell if it fed. . . . Time will tell, but I suspect neonics [the pesticide type used by Monsanto] were the cause of this.

(C.S., May 20, 2015)

What I see in C.S.’s post is a critical moment in the interface of the online and the on-the-ground world in which C.S. interacts. The on-the-ground observations of the dying bee have meaning and relevance in the forum because

monarch caterpillar growth is also affected by this pesticide (Pecenka and Lundgren 2015). C.S.'s observations of her surroundings are transformed in Dplex-L as a description connecting Obama, Monsanto, and the dying bee. This is a good example of how cyber-awareness is effective when it acquires sense through empirical connection with the monarch and its habitat (it is non-arborescent), and I argue that the lack of this earthly connection is a limiting feature on the transformative capacities of this network. An absence of monarchs in the local ecology becomes, for members of the Dplex-L forum, an indication of a larger problem. These empirical observations, which reinforced the recognition of dwindling monarch habitat, prompted users as C.S. to plant milkweed and participate in cyber-lobbying. For instance, C.S. was active in promoting the ESA petition. In a sense, this micro land restoration is reshaping the landscape. It is a form of 'fixing' the land through milkweed cultivation and caring for monarchs, activities that shifted from an act of amateur gardening to stand as the outcome of an online political mobilization. Monarch Watch plays a central, often ambiguous role in this practice. Its milkweed seed provision and networking makes this micro land restoration possible, but those same actions bestow monarch amateurs with the tools and knowledge to contest and question agribusiness practices and Monarch Watch's conservation agenda.

***Partnering brings fractures: on the controversies of agribusiness and conservation alliances***

The posts regarding Monsanto became more pointed when in January 2015 Chip Taylor announced that Dplexers could expect a new 'partnership' with the agribusiness sector, and that Monarch Watch was open to collaborate with this sector to boost conservation efforts for the butterfly. The announcement came as part of the 'heated' discussion on Dplex-L regarding the petition to list monarchs on the ESA. Chip didn't favor this petition and was vocal in Dplex-L and beyond, arguing that it promotes a "top-down approach to conservation and gives the impression that 'protection' will be achieved by government actions alone" (Taylor 2015). He opined that listing the insect would negate its iconic status. As an alternative to the listing, Chip argued for a collaborative approach. Some of the users were very critical of Chip's 'openness' to bringing Monsanto on as a partner in the conservation efforts instead of supporting the ESA petition. On March 2015, the partnership was announced by Monsanto and it involved a "1.2 million" dollars matching fund commitment with the National Fish and Wildlife Foundation (NFWF) and collaboration with Monarch Watch in the form of a grant to increase Monarch Watch's existent milkweed market. On several occasions a myriad of Dplexers recognized that the monetary contribution of Monsanto was undesirable but crucial. Some saw this partnership as the minimum ethical thing the corporation could do, while others saw it as an irremediable 'evil,' even if it did save some monarchs. These opposing reactions to Monsanto's inclusion in the alliance signal the diversity of the people involved, some of whom may agree with the goal of helping monarchs, but are

disinterested in protesting the activities of or even supporting the success of neoliberal agribusiness in general.

Although users were confronted by these contradictions, it did not disrupt the transformative actions of planting milkweed at different scales. It is these affective relationships between amateurs and butterflies plus the viability of recreating monarch habitat with relative ease (after all, this is a ‘weed’ that propagates easily) that help conservation scientists to realize the plant-milkweed-campaign. In true rhizome fashion, the tensions between co-optation and liberation are constantly at play. If we assess the success of this networked movement as the ability to bring back milkweed, and we assume that this will bring back monarchs, one can see that micro landscape reshaping and Monsanto’s funds to expand these efforts are a positive and palpable effective outcome of this resistance. However, Monsanto’s possible co-optation and the related frictions among the monarch butterfly community signal the limits of the creative aspect of the rhizome.

### **Conclusion: grids of resistance**

The chapter describes a resistance that takes place through an assembly of humans and butterflies connected through cyberspace and that propagates a milkweed root system for butterfly survival. For some amateurs, this engagement implies lobbying for changes to agribusiness’ damaging environmental practices both in the forum and off-line. For the great majority, the concern about monarch decline engages them in the efforts to make milkweed available in an effort to revert habitat loss. This form of enabling the survival of the butterfly through the plant-milkweed-solution speaks to a phenomenon of rhizomatic resistance to agribusiness corporations that in the public arena is exemplified through petitions that lobbied for government regulation over herbicides use, and for public herbicide-free spaces such as school yards, tollways, and parks. In the private arena, it takes shape through micro habitat restoration and awareness of the links between agribusiness and habitat loss. I suggest that this is a signal of the way in which the rhizome takes shape through everyday becomings between humans and non-humans. These alliances, however, may allow Monsanto to take a leading role in an amalgamation that gained momentum to contest its own practices.

This assembly of beings at work provokes the question “Who changes whom?” and opens the possibility of exploring social protest through the presence and actions of more-than-human entities. The users of Dplex-L have wide access to the extensive infrastructure characteristic of North America that depletes habitat, but that same channel provides resources such as the knowledge that travels through it, and facilitates political mobilization that enables users to embark on their own milkweed planting campaigns. The political position of Dplexers is therefore entangled in the infrastructure that enables its existence.

Environmental cyber-resistance movements have gained traction to the point of being substantially present in politics (Castells 2010a). But cases also suggest that though it may not have grounded connections or local networks, “the

Net” can encourage “passive practices” (Ward and Gibson 2008: 30). Having the capacity to act locally (Elyachar 2014; Lusoli and Ward 2004; Ward and Gibson 2008) may enable the possibility of mobilization promoted in cyberspace. In such a sense, the argument leads us to ponder how virtual reality is not necessarily dislocated, but how environmental cyber-resistance needs a grounded setting through which to take action to gain traction. Dplex-L and *Danaus plexippus* merge the virtual and the physical indistinctly, and we see here how this merging acquires meaning on the ground only through that indiscernibility. In that sense the cyber-grounded characteristic of this movement is crucial to keeping the transformative potential of the network.

Finally, I want to reflect on the question of how far cyber-resistance can go in consideration of the co-opting mechanism described. It has been widely argued that cyber-activism is now crucial in revealing agribusiness practices that damage the environment, and that cyberspace is the most successful communicative channel to raise awareness of local and global environmental crises and organize resistance against their root causes. The analysis of these co-optation practices indicates that by funnelling money and counteracting Dplexers’ cyber-activism with cyber-greening industry campaigns, Monsanto is now part of the same network movement. It simultaneously ‘destroys’ and ‘creates’ monarch habitat. However, instead of seeing this ‘uncomfortable’ presence as a total co-optation, it is precisely the rhizomatic nature of this networked conservation effort that enables unpredictable outcomes. In this view, corporate power presence may indeed be a sign of how effective the counteracting movement to Monsanto may be. It is possibly the source of its own contradiction. But the acephalic character of this cyber-movement halts totalizing projects. Cyberspace is a decodified space, and in that sense, it provides the means to enable new or ‘dissident’ networks.

In the reality of an environment that itself calls for more than human beings, cyber-activity is territorialized when the ground, the cyber, the human, and other biological organisms can enter into becoming states that permit change. The case presented in this chapter demonstrates that this is a form of resistance that exists through ramifications expressed in milkweed roots and butterflies and can shed light on how environmental cyber-resistance movements occur through the distribution of agencies in which non-humans mobilize and are mobilized to resist power configurations.

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