Inside the Black Box of the Agricultural Treadmill:

Organification, Cooptation, and Masculinity in the Organic Dairy Sector

By

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Abstract

This dissertation uses the situated, rich, and contradictory stories of conventional dairy farmers to illustrate the barriers and opportunities the United States faces in transitioning our agricultural system into something sustainable. Sociological explanations of the agricultural treadmill – which describes the economic concentration and ecological degradation that has accompanied the rise of industrial and capital-intensive agriculture – often focus on political economy, prices, and market relations. This approach tends to conceive of farmers who are forced to "get big or get out" as rational actors caught in an unfortunate economic structure. This dissertation goes beyond rational explanations based on unequal power dynamics, or rather it goes deeper into these dynamics, exploring the black box of how and why farmers are complicit in their own exploitation. The rise of the organic dairy market presents an unusual opportunity to observe the mechanics of how ecologically destructive hierarchies of advantage are reproduced. In a second dissertation, for a PhD in Environment and Resources, I tell the story of sector-level "conventionalization" of organic dairy, driven by profit-hungry investors and a complicit state. In this Sociology dissertation, I describe the social-psychological barriers that many American farmers face, preventing them from embracing, or even being aware of, a sustainable vision of agriculture that may be congenial to farmers but not to agribusiness. Through several particularly stark mismatches between farmers' economic incentives and the choices they actually make, I explore the meanings that farmers attach to the epistemic objects of "good farming," organic, and environmentalist, and where those meanings come from. I first explore the mismatch between conventional dairy farmers' stigma against and fear of organic before they convert to organic for the price premium, and their subsequent ideological embrace of sustainable agricultural practices once they try it – a process I call "organification." The second

mismatch is between converted farmers' new enthusiastic embrace of agroecological principles, and their continued resistance to environmentalism more generally, in particular their continued denial of climate change, which disproportionately impacts organic farmers. Using data from farmer interviews and participant observation at putatively "grassroots" farm associations, I illustrate how anti-environmentalism among farmers is cultivated by agribusiness and fossil fuel trans-national corporations that have coopted the institutions and civic totems of agricultural life. Furthermore, the stigma with which "environmental" has been endowed, together with industrial agriculture's valorization of dog-eat-dog competition and steep social hierarchies, produce a context in which performing anti-environmentalism has become a way of signaling the kinds of masculinity that are valuable for maintaining one's position in social hierarchies.

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Chapter 1 : Introduction

I find Seamus out in the barn. He's wearing blue rubber bibs over a forest green sweatshirt. He keeps the hood up against the chill air. He's feeding three calves in a small room with a low wooden ceiling and a straw floor. Two of the calves were born this morning. The third yesterday. It's a tough time of year. Cold and rainy and windy. One calf is shivering, a lot. Seamus lets one feed for a while, sucking milk out of a giant bottle with a red rubber nipple. Then Seamus surprises me, and the calf, by forcefully inserting a tube down its throat into the stomach and pouring in the milk. The calf struggles and cries loudly, eyes wide with fright. Seamus explains that he is "drenching" the calves. And it's not just any old milk, but the antibody- and nutrient-rich first milk that a cow produces after giving birth, called colostrum. "You see," Seamus says, "a calf is born with no antibodies in their system, so they have no immune system." They get their first antibodies by drinking colostrum. Seamus emphasizes, "If a calf gets colostrum within the first two to three hours of life, you can really really reduce health problems, when they're young and throughout their whole life." He's using the feeding tube just to be sure they get enough.

As one of the "five C's" of cow care – colostrum, comfort, cleanliness, calories, and consistency – conventional and organic dairy farmers alike rely on colostrum. But organic farmers pay special attention to prevention in ways less common in conventional: lower metabolism and milk production, less concrete, more exercise, grazing on fresh and diverse pasture, and hearty genetics, among other things.

Seamus explains how important prevention it is for organic dairy farmers. "It's all about their own immune system. Keeping it healthy and making it better." Under the National Organic Standards, dairy farmers are prohibited from using antibiotics and most other synthetic medications. For farmers who already pasture their cows, giving up antibiotics is usually the scariest thing about going organic. Many put off going organic because they consider it cruel to deny medication when it's needed. But Seamus's cows only got healthier after going organic, and I've heard this from most of the organic dairy farmers I've talked with.

"You will hear this from a lot of organic people." Seamus tells me. "They first convert because of the money, but then they realize after they convert, that the cows are healthier. If you tell a conventional person that, they will scoff at you. But you have hard-core conventional people who converted only for the money, and realized, wow, it really works and the cows are healthier."

As a staunch free-market advocate with little patience for environmental regulation, little time for idealism, and an unquestioning faith in innovation, growth, and technology, Seamus talks about "hard-core conventional people" from his own personal experience. Seamus went organic not for ideological reasons, but to reap the economic rewards of this "niche market."

After the calves are fed, Seamus and I walk back to the house, an inviting yellow Victorian, substantially remodeled with large windows over-looking the pastures and the mountains beyond. A statue of Saint Francis greets us on the front porch and a cross is set out on the table by the entrance. Inside, Seamus's wife is home-schooling the two youngest of their three strapping boys. Their home is elegant yet practical and there is a sense of well-organized purpose. In every room are framed messages to inspire hard work and remind those inside of their purpose, the larger truths, and the goodness of life.

Background

In 2016, I embarked on fieldwork to investigate how the collaborative institutions of a mission-based, values-driven cooperative – the CROPP Cooperative (known by its brand name Organic Valley) – could influence the cultural worldview of organic farmers, with respect to communitarianism. I address this subject, as well as structural conventionalization in the organic dairy sector, in a separate dissertation in Environment & Resources at the University of Wisconsin-Madison's Nelson Institute of Environmental Studies, which will be completed in July 2019 (Anderson, 2019). The chapters contained herein reflect three unanticipated discoveries made during field research, as summarized at the end of this introduction. This switch in, or addition to, my original focus primarily resulted from seeing the world through farmers' eyes instead of seeing how farmers looked through my eyes.

Methods

This is a qualitative research project. Many aspects of the social world cannot be quantified objectively, and many important processes and causal mechanisms cannot be discovered in available quantitative data. As firmly established in the National Science Foundation's 2004 report on the Scientific Foundations of Qualitative Research (Ragin, Nagel, & White, 2004), studies that rely entirely on qualitative data can be extremely valuable, and qualitative research is often the only way to discover and understand complex phenomena. As described in the National Science Foundation's 2009 report on Interdisciplinary Standards for Systematic Qualitative Research (Lamont & White, 2009), qualitative researchers are trained to

adhere to systematic standards to prevent bias and achieve transparency in their assumptions, analyses, and conclusions.

Data collection

Data for this project come primarily from interviews and participant observation. I completed interviews with 86 individuals, 60 of whom were farmers. Non-farmer interviews included the CEOs of three milk processing companies, three farm workers, staff at Organic Valley, environmental professionals, organic certifiers, and agronomic professionals. Thirty of the 60 farmers were member-owners of the Organic Valley Cooperative and the remaining 30 sold their milk to various other processors and brokers. Farmer interviews occurred in five regions chosen for maximum variation along the axis of tending to have more back-to-the-land or small-scale farms at one end and tending to have large and productivist farms at the other end: two counties in northern California and one county each in southern California, the Green Bay area of Wisconsin, and the Driftless area of Wisconsin. The Organic Valley farmer sample was selected from their population of farmers in these regions. Staff at Organic Valley provided me with a list of their population of farms and farm characteristics and I selected farms to achieve variation in region, farm size, and how engaged the farm is in Organic Valley governance. Within these categories, I selected farms at random. I used a snowball sample to locate non-Organic Valley farms. Of these non-Organic Valley farms, I aimed to interview at least one farmer selling to each buyer (processors and brokers, such as Horizon Organic) in the local market.

Because my intention was to research cooperation and communitarianism, I pursued a 100% response rate and was nearly successful. People even remarked that they'd heard I'd gotten so-and-so to talk, and they were surprised. Interviews lasted around three hours each near

the beginning of field work, and slightly less after a few months in the field. I also conducted follow-up telephone interviews with producers around certain events, to get their reaction, for example when Horizon canceled all of its producers' contracts, or before and after the Organic Dairy Association (ODA) meeting, to learn about farmers' expectations and reflections.

I conducted at least seventeen days of participant observation: 2 days at a dairy business association in California, for which I use the pseudonym California Dairy Alliance (CDA); 3 days at an organic dairy association meeting, for which I use the pseudonym Organic Dairy Association (ODA); 4 days at Organic Valley meetings; 2 days at county fairs; and 2 days at Farm Bureau meetings. I also stayed with several producer families for one to four days.

Data analysis

For data analysis, I used the grounded theory methodology (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1998). Grounded theory is a context-rich methodology that allows for realistic, insightful, and logically-integrated theory generation (Corley, 2015). Grounded theory methodology allows the researcher to build theory from empirical research rather than purely from a conceptual basis. Grounded theory entails iteratively proceeding through several overlapping stages: 1) data collection, 2) data analysis, 3) hypothesis generation, 4) hypothesis testing and refining through (back to 1) new data collection and analysis. The formal practices of grounded theory are referred to as theoretical sampling, close (or theoretical) coding, constant comparison, and theoretical saturation (Charmaz, 2006).

For expositional purposes, this dissertation highlights several families. My conclusions, however, are based on the whole set of data described above. I have changed the names of all

participants and made other adjustments to inessential farm characteristics to protect their confidentiality. The Hispanic-sounding last names are actually Portuguese; I chose them to recognize the substantial Portuguese-American community of farmers in northern California.

Summary of chapters

The chapters contained herein reflect three unanticipated discoveries made during field research. The first came shortly after I began research, when I discovered what organic dairy farmers already knew – the voluntary organic standards, whose efficacy was so hotly contested in the conventionalization literature (Guthman, 2004), were making more progress in getting producers not only to adopt but to embrace sustainable agriculture practices than any incentive or education program I'd heard of previously. It was a beautiful feeling to hear farmers' stories of waking up to (some of) the principles of agroecology as if from a blind sleep. I call this "organification" and it is the subject of Chapter One. The second discovery arose when I decided during fieldwork to add participant observation at the annual meetings of several grassroots farm organizations. At these meetings, I stumbled into witnessing the micro-politics of the agricultural treadmill (Cochrane, 1993), both in terms of the specific practices and routines through which agribusiness power grows and concentrates, as well as the unwittingly complicit role of producers who adopt knowledge and prejudices that serve more powerful actors' interests better than their own. Because boundary work at these meetings controlled the definition of epistemic objects (like environmentalist, but also worker) through ritualized moments of shared excitement (collective effervescence), I call this chapter "The Civic Totems of Conventional Agriculture." Third, through spending time with farmers who embody a dominating version of

masculinity, I discovered (what so many already know) the invisible work done by gender hierarchies to coerce actors into aggression, including towards the environment.

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Chapter 2 : Organification

Introduction

The idea of organification was first suggested to me by Candy Kavanaugh, director of member services at Organic Valley, in one of my very first interviews. This is what she said:

"The number one reason that most of our members joined us, after the initial group, was the financial aspect of it. Nobody believed in the beginning that dairy farmers would be able to dictate their pay price and get that premium for their milk. But when that started to pan out and more farmers were struggling with the natural ups and downs of the dairy industry, that became a driver. So what happens, I would say with 80% of the cases, is that after farming this way after even just a year, the farmers become advocates for the environment, for healthier food, for "better for the planet" practices. One of the biggest concerns we get from conventional farmers is, 'what am I going to do when my cows get sick?' And usually the first year can be rough, especially on the calf. But then they're amazed because the mortality goes down. We have many many farmers who have no calf mortality at all or really low."

Without thinking too much, I suggested the word "organification."

Candy didn't hesitate. "I love that."

Organification is the word I've chosen to describe a phenomenon in which conventional farmers who are cynical about organic agriculture but convert for the price premium, undergo an ideological conversion in their beliefs and values about organic based on their personal experience of transitioning their farms to comply with the national organic standards.[1] Once they

[1] Rosin and Campbell (Rosin & Campbell, 2009b) presented the idea of organification at the European Society for Rural Sociology in 2009, but ended up not writing the paper. They describe a hypothetical "tendency for conventional agricultural systems to adopt social and environmental relations more commonly attributed to

start using organic farming methods, many of these "conventional types" become personally invested in organic methods as the evidence from their own daily practice convinces them that it works and visibly contradicts the dominant narratives of the dairy industry, including what many dairy farmers learned at university. Farmers perceive that cow health improves, soil fertility rises, and, in many ways, farming becomes simpler and more satisfying (although not strictly easier). A mid-sized organic dairy farmer in Northern California said, "You will hear this from a lot of organic people. They first convert because of the money but then they realize after they convert that the cows are healthier. If you tell a conventional person that, they will scoff at you. But you have hard-core conventional people who converted only for the money and realized, 'wow, it really works, and the cows are healthier.'"

Organification is far from a uniform phenomenon and rarely encompasses a complete conversion to the "core values" of the organic movement. Yet, despite its limited scope, it has had profound impacts on farmers, ecosystems, and market relations in certain pockets of the economy. And this is worth noting, both for environmental sociologists and food systems activists. My conception of organification is limited to the individual level – what individual producers experience. I make no claims (here) about how the organic standards affect the overall dairy sector or the agricultural sector more broadly. Furthermore, I make no claims about organification beyond the case of dairy; in fact, certain characteristics of the dairy sector appear to make for particularly fertile ground for organification.

This chapter begins by placing organification in the context of the "conventionalization" debates. I then describe a small addition to the methods section provided in Chapter One, which I made to pursue this question. I then present the main findings of this inquiry, moving from

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organic agriculture". I did not explicitly investigate this sector-to-sector kind of organification, but my data does not support their thesis.

conventional farmers' pre-organic baseline approach to farming, through the agronomic impacts of the transition, and on to the ways transitioning has affected more than just their land and animals. The chapter finishes with a consideration of the variation in organification, including two producers with minimal or no organification, followed by concluding thoughts.

Why does it matter? The conventionalization debates

There is a substantial literature exploring the idea that organic agriculture has been "conventionalized" (e.g., Buck, Getz, & Guthman, 1997; Guthman, 2002, 2004). These arguments reflect a broader debate about the potential for voluntary standards to achieve desired social outcomes (Bartley, 2018; Guthman, 2007), and the extent, more generally, to which institutions are amenable to fundamental reform, especially concerning environmentally destructive practices (Meyer, Jenness, & Ingram, 2005; Obach, 2017).

Conventionalization refers to a diluting or cooptation of the early goals, methods, and outcomes of organic as the market has grown out of the hands of the idealistic pioneer farmers, consumers, and natural food markets, and into a market largely owned and controlled by large, profit-driven corporations, many of which were conventional food companies that added organic lines. In brief, conventionalization describes the process by which organic agriculture increasingly takes on the characteristics of mainstream industrial agriculture (D. Constance, Choi, & Lara, 2015). Phil Howard's (2009b, 2009a) powerful graphic representations of one aspect of conventionalization, showing how a few corporations came to own so many of the organic brands we know, shocked a generation of food scholars and activists.

The claims are that as corporations control progressively more share of organic production, and progressively more nodes of organic value chains – from the land and labor of

farming, to processing, logistics, and retail – the practices of organic farming, the contents of organic food, and the relationships, especially the power dynamics, have come to resemble the conventional world. The network of small, diversified, closed-system, independent farms marketing their products locally, was replaced by large, input-intensive, monocrop farms owned by far away corporations marketing through giant supermarket chains.

In terms of production, organic farming is purported to have taken on an "input substitution" model in which growers maintain an industrial approach to production, replacing synthetic fertilizers and pesticides with purchased off-farm "organic" inputs that are allowed under the organic standards. For example, organic dairy and meat are now sometimes produced on giant, industrial, intensive confinement operations.

The theory explaining these trends has several dimensions, drawing primarily from neo-Marxist political economy. First, as agribusiness corporations capture more power and profit, they exert downward pressure on farmgate prices, leaving producers with no choice but to respond to price pressures by adopting industrial practices or exiting the market. Second, corporations with disproportionate market share and control of resources successfully exert pressure on the National Organic Standards Board (NOSB) and the USDA to relax or water-down the organic standards. Finally, new entrants who join the organic market to capture the price premium – producers, processors, or other nodes – are less committed to the original goals of organic, and the "authentic" focus of the early movement dissipates.

A number of scholars have pushed back on the conventionalization thesis, criticizing a "politics of perfection" (Dupuis and Goodman 2005: 362), and establishing through case studies that the reality is much less grim in general and much more uneven once you look outside of

California, where much of the early conventionalization research and theory took place (Campbell, Rosin, Hunt, & Fairweather, 2012; Coombes & Campbell, 1998; Lockie & Halpin, 2005). These authors challenge the "inevitability" of conventionalization and emphasize the importance of local context (Best, 2007). Some have argued that conventionalization may be a useful word for vernacular and popular understandings, but it is not theoretically useful.

An outsized contribution to this literature comes from New Zealand, where well-organized, multi-year research has examined multiple aspects of organic production in several different commodity sectors (Campbell & Liepins, 2001; Campbell & Rosin, 2011; Campbell et al., 2012; Rosin & Campbell, 2009a; Schewe, 2014). These scholars, generally speaking, find much less evidence of conventionalization. They dispute both the claims that organic practices come to resemble conventional, and the claims that organic agriculture tends towards a binary distribution of very large farms and very small (authentic organic) farms. However, as this work comes from a small country with a unique climate, a unique national politics, and a particularly small pool of buyers, it is important to explore this question elsewhere.

One study has looked specifically at the question of conventionalization in the organic dairy sector. Guptill (2009) undertook an exploratory qualitative investigation of whether and how the organic milk value chain in upstate New York is conventionalizing. Overall, she found two distinct trends acting in opposite directions. She pointed out that organic milk, from the beginning, was based in the conventional model. The USDA regulations governing organic dairy have largely facilitated the replication of this conventional model. On the other hand, she found that some formerly conventional dairy producers were responding to these pressures by embracing an authentic organic model and replacing centralized marketing with more direct and local relationships. While Guptil's analysis was exploratory, she concludes that "many [organic

dairy farmers] come to embrace fundamental principles of the movement after transitioning, indicating potentially a broader counter-trend to conventionalization" (Guptill, 2009). She suggests that future research investigate this question further by exploring organic dairy farming as an ongoing career, in particular, how farmers decide to go organic and whether and how organic farmers go deeper into an authentic model of organic over time.

In my own results (Anderson, 2019), I find substantial conventionalization of organic dairy at a national scale, including through regulatory capture of the National Organic Standards, non-enforcement, fraud, pressures from industry lobbying groups, concentration in ownership along the value chain, low producer pay prices, and through the pool of organic producers who have, indeed, become much less committed to the ideals of organic. These results, especially in comparison with other countries, highlight specific aspects of the U.S. context as well as broader and more universal structural forces, that contribute to conventionalization. It is in light of this conventionalization that understanding and documenting organification – the powerful potential of organic, and the reason to safeguard it – is so important.

Methods

This body of research has raised and answered important questions, continually refining our understanding of a critical policy tool. For the most part, this body of research has explored broad processes, without attending sufficiently to the real people who constitute the theorized actors and actually interact with standards within specific political economies and cultural value systems. I did not set out in my dissertation field research to investigate organification, but in the process of my ethnographic research on the institutional foundations of cooperation in the

organic dairy sector, I got to know a lot of farmers pretty well, and to see organification and conventionalization through their stories.

Based on my early conversation with Candy Kavanaugh, the Organic Valley director of member services, I added questions to my "institutions of cooperation" interview instrument that I hoped would provide data about organification. I asked participants to tell me about their transition to organic; why they decided to transition; how they expected and wanted going organic to change their farm or their life; what social actor(s) played important roles in their decision to transition; how going organic has changed their farm, their beliefs, values, attitudes, and relationships; whether they wish that all farming was organic; and what they would keep from organic if they went back to conventional. I made sure to ask these questions in an open way so as not to lead participants into my hypothesis, which was that organification happened *after* the transition and it was not the cause of the transition.

I didn't always get a chance to ask all of these questions, as my interview style was informal, mostly fitting my questions naturally into the conversation without looking at the guide. The guide also evolved as my field-derived knowledge developed. Some of my organification data were elicited by these questions, but much of it came out in talking about other things, like agronomic practices or their involvement with farm associations.

Before organification: proudly conventional

In this section I use exerts from interviews with two families to illustrate some of the conventional commitments organic dairy farmers had before they went organic. To understand conventionalization and organification, it's important to know what kinds of people are joining the organic sector, both to understand the changing composition of the organic farmer pool and

to understand the baseline from which the transition experience may cause some metamorphosis. These two families are larger than most organic dairy farms, more competitive and growth-oriented, and more engaged politically in the sector. However, they are not unrepresentative of farmers' pre-organic commitments. I chose the Bankers to illustrate their emotional attachment to their registered Holstein cows and to participating in conventional dairy social life. I chose the Albertos to illustrate the cultural norms around high-technology and high-yield production, including using rBST and milking three times per day.

Mick Banker and the "colored shavings"

Mick Banker is an intense presence. He seems tall, but I don't think he actually is. His posture has the appearance of someone who is too focused on work to pay attention to healthy posture. He's wearing a denim button-down sporting the Organic Valley logo, tucked in to clean jeans. His voice is raspy, but it booms and reverberates around the room. He can spit out agricultural statistics like a computer, and his immense knowledge is as intimidating as his physical presence. He's a good talker. He understands how to fill any space in the conversation, and it's easy to let him because his memory for detail and appreciation of humor is riveting at the same time that the pace and harsh volume is exhausting. He sits in his office under a ten-point buck elk shoulder mount. The room is crowded with tenuously balanced, partially unpacked boxes and piles of papers.

Mick is 64 years old and he milks around 1,050 cows with his daughter Anya in Northern California. They're so big that they've been accused by neighbors of violating the pasture rule, but after three hours of listening to his endless interest in pasture, soils, organic matter, compost,

attention to thistles, and biological life underneath his grass, I wouldn't be surprised if they're in full compliance. Mick is creative, experimental, and hard-working.

Mick's parents immigrated from Ireland and their dairy was the pulse of the family, spoken about at the dinner table and something everyone played their role in. Mick fell into a particularly weighty responsibility for the family farm when his father ran into health problems and his older brother, the one groomed to take over, met a premature death. Mick laid to rest his dreams of going to Cal Poly and, against his parents' will, dropped out of high school to run the farm. Never having left the farm, except to hunt and go to farm-related events, Mick's whole world was dairy.

He's an entrepreneur who gets excited at new opportunities and doesn't understand the idea of a vacation. Mick sometimes tolerates vacations and domestic indulgences, like remodeling the house, for the sake of his wife, who he lovingly calls his girlfriend. But he'd rather put up another barn. On the subject of vacations, he had this to say, "We went for four days to Monterey. I took the soil fertility book. I read the book every day. I got up at 4:30 like I normally do and went out the back door. There's a Starbucks right around the corner on Cannery Row. I get my coffee and I read my book for 2 hours. Then I get back to the hotel. Then she's getting up. Okay. It's hard that this has been your life, all your life, just to show, I get a kick out of people retiring. I think most of us farmers just get tired. We don't retire."

Mick is an associational type, active in a number of different farm groups. Mick isn't just associational, he's downright cooperative. He balances the dual impulses of competing to get ahead and cooperating when it's clearly in the best interest of the group. I have a clear picture in my mind of Mick at the Organic Dairy Association (ODA) annual meeting, scampering from table to table, passing out the flyers that Organic Valley farmers had put together outlining a plan

for farmers to work together to prevent oversupply and low, volatile prices. He wanted to see organic farmers cooperate together in solidarity and achieve the kind of supply management that would raise their prices.

Before they went organic, in 2003, he and his daughter were obsessed with showing cows. "Anya showed at Madison, we went to expos. She was on the colored shavings. We had the best three grand champion cows at the World Dairy Expo."

By "Madison," Mick is referring to the World Dairy Expo, the largest and most important dairy cattle show in North America. It's a five-day event held annually in Madison, Wisconsin, where prize dairy cattle and the newest technologies are showcased. Vendors, speakers, and participants come from around the world. By "the colored shavings," Mick is referring to the special bedding the Expo uses to distinguish the winning cattle. It's a short-hand for prestige. Mick goes back to talking about the colored shavings at different times throughout our conversation. The cows that go to the World Dairy Expo are the best of the best. Local champion cattle face tough odds in the steep competition. Mick remembers all of the details like it was last week.

"The highest we ever got was 7th place in the heifer class. Our heifer won everything on the west coast. We got 7th out of 45 and if she would have got 6th she would have got nominated, but she got 7th. We took a cow back there one year that stood 11th out of 28 mature cows. She come home and they reclassified her as excellent 95. The first cow we ever had go 95 points. So she wasn't a bad cow to go 95, but she's still 11th back there. Eleventh. A little bit of politics on the halter, but still you might have only moved her up a couple of placings. You get to Madison and the competition… you are with the best. It's the best of the best. You've got the

best of Canada, you've got the best of the United States and if you stay at the top 10 you are doing pretty damn good."

The Bankers had put off going organic because they were attached to their cows and they were worried about what would happen if they couldn't treat them anymore. Especially Mick's daughter Anya. She was absolutely against going organic.

"It was 2002. We started with land, and we shipped our first [organic] milk in 2003, November 2003. It took us forever because we had the registered cows and we were addicted to registered cows, okay? Every time a cow looked at us we gave them a shot for something. Yeah and Anya was like 'Oh my god dad, they are going to die, they cannot do this.' You've got to remember, we've got a 30,000 pound herd average [extraordinarily high production per cow]. All excellent cows. We're going to have 12 gallons a cow. And our veterinarians had us so tuned in to showing cows in the colored shavings and doing everything. And somebody going organic can't even treat them with antibiotics? They are all going to die. How could you do that? I go, 'we are going to try 100 of them.' We were milking 600 cows at the time. 'We can have a split herd. I'll build another milk house, we will milk the organic first. We will take these ranches that qualify. We will take the young calves, 6-8 months old heifers, and put them all on organic, no antibiotics no nothing.'"

Different people have different symbols and visions of success. Mick's conventional dairy farm was a well-oiled machine and his high herd average showed it. For many conventional farmers, high yield and placing in cattle shows are how they visualize their success. And these go together. The judging criteria for milk cows evolved to mirror those attributes thought to indicate the highest production and healthiest cows – healthiest, as we'll see, as relevant for concentrated confinement feeding operations, not for grazing on hilly pastures. As

we'll talk about in Chapter Three, cattle shows are sites of collective effervescence where shared visions and commitments are formed, as well as sites where social and cultural capital is earned. Other farmers I spoke with had similar attachments to showing cattle, and I even ran into Mick's daughter Anya and Suzanne, an organic dairy farmer who we'll meet in a few pages, at a cattle show. They weren't showing, but it's still a meaningful part of their lives. The Bankers's dairy is the center of their lives, and the social life of their dairy community is built on the conventional model. Once they transitioned, they would no longer have the kinds of cows that win prizes at conventional cattle shows, because the traits that are best for organic aren't valued.

The Bankers went organic for the money, but they didn't seek out this financial opportunity. They were convinced to transition by their processor, Clover Stornetta, located north of San Francisco. Their processor didn't seek out organic either; it was a business move. Clover profited from their reputation for quality milk, and they offered a line of non-rBST milk for consumers wary of drinking artificial growth hormones. When their competitor, Albert Straus, became the first dairy company on the West Coast to go organic, Clover felt they had no choice but to do the same if they were going to keep their market share.

Mick takes me through the history. "Clover started the organic cause Albert had organic and Clover was competing with Albert. All Clover had was North Coast Excellent. Albert has organic milk. 'Hey we got to get organic milk. We've got customers in San Francisco Bay area they want organic milk.' So it was Clover that convinced us. 'Try it Mick. you are a good dairyman. Try it. I can pay you an extra $3 or $4 a hundred weight more.' Back in them days it was the same thing, you'd have a good year in the dairy business, and you'd have a couple bad years and you'd have these every two to three years ups and downs. 2002 was a bad year, that's what convinced us."

The Albertos: "It's all NPK"

I visit the Albertos at their farm in northern California. They milk over 1,000 cows on 3,000 acres, mostly in lush grass, with some crops, wetlands, and riparian zones. They have a large and tidy farm house with an ample wrap-around porch and chairs for anyone who wants to watch the sun set over the trees in the distance.

Over dinner, Sally, Vince, and their three children tell me about how they farmed before going organic. Sally starts. "We're passionate about being dairymen. We thought we were doing it right. We were believing what Monsanto and Pfizer told us. So it was cow comfort. It was health. It was preventative. We were good. We fed our calves and used all the tools available and we raised really healthy calves. And we were in the magazines for that. We milked three times per day and we used rBST. We were high-yield agriculture, schooled at university, as such. We were doing everything right, at the time, in our world."

Vince compares what he's learned since going organic to what he knew when he was conventional, much of which he learned at college. "So, yeah, we're huge believers in biodiversity. No mono-cultures. No mono-anything. Right? Everything is inter-related. Symbiotic relationships and all that. We get that. You know, what I've loved about our path from conventional to organic is learning about the soils. I always tell people. It pissed me off. I went to [a California agricultural university] and I graduate and I get out with a four-year degree and no one told me there that urea killed earth worms."

All three of their kids went to or currently attend the same college, and they now chime in. "They still don't." "Not at all!"

Vince continues. "First of all, I realize, so I go to [college] and I get lots of kudos for graduating. And then, like I said, I get pissed off, when I find out that wow, they didn't tell me that… you know… any fertilizer, all fertilizers, all salt fertilizers, kill earth worms, and kill everything else. And so, they're bad for the soil, in general when you're thinking of the biology of the… and they don't even talk about the biology of the soil. They pretend that it just happens."

Sally explains, "It's all NPK." She's referring to the three most important macronutrients that plants need to grow – nitrogen, phosphorus, and potassium.

Vince goes on, "Yeah. You going to grow plants, you need NPK. And you balance those three minerals and forget everything else. So when I get into organics I'm like, hearing these speakers and everything we can do and meeting people, and then I realize, oh they wrote a book, they did this, they did that. I want to read. I want to know more. And then I invited them out and we'd learn more. Really, it was such a contrast to what I thought I knew that, yeah, I had to dig in and deep. Ok, if I'm going to get good at this, or we're going to get good at this, I need to know what I'm talking about. That's how it goes."

Sally tells me about the first time they went to a meeting put on by ACRES USA, a clearinghouse for educational books, magazines, videos on ecological agriculture, with a focus on soil. "When we went to ACRES, I always remember that the keynote speaker was a doctor makin' a difference in people's lives with nutrients, with the farm. 'Go to the farm, not the pharmacy.' That whole thing. We just fell for it hook, line, and sinker."

Vince tells me what he's learned about science and technology. "It was science and technology that brought us the industrial wave. Which was good and we learned to feed the

world. And now we're suffering the consequences of that with huge farms and over-application of a lot of things. Pesticides and fertilizers and all these nasty things that…"

Sally interjects, "kill life"

Vince continues, "that ultimately don't encourage production anymore. It's like you have to do it to survive. You don't get the production yield gains to the same degree that you used to and there's a diminishing return on these products and that's because nature is fighting back. And we're working without nature or against nature. So no, Industrial technology is not always a good thing."

I ask whether they'd feel this way if they hadn't gone organic, for the money. They're silent. They seem to struggle with this question. Finally, Sally says, "Would I still be like my siblings? We have siblings that function in that world, so how would they answer that question?"

Vince answers her question. "[They think] that fractionalizing milk and tearing it apart and putting it back together in pieces is the future of the industry. So, they're still going down that path, and they think that's a GOOD thing. It's not the kind of products that god wanted us to eat. Those things hit your gut and they don't do well. There's pieces missing. That's a tough deal."

Vince and Sally went to one of California's best universities for agricultural sciences, a place where motivated farm kids from all over California come to study, and to meet their future colleagues and spouses. They learned a lot at college, but nothing about agroecology, ecology, organic, or sustainable agriculture; nothing about the ecological damage caused by the farming methods preached by their professors. Their trusted professors along with their family and social network – all the people they looked to to figure out what "good farming" means – all celebrate

high-production, high-input farming. Sally's siblings even want to go beyond the commonplace commodification of nature on confinement dairy farms, and further parse out the sub-commodities of milk. This is the world they split from when they went organic. This is the world they would still believe in if they hadn't gone organic.

Both Vince and Mick were focused on cows and working since they could walk. Neither of them had outside hobbies and they really weren't interested in anything else. Before they went organic, both families' social networks were populated by conventional farmers and centered around conventional farm events. They didn't see themselves as "conventional," they saw what they were doing as "real farming."

Why go organic? It's always money

The first marketing options for organic dairy emerged in scattered regions around 1985. Before then (and for a while afterwards, in regions with no organic processor), dairy farmers who wanted to farm using organic methods mostly sold their milk conventionally, due to highly regulated milk markets. While a tiny proportion of organic dairy farmers entered dairy without farming conventionally first, the overwhelming majority of organic dairy farmers converted from conventional, both then and now. Due to the high capital costs, it's usually prohibitively expensive to start a dairy farm from scratch. So, the organic dairy pool contains more people who converted to organic from conventional than in other organic sectors.

These early folks were pioneers. Not only was there simply not a lot of information about organic dairy available anywhere, but without the internet, it was hard to come by what information existed. For example, you couldn't do a quick Google search to find out that the best way to treat pink eye without antibiotics is to flush with milk several times a day for about

three days. From what I've heard, these pioneers converted for a range of reasons. Some religious; some due to personal health problems, like cancer, that they associated with the pesticides they were spraying. A handful started organic dairy farms as part of the back-to-the-land movement in the 1970s and 1980s. These farms should perhaps be the baseline against which any conventionalization is measured.

These early pioneers aside, the overwhelming majority of organic dairy farmers today converted for one reason alone: price. And it's not surprising. Conventional dairy has been hard. Throughout rural America, entire communities are falling apart as the widespread loss of small farms has a multiplier effect on local economies, threatening non-farm businesses like car dealerships and hardware stores, eroding the local tax base, and forcing schools to close as the population moves away in search of jobs. In 2018, the average U.S. farm's income is projected to be 35 percent below its 2013 level (Ivanova, 2018), and farm bankruptcies are increasingly common. Representative of this trend, Wisconsin lost 500 dairy farms in 2017 alone (Barrett, 2018).

Since the 1980s, many farms have stayed in business by expanding their operations to capture economies of scale, producing more volume at lower costs. However, while this Band-Aid solution helps to shore up an individual farm's finances, the aggregate effect of over-production only exacerbates the problem. Agricultural sociologists and economists have explained the structural dynamics behind these trends using various theories such as the "agricultural treadmill" (Arbuckle & Kast, 2012; Cochrane, 1993) and the "cost-price squeeze," (van der Ploeg, 2006).

While the past two to three years have been tough, and the future is uncertain, for nearly two decades, the organic dairy sector had bucked these trends with high milk prices that have

allowed small and medium farms to thrive. Not only have organic milk prices been high, but they have been stable as well, meaning a farmer could actually plan out their annual spending – to make those improvements on the loafing barn, hire an employee or two, and purchase grain – in a sensible way. What this boiled down to, in the words of so many farmers who shared their stories with me, was "I could sleep at night."

Only 2 of 50 in my sample converted for reasons other than the price premium, and one of those two waited for an organic contract before he transitioned. As we'll discuss in Chapter Three, some farmers chose *not* to transition or put off transitioning, for moral or ethical reasons, even though it meant financial hardship. Most often this was because they thought it was fraudulent or they were prejudiced against certain aspects of the organic stereotype and they didn't want to join that group or be perceived to be part of that group.

Vince Alberto is clear about why he went organic. "It's crystal clear. To make our business a viable option for our kids and their spouses, it's always money. Everything is money."

I interject, "But before it sounded like you went organic to keep farm life interesting and exciting."

"Nooooo. It's money. It's always money. Don't get confused. People who pretend it's not about money are lying. Because it needs to be sustainable. It has to be long-term. The definition of sustainability, from a business standpoint, is money. I wish you could slice it different, but there's no way to avoid that truth and reality. So I'm not ashamed to say it's about money. It has to be about money. This has to be a viable option for my kids and their spouses."

Harry and Gaby Rasmussen also converted for money, but it was less for their kids than for his father, from whom they'd bought the farm. We talk at their kitchen table, in a round alcove extending off their expansive kitchen, with windows on all sides and a pleasant view of their fields and the hills in the distance. Harry's a sturdy man of average height, with big, thick fingers from years working with his hands, often in the bitter cold. He wears an Organic Valley hat and a close-fitting sweatshirt with dirt on it. His demeanor is very shy, very humble. His blue eyes don't make a lot of eye contact, except when the conversation rolls around to specific farming practices, nutrients, chemicals – anything that is technical and hard to understand. At those moments he looks me right in the eyes. But other times, he looks elsewhere. When he smiles, he does so sheepishly. Gaby is the garrulous one. She smiles often and is comfortable talking, maybe from years of teaching high school music. Her white hair is pulled back in a long braid almost down to her waist. She's stout and comfortably dressed in a baggy sweatshirt.

They live in the Driftless region of Wisconsin, or as some people who farm elsewhere call it, a "pile of rocks." One of the first regions of the United States to foster an organic dairy community. Indeed, one of the five or so rural counties in the whole United States that was blue in the 2016 elections.

The Rasmussens decided to transition in 1999 when the conventional price just dropped too low. Harry knew plenty of organic farmers, but he was waiting because he felt that the premium wasn't high enough and he knew it would be a lot of extra work – a lot more paperwork and some extra work cultivating corn instead of using herbicide.

Gaby laughs as she explains that "milk went down to nine dollars [a hundredweight]."

Harry said, "Yeah. I was kind of thinking, maybe I should get an off-farm job."

Gaby was already working off the farm and they were barely making things work. They were paying out more than they were taking in. She reminds Harry, “I think you kind of told your dad that you were thinking about getting out of farming, and his dad...”

Harry interrupts, “Just the expression on his face. And I was like ‘Alright, we can manage the tough times. Just got to figure out a better way to go at it.’ I just hoped there would be the premium there I guess that would make it easier to consistently be profitable I suppose. Hopefully the expenses would be just a little bit lower too, as far as what you're paying out for some of it.”

Gaby explains to me that his parents wanted to keep the family farm in the family.

Harry confirms, “I'm sure they wanted to get the Rasmussen name to stay on the family farm if possible.”

This is organification

Two unique aspects of dairy make it different from other organic sectors, and push it in contradictory directions with respect to conventionalization and organification. First, as was discussed above, dairy is so capital-intensive that it’s hard to imagine an organically-minded person starting an organic dairy farm from scratch. Usually, dairy farmers are born into the profession, inheriting buildings, equipment, land, and animals. They also inherit the human capital, the knowledge instilled from a young age, talking about markets and parasiticides at the dinner table. It is to be expected that dairy will have a much lower proportion of ideological entrants not raised in conventional dairy because, compared with, for example, a vegetable farm, the entry costs are too high. Organic dairy farmers start off steeped in the narratives of the agro-industrial complex. On one hand, this will be a factor pulling organic back towards

conventional. On the other hand, there is much greater potential to spread agroecological knowledge because the organic movement is not just preaching to the choir.

Second, dairy is more of a complete system than other agricultural commodities, or at least it has the potential to be. In the right climate, a dairy farmer can grow 100% of the corn grain, silage, forage, and pasture they need to feed their animals, and the manure then provides 100% of the "fertilizer" needed by the crops, especially if they compost it. Thus, there is greater potential to follow a more whole-system, agroecological model, rather than input-substitution. Furthermore, organic dairy farmers have a financial incentive to look underneath the hood of their soil and to get to know it (again). There are so many opportunities for creativity. In this way, organic dairy farmers are more "vulnerable" to a more profound organification than, say, a soybean farmer.

When a conventional farm goes organic, these two forces have competing influences on how that experience will feel, how they will interpret things, what evidence and events they selectively notice and what they don't see.

In this section, I present, in a sense, the best case scenario for organification – a description of the possible and evidence that conventional producers do experience an important transition. In the next section, I interrogate how real this is, how important it is, and what are different farmers' various experiences.

The green is the glue

It's hard to know where to start in detailing the process of organification, because the different aspects – herd health, more grazing, healthy soils, biological activity, personal health, financial security, and pride – all feed back and integrate together. I'll start with money because

in many ways it's the glue that keeps the various parts together. As we'll see more below, money is an important factor driving producers' practices, knowledge, beliefs, and values. The organic premium allows them to engage in practices that otherwise would have been prohibitively expensive, like lowering milk production to keep the cows healthier. As we'll see, the cost of organic inputs also forces organic dairy farmers to provide their own. This is part of how the "input-restriction" type standards, so often criticized in the conventionalization literature, while not explicitly "process-based," ultimately induce farmers to adopt organic "processes." The cost of organic grain forces farmers to learn about the agroecology of their pastures. The cost of losing a cow because she gets sick and you can't treat forces farmers to understand the cow's natural immune system and to strengthen that. The cost of fertilizer forces farmers to learn the techniques of composting manure.

Herd health

For most organic farmers, the scariest part of going organic is the prohibition against using antibiotics or (most) other synthetic medications and a few non-synthetic medications as well. Once they transition, farmers find they don't need antibiotics. Many farmers told me that they'll lose a calf now and then, but it's rare. The prohibition on antibiotics often forced farmers into a whole-system approach to cow health, involving multiple complementary aspects.

Improved herd health in organics begins with lower milk production. In conventional dairy, cows are pushed to produce tremendous volumes of milk. Wisconsin farmer Martin Lawrence says, "That's a lot of stress. They say a cow milking 80 pounds a day is working a 70-hour work week for a normal person. These cows milked 100 pounds a day, so how hard they working, you know?" After going organic, Martin's cows produce about 52 pounds per day.

(He adds, still with that conventional farmer's sensitivity about yields, that this will probably go up since they built a new barn and the cows are more relaxed and comfortable). He can still make ends meet because he's getting a much higher price per pound. The organic premium *allows* him to be easier on his animals.

Brenda Gillon, who farms in southeastern Wisconsin, was the first to explain to me why high production is harmful to a cow. "If you're pushing your cows for production, you're generally feeding a higher concentrate in their diet, so lower forage, more grains and stuff like that. So, you're instantly going to see more issues with foot and leg health and acidosis. In order to get that cow to produce more milk, you have to give her more energy. But when you do that, when you give a cow a lot of extra grain and more energy, you're going to end up hurting that biology that's going on in her rumen, and that just sends the cow's health down the toilet in my opinion. We were having a lot of surgeries, DA surgeries, which means a twisted stomach, displaced abomasum. And a lot of milk fever cases. Basically when the cow starts to produce milk right after she's had a calf, she'll have a deficiency in calcium, I think it's calcium, in her blood stream because it's trying to pull that C out of her blood in order to produce the milk. Normally what happens is a lactating cow will pull that C out of the bones. Sometimes that doesn't happen fast enough for one reason or another, so all of a sudden, a cow will be perfectly fine one minute and then she'll be down and dying two minutes later. That quickly."

Organic cows produce less milk for several reasons that are consistent with better health. First, they spend more of their energy walking around while grazing on pasture and walking to and from the milking parlor twice per day, so they have less energy to convert to milk. The organic pasture requirement specifies that dairy animals must graze outdoors for the entire grazing season. The grazing season depends on climate but must be at least 120 days per year.

During the grazing season, 30% of dry matter intake (total pounds of all feed, devoid of moisture) must be from pasture. Exercise and spending time outdoors and not on concrete promotes health. In this case, the organic standards for pasture *force* dairy farmers to be easier on their cows.

Second, organic dairy farmers typically feed less grain (corn and soy) and more forage (pasture and dry grasses/legumes). This has a double health benefit because not only is the metabolic stress of high volume reduced, but more forage is consistent with the diet that cows evolved with and promotes their health as well. This is one element of organic that varies quite a bit between different farms. Because of the greater energy content of grain, the amount of grain in a cow's diet influences the volume of milk produced. If a farmer needs to increase volume, they feed more grain. Many farmers, especially in California, must buy their organic grain, so they need to balance the revenue from increased milk volume with the cost of purchased feed inputs. One reason a lot of organic farmers invested their time learning about soil organic matter, microbial activity, worms, and pasture species diversity was to save money by growing more of their feed. For farmers who do grow their own grain, the greater difficulty and cost of controlling weeds through cultivation (mechanically disturbing the soil) rather than herbicides incentivizes greater use of pasture as well.

Finally, organic cows are more valuable, financially, than conventional cows. Heifers typically freshen, or give birth for the first time and start producing milk, around their second birthday. So, for two expensive years, an organic replacement cow must be raised on organic feed and cared for organically, without yielding any profit. Because of the high cost of replacing

cows, farmers are very careful to push the right amount of milk so they have a profitable volume but their cows are healthy.[2]

In addition to lower milk production, another factor contributing to organic cows' improved health, is the quality of their diet. This also varies tremendously, but many of the farmers I spoke with have invested substantial time in learning about and experimenting with ways to not only grow higher yields but also higher quality, through experimenting with different varieties, more diversity, compost, and ways to build up nutrient rich soils with lots of organic matter. Without the option of prohibited medications, farmers need to understand their animals' natural immune system and health, and they need to learn about the ecology that produces nutritious grasses and forage.

Since they can't treat their cows with antibiotics, organic farmers are a lot more careful about aspects of prevention other than nutrition as well. They keep their living conditions clean, sanitary, and comfortable; they are extra careful to ensure calves receive colostrum within a few hours of birth; and they use probiotics and otherwise encourage the "good" bacteria in their gut to help with immunity. In general, they nurture the cow's own immune system.

Because organic farmers can't treat sick cows,[3] they have to sell them, either as conventional milking cows or as meat. In this way, they essentially are culling form the herd genetic lines that are predisposed to health problems. These weaker cows might otherwise have been repeatedly treated with antibiotics. This not only removes these weaker cows from the herd, but their progeny as well, improving the genetics of the entire herd.

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[2] This is one reason the "Origin of Livestock" controversy, described in Anderson (2019), in which organic mega-farms fraudulently raise conventional calves until their first birthday, has elicited such uproar among rule-abiding organic dairy farmers.

[3] According to the national organic standards, organic farmers *must* treat sick cows. But they then must separate them and then sell them conventionally, keeping clear documentation for their certifier.

Additionally, organic farmers are diversifying their herd genetics, breeding in different types of cows, including jerseys and many other breeds. Many of the farmers I spoke with have experimented with "genetics," as they say, brought in from areas of the world where grazing is still common. Holsteins, which dominate in conventional, have been bred for high volume production, at the expensive of body condition and robust health. They're not well suited for pasture because they were not bred to walk. Their consistent need for concentrated energy requires large amounts of grain and is hard to adequately supply through grazing.

Mick Banker tells me a funny story about how his neighbor finally got him off of 100% Holsteins. "Today we have about 800 Holsteins and a couple hundred Jerseys. Jerseys are better for butter. And when you really think about the Jerseys and organic and pasturing, when we go up over the top of the hill, if I turn lose 300 cows in a string of cows, the first 25 cows that crest the top of the hill, 19 of them are jerseys. Two or three are crossbred and then there's two or three Holsteins trying to keep up with them. When you think about it, they are a little person, they are light weight. They go right over the hill." Mick smiles and goes on. "You know how we started our first Jerseys? Neighbor came into the valley, crazy bugger, and we had too many Coors Lights one night and it was my birthday. The next morning I came out and in the extended cab there was a Jersey calf, heifer calf in the back seat looking at me. So we went in the Jersey business. I gave him a Holstein for his birthday that year and his Holstein died but my Jersey stuck."

Soil biology

The combination of no antibiotics, no synthetic inputs, high organic feed costs, and the strict pasture rule, together provide strong incentive for farmers to learn how to improve the health of their soils.

Farmers like Mick Banker, who want to be big, see pasture health as their key to getting more production from the same amount of land, given that they need to meet the pasture rule. They've gotten almost completely away from tilling to protect the worms. Mick says, "Don't break up the party, they do all the work for us." They also see that healthier soil means healthier cows. And they have to learn about the soil because they can't rely on NPK.

The Bankers also want to save on costs because it makes them money. "When we go out on pasture, we drop a little bit in production, but we make nothing but money because it's all on free grass. It's not free because we got a lot of expensive fertilizer, compost, seed, and everything into that grass. But the more grass we can grow the more profitable we are. I get a kick out of the certifier, 'We come to see if you're getting your 120.' I go, 'Hey, I'd like to do 160 if I could figure it out because I'll be there.' When we go out on pasture, we make our big chunk of money in them 4 months. You put 1,000 cows out in pasture and they're eating 50% pasture for 4 months, and you make a chunk of money. We don't want to tell our local county people that because they'll raise my taxes. If you get your soil healthy, and it really boils and grows good grass, and your cows are eating grass, you cut back on your grains and you don't have to feed the expensive hay and stuff, you make a bunch. That's when we make our money, is our pasture season."

Vince Alberto describes how learning about his pastures is a continual evolution. Like most other organic dairy farmers, he uses managed intensive rotational grazing (MIRG), and he thinks he keeps getting better at it, learning to use natural processes. "Five years ago, we used to

graze feed a lot shorter and tighter. Now there's a movement in the organic world to leave the grass longer, more mature, more carbohydrate, less protein, more balanced ration, parasite control, a lot of benefits, great for the soil, the root system down below. With short plants you don't get big roots. Just a win win win."

By parasite control, Vince is referring to the farmer's ability to reduce the herd's exposure to parasites by not letting the cows eat the grass so low to the ground.

Beyond agronomics

Aside from the agronomic elements of organification, many farmers reported that they've started eating organic foods (none told me that they don't), they believe in the product, they've noticed more biodiversity on their lands, they're excited by the challenge and excited to learn (often mixed with excited to make money), and they notice things more. Many are now firmly against GMO and one farmer in my sample even spoke out against GMO from her position on the local Farm Bureau board.

Suzanne Harris tells of her family's gradual conversion to eating organic after they had decided to transition. "I myself was not eating organically. And at that time, the produce itself looks kind of yucky. It looked dirty to me. As if the chemicals are so much better. I mean, you've got to realize that we shopped at Lucky's or something. And my mother, bless her heart, she's not the best cook in the world. So we would eat… our vegetables were always the frozen ones, heated in the microwave, peas and carrots. I was definitely not personally invested in organic. Supporting the American farmer was something I believed in. Like buying American stuff. Not that I didn't have my fair share of electronics and gadgets from different countries. I

remember one time we went up to Humboldt for an organic dairy conference. We met Jack Warner, from Oregon. He's been with OV [Organic Valley] for thirteen plus years. He told us, 'just keep in mind, you know, at first you kind of do it for the economics. But then the more of these things you start coming to and the more you start hearing about organics, you watch, your wife is going to start buying organic food.' We were like, yeah right. Then I had my kids. And I started going, hmm, ok. We kinda started with strawberries, you know. Certain produce and stuff. Wesley, he reads a lot too, and he was starting to read more and more things and he was like, 'You know, potatoes. You might want to start buying those organically. And I was reading this, and you know, bananas…' So finally I was like well, okay, but our grocery budget's going to kind of go up. And he's like, 'Hey, I don't really care. I'd rather buy…' So, it is funny. You do kinda start changing. Not everything in my pantry is organic. I will say. But for the most part, I try to buy a lot of organic stuff."

Whether or not she's onto something real, Suzanne also began connecting the dots between people she'd known who'd farmed conventionally and who'd gotten various forms of cancer, and how the older generation that farmed before the chemicals came out all lived until old age. She tells a story about someone on Facebook kind of missing the point about chemicals.

"My cousin had thrown this question out there on Facebook, 'Just curious, what kind of milk do you drink and why?' Some people answered organic, and this woman answers her back, and she's like, 'I don't believe in that organic stuff.' Okay, fine. But then a little while later, she answers back, 'You know, our grandparents lived to be old and they didn't eat organic.' Okay, you are kind of like proving the point."

Mick Banker says, "We originally, I have to admit, we went because of the money. And now, I buy all organic when we buy food. I just feel, I don't want to eat pesticides. I don't want

to eat Roundup Ready Monsanto on fertile ground. I really believe. I've seen it in my cows, you keep the soil healthy, the cows get healthy. I mean, we still have a cow die once in a while and things, a calf dies and different things. But overall, you get healthier animals with healthier soil. And I want to be healthier. I want to live for a while. I've worked too hard to die tomorrow. So, you try to be healthy."

Both Mick and Suzanne's husband Wesley transitioned purely for profit, and they hadn't conceived that their system of farming could be unhealthy. It's a profound shift to start thinking about health from a wholistic perspective, and to question the products of the agro-industrial complex. As Sally Alberto said, their whole view of health changed to, "Go to the farm, not the pharmacy."

Many farmers noticed more biodiversity on their farms when they stopped using chemical inputs. Vince and Sally Alberto love the "critters" on their land. Vince says, "We want to go out and see critters. And the fact that we are organic has allowed species to just thrive on our property, that just never would have been here… Totally. Totally. I mean, dung beetles for instance." He laughs.

Sally adds, "I love telling this story. It was raining, it was kind of early evening. I was going into town, and everywhere I drove on our ranch... We call them kamikaze frogs. So, these frogs are going across, going across, the road, right in my lights. And just seeing it! And just as soon as I left our property line, I get to fish and game land, where it's not grazed. Where it's dead grass. Where it's not managed at all. There's no frogs. And I realize, wow. And in the bible it says green grass, and then in my concordance of it, with it, it says where life flourishes. And we have green grass where life flourishes."

Vince continues. "Life is flourishing on our ranch. I'm looking out the window now and they are just birds everywhere. And they're healthy, and they're eating stuff that is grown here and lives here and there's nothing toxic to them and they're… they're just doing well."

Sally wants to tell another story, about baby spiders. "We were driving down the road. And it was late fall. And there were just all kinds of webs in the field. Cuz the baby spiders were jumping up and going somewhere.

Vince says, "launching."

"Launching, yeah. And you could just see. It was glistening in the early… you know that dew and stuff. I never saw such beauty."

A number of farmers were confident enough in organics to speak up publicly, even in conventional spaces. Anya Banker certainly did not want to go organic, but her father did, and today Anya is a firm believer. She and her father both tell people on the Farm Bureau board what they think.

Mick Banker tells me, "We have Farm Bureau. My daughter was on the Farm Bureau Board. She got a little frustrated because at 36 years old, the average age on that board was probably 65 years old. Most of them were great guys and they all believed in GMOs. She sat there and told them, 'I don't believe in GMO. I don't believe in Monsanto or any sprays, and I think you guys are all crazy.'"

I asked Mick how they responded.

"Some of them said, 'That daughter of yours is a pistol.' I'd see a few of them and I'd tell them, 'Hey, if you quit spraying along your vine and if you put a cover crop in there, and then lightly disc it in and put compost on there, you could get that much more production out of

your grapes.' They go, 'Yeah. No, we've been spraying that for years and we spray right around the vine. We kill all the foliage.' 'You also kill all the good worms and everything else in your soil.' Now the big deal here, we have 2 big operations growing worms and selling the castings to the vineyards because they realized they put this castings on, it goes into the ground and they get more grapes… Then they come back and spray. If they just wouldn't spray."

I ask Mick, "Would you have spoken these words if you hadn't gone organic, do you think?"

"Probably not and probably would never really. I probably wouldn't even read the books because it wouldn't interest me, you know? I read Acres all the time and the Grazing Magazine, the Pasture Magazine."

As described in Chapter Four, "full organification" would include not just these agronomic and health aspects of organic, but a commitment to the multiple aspects of the early organic movement: a commitment to the environment, communitarianism, social justice, personal liberation, and an understanding of the interconnectedness among these elements. Did I find evidence for this broader and perhaps ultimately more impactful organification? Chapters Three and Four partially address this question, and two chapters of my Environment & Resources dissertation (Anderson, 2019) go into more detail. The short answer is not much, but it depends. It depends on the farmer, on the institutions they're part of, and on how you look at that question (Anderson, 2019).

Variation in organification

Tim Kaplan, Organic Valley's Division Manager for the West, knows every organic dairy farmer in California and has watched them transition to organic and ride out the market hickups. When I asked him about the general idea of organification, he said he would parse the "organification" effect into two possibilities, depending on the producer: awareness, which he would consider most common, and commitment. The Albertos are an example of a farm that is committed to organic as a market and as a philosophy of production. They may fall short of "full organification," but they are committed to wholistic production processes and they firmly believe in the superiority of organic.

Not all organic producers feel this way. I would say that Paul Locke, who we'll meet in Chapter Three, is an example of neither aware nor committed. He says, "I mean, milk's milk. But we have these people that say, 'Oh, organic is much better than the conventional.' To me, you know, the consumer is there for both products. That was the hardest thing when I went organic, Wallaby called and said, 'Hey will you do a voiceover for Whole Foods?' The lady came out and walked out in the pasture and the cows were grazing. 'Tell me why the cows are better on this pasture than they are locked up in that barn?' I went, 'Time out. If that's where we're going, pack your bags.' I said, 'if you go back to the 50's when we didn't have our free stall barn and my grandfather had huge silage piles and by the time they got from here to the milk barn, they were walking in three foot of mud. And as a kid I was over there with a high-pressured hose washing cows. Out of 250 cows, you had 20 cows in the hospital pen.'" Paul is remembering a time long before they went organic, when they had to have their cows on the pasture all the time, even in inclement weather, because they didn't have adequate facilities to house them and keep them comfortable. Paul's farm has essentially been organic his whole life.

The only change when they got certified was buying different feed and not using antibiotics. This may partly explain why he doesn't see any difference.

Martin Lawrence is an example of aware but not committed. He's a high-volume Organic Valley producer in the Driftless region of Wisconsin and he's on Organic Valley's Dairy Executive Committee. In contrast to a whole-system approach, he takes what's called an "input-substitution" approach to organics, where the logic of their farm does not change, and inputs and practices that are banned under the National Organic Standards are simply replaced with allowed substitutes. Input-substituters farm by the letter of the organic standards rather than the spirit. I call him "aware" because he does appreciate a lot about organic, especially the herd health. "Ever since I stopping treating cows with antibiotics, I said 'God, cows don't get sick!' You look at a conventional herd and they might have a 45% cull rate because of somatic cell count every year." He also more or less admits that he hasn't fully tried a whole-system approach and maybe someday, when his loans are paid off, he will.

Martin lives in the Driftless region of southwestern Wisconsin. On my way there, near Richland Center, I pass a dealership with a yard full of shiny, new Bobcat loaders, excavators, forklifts, and a lot more. Barns are used as billboards to proselytize various messages: "We Stand With Scott Walker" and, in gigantic white letters that's impossible to keep out of your peripheral vision: "Fight and Pray to Stop Abortion." In the progressive town of Vernon, I drive by art galleries and a beautiful old movie theatre. It's a rather hopping town, especially considering the more common images of rural America that you see in news stories about rural schools closing and main streets boarded as the farming population dwindles. They even have a community radio station.

Looking at a topographical map, this whole area is covered with tight lines tracing dramatic shapes. The road twists and turns through the hills and valleys left untouched by glacial drift. I pass a number of farms with severe erosion. In some places, whole hillsides have turned nearly into cliffs and creek banks have sloughed off into the water where the sediment is gradually being carried downstream. Much of the hilly land has been strip-cropped to prevent nutrient runoff and erosion and to force the water to infiltrate the soil. It's a beautiful sight; stripes of golden corn stalks and light green forage crops.

Martin calls to warn me about the guard dog. "Wait in your car until I come out and get you. She gets kind of excited. It can be terrifying." He also tells me that Rob, his nutritionist, is there so we're going to have to start our interview late, after Rob leaves.

I turn onto Martin's road and suddenly I've emerged from the hilly forest onto an expansive plateau. I see the Organic Valley Farm sign and turn in to his driveway. The "guard dog" is just a skinny little border collie, easily distracted with a tennis ball.

I walk out back with Martin and Rob, to where his feed is stored.

Rob seems to feel genuinely proud of Martin's success. He tells me, "It's been real exciting to watch this farm grow. From 150 to now 300-350 cows. That's really, really good." Rob is pushing Martin to consider TMF hybrid corn seed to improve silage yield. It's a conventional product, but it has some special properties for which there isn't an organic alternative. Apparently, certain certifiers will still allow conventional seed products if there isn't an organic alternative. As I shift my weight from one foot to the other, trying to stay warm, I wonder whether this is even legal under the standards. I know it's not in the spirit of the standards.

Rob is a conventional nutritionist working for Land O' Lakes and Martin is his only organic client. His consultations are free and there's no obligation for his clients to purchase the products he recommends through Land O' Lakes, but that is how his salary is paid. Rob got his bachelor's from UW-Madison Dairy Science and he consults on five herds himself, plus he manages the education and coordination of Land O' Lakes' fleet of nutritionists. Rob doesn't seem to have received any training in organic and doesn't seem to have educated himself about whole-system approaches. Missing from this conversation is any focus on the cow's health and longevity or how much nourishment could come from Martin's ground if he built up his soils, relied on compost, and learned more about other organic innovations.

But Martin trusts Rob and they like each other. They go to the Land O' Lakes conference together every year. Martin goes to a bunch of conventional events. He thinks that keeping abreast of advances in conventional is the only way to learn about innovative new ideas, technology, and progress. He based his new watering system on information he learned at a conventional conference last year.

Rob guides Martin through the numbers on a printout he's brought along, with the results of his analysis of Martin's feed ration and milk production. Rob seems to be telling Martin that he needs more protein, more corn, more protein supplement. He says that Martin needs to lower his forage and increase his protein, which means buying more off-farm inputs. He's recommending a soy-based product that costs $300 conventional but $1,200 organic. It all sounds very expensive to me and I sense that Martin is a little anxious.

While feeding corn grain and soy products is perfectly legal under the standards, it doesn't fit in with a whole-system approach. Neither metabolically nor financially.

Martin follows a productivist, industrial model of farming, but substitutes organic ingredients to get the organic premium. He seems to genuinely respect and appreciate organic. He enjoys the positive attention he gets for farming organically and pasturing his cows; he likes being part of the Organic Valley community; and he's happy that his cows are healthier. But the relief of being able to pay his bills, with a nice cushion, and pay off his substantial debt is his favorite part.

Martin not only prefers to get his ideas from conventional sources, but he's actively ignored the efforts of Organic Valley's staff veterinarians and agronomists to help him go deeper into organic. He tells me about the three vets on Organic Valley's field staff. "Dr. Guy, Dr. Paul, and Dr. Silva do a lot of promotion of nutrition and fertility and stuff like that. They don't help me and I don't listen to them right now. I said 'someday I would, but right now I'm busy with what I have going on' and I won't listen. They try to sell me all that. They're like, 'Oh, you know, we could make you so much money.' I said, 'You know what, not right now.' I said, 'I've got to get out of this. Once I get out of this, once I'm beyond this, I'm open to making sure this all runs.' I buy corn, I buy my proteins. It's expensive."

By "get out of this," Martin is probably referring to his debt, although I didn't confirm that with him. Instead of using the low-cost approach that Organic Valley's staff are advocating to make a lot of money, Martin feels safer making his finances work through production numbers. Conventional is still the world that makes sense to him, even though he's now *aware* that there's another way. But he's only been shipping organic for three years and it seems like he may be open to going deeper in the future. He says he's not ready right now, but maybe once he gets out of debt, he'll be able to take some risks and experiment with the approaches Organic

Valley advocates. The fact that his conventional nutritionist provides personal consultation, frequent farm visits, and psychological support may be part of this.

I should mention that Martin's experience of transitioning his animals was particularly tough. He recounts how lost and scared they were when they went out to pasture for the first time. They didn't adjust well to organic and Martin had to cull a lot of cows because their production dropped too low and never came back up. He guesses they were down about 100 cows. Eventually, the herd rebounded and now Martin reports they're healthier than ever.

Martin had no choice but to stop using antibiotics and synthetic medications, and he found out that his "cows don't get sick anymore." But the input-restriction model adopted by the National Organic Standards can't force the whole-system approach, and without that push, without a trusted, helping-hand nutritionist to stop by and coach you through it, Martin wasn't willing to go there. Not yet anyway.

After out interview, as Martin is walking me out to my car, his kids are coming home from high school. His daughter runs up to her dad with a flyer in her hand advertising some farming workshops designed for young people. She's eager. "Dad, dad, can I do this?" Martin's son is planning to major in dairy science at UW-Madison. Martin hopes his children will stay on the farm, but he's not pushing them. And maybe in their college classes they'll learn about a different approach to dairy science than what was available during Rob's tenure. Since the time when Rob was a student, the UW-Madison College of Agriculture and Life Sciences has made some changes, including the addition of an Organic and Sustainable Agriculture Research and Extension program. Maybe they'll even teach about the whole picture of organics, including the communitarianism.

A few minutes away from Martin's farm, I get stuck behind a procession of four Amish horse and buggy wagons on the road. It'll be a while before I can see far enough ahead to pass on the narrow road, as it winds around a bend and up a hill. Two buggies are enclosed and two are open to the brisk winter air. There are four or five people in each one. They appear to be returning home from a gathering. The horses come to a slow walk as they go up the hill. They started trotting again on the way down. One of the buggies turns off, and a short distance later another one slows down and stops to talk with an Amish woman who was out raking her front yard. I realize I don't normally see people raking in the countryside; they have riding mowers for that. I don't normally see people outside of their homes talking to each other in the countryside. Outside of the Amish farmhouses, I see people working with hand tools, talking with neighbors, doing things together. The surrounding fields are dotted with Van Gogh style haystacks or corn stacks, gathered by hand into pyramids instead of square or round bales. I start to see more and more Amish people. There is a handful of horse-drawn buggies and wagons parked off the road near a shop called Morning Sun Carpentry. And more buggies are coming down the lane. I'm surprised to realize that Martin lives in the midst of Amish country. As we talked about his neighbors, the organic and conventional people he knew, and social networks more generally, he never mentioned the Amish. He seems not to see them.

Conclusion

Several threads are worth highlighting about organification as we've discussed it so far. The inherent potential for dairy farms to operate as a closed system is an important factor in organification. Not only is the closed cycle of manure feeding crops feeding animals inherently conducive to low input agriculture, but the farmers can see with their own eyes their animals'

health and their lives improve and this has a psychological impact. Vegetable farmers don't necessarily get to see their customers' health improve. Another important thread is the importance of financial incentives. Defying one branch of the conventionalization thesis, if farmers want to "cut corners" to make more money in organic dairy (assuming they still follow the rules), to an important degree they only hurt themselves. Dairy may be unique in this regard. Farmers are financially incentivized to get more from their land and animals through nurturing their natural biology, not harming it.

I found organification in each of the five counties I visited and on various sizes and types of dairy farms, but the nature of my data is insufficient to assess how frequently the various extents of organification happen when a conventional farmer transitions to organic. The organification I've observed may also be an artifact of historical circumstance. For example, as the market share of Organic Valley, which promotes wholistic organic farming, shrinks (Anderson, 2019) and the character of organic farmer associations change (Anderson, 2019), organification may look different in the future.

Critics of the National Organic Standards question whether the "input-restriction" form of the standards has the potential to meaningfully guide farmers' processes. The findings presented here suggest that, while these farms are not perfect, input-restrictions have indeed transformed farm processes in substantial ways with meaningful impacts. In the words of Seamus, who we met in the introduction, feeding colostrum to his newborn calves, when you transition to organic, he said, "you become a lot more aware of little things: the soil, making the soil better, how the microbial activity works, delivering the minerals to the plants, the plants to the animals, the animals get their minerals from the plants. Just balancing everything the way it's supposed to be. So that has become a learning curve, and it's been exciting."

While this organification story is important, I am not arguing that there is not also a substantial conventionalization going on in organic. As described in detail in Anderson (2019), this is undeniable and follows many aspects of the political economy model set out by Julie Guthman (2004) and others. It is this conventionalization, and the threat of more conventionalization, that makes telling this story of organification – the surprising possibility of organic – so important.

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Chapter 3 : The Civic Totems of Conventional Agriculture

Introduction

This chapter builds from the analysis of organification developed in Chapter Two and picks up where it left off. Conventional farmers have gone organic and many of them have been surprised to learn that the conventional practices they'd trusted were harmful to their land and animals. What next? Well, that's more or less it. Going organic revealed on-farm ecological dynamics, but not a lot more. The farmers I interviewed did not develop greater environmental awareness and felt no more open-minded about environmental regulations. Why not?

Part of the conventionalization thesis is that as the organic market develops, more and more conventional farmers will convert to organic and this will somehow erode organic. The assumption is that early-adopting organic farmers are different from conventional farmers who go organic for the price premium once a clear path has been blazed. This idea intuitively makes sense, but it has not been explored in depth. The idea of conventionalization implies that there is a continuum along which organic farming goes from something with long-term benefits for eaters, farmers, and the Earth, to something that suffers from the same environmental and economic exploitation problems as does conventional farming. Where do farmers' "conventional" worldviews come from? How are they reproduced? What are they composed of?

This chapter helps answer these questions by exploring farmers' beliefs about the environment, good farming, and organic, and investigating where these beliefs come from. I draw on Durkheimian and Bourdieusian analytical perspectives to understand how beliefs are produced, and I examine two specific sites of ritual and boundary work – the annual meeting of a

mostly conventional California dairy business association and the American Farm Bureau Federation (AFBF). By moving between a close focus on the environmental values of two conventional-turned-organic farm families and a wide focus on national politics, I explore how industrial agribusiness and fossil fuel interests influence the phenomenon of conventionalization through their presence in the meaning-making institutions of farmers' lives. This chapter suggests that powerful vested interests operating at the national level may be influencing farmers' beliefs and dispositions by coopting, to a certain degree, grassroots farm institutions.

Certification reveals faith beliefs

"Help Wanted: Organic Farmers"[4]

People who know the U.S. organic dairy world aren't surprised that most farmers converted for price alone. But I've found that among the general public, people do assume that organic farmers were ideologically driven based on their principles about society or the environment.

In an important sense, this assumption is backwards, at least for dairy. Many of the farmers I interviewed converted to organic because they *lacked* the ideological convictions that held back non-converters. The 1990s and 2000s were auspicious years to go organic, yet many farmers chose not to convert based on their personal convictions that organic was at best an inferior model of farming and at worst perverse, fraudulent, unethical, and degenerate. For many, it was very threatening. For 20 years, U.S. consumer demand outpaced domestic supply for organic, creating a stable and high premium (D. H. Constance & Choi, 2010). Processors were actively recruiting (Brock & Barham, 2008) and many organic dairy farmers were more

[4] This was the name of a campaign to recruit more organic dairy farmers in 2005.

highly satisfied with income and overall quality of life than conventional dairy farmers (Barham, Brock, & Foltz, 2006). Many of the conventional and later-transitioning organic farmers I spoke with thought organic milk was part of a marketing scam and their moral convictions prevented them from committing such fraud even if it meant sacrificing an increase in annual profits of tens or hundreds of thousands of dollars. Others resisted because they felt organic was a criticism of the putative inferiority of conventional milk and those who produce it – a criticism of themselves and the communities and values that gave meaning to their lives. Many focused on stereotypes of organic farmers as hippies and they either couldn't face the social stigma of joining that odious group or couldn't get over their own aversion. Brock and Barham's (2013) interviews with organic and conventional dairy farmers in Southwestern Wisconsin confirm these patterns. Coming from an economics department, they apply the theory of "bounded rationality" to explain the apparently irrational business decision to remain conventional.

My field research confirms the antagonism and contempt many conventional farmers felt towards organic before they transitioned. While some empirical studies have documented a stigma against organic (Duram, 2006; Padel, 2001), much of the literature reports a more agnostic stance among farmers, or a mix of positive and negative feelings. Sutherland even suggests that "the up-take of organic farming by cohorts of long-term conventional farmers suggests that there have been important normative changes in long-term farmers" (2013:430). My results do not support this idea. Here are some of the ways the anti-organic stigma came out among my participants.

Paul Locke tells me about the stigma against organic in the farming community. "In the dairy industry, there is still this divide between the conventional and the organic dairy man. Even

in your state. My daughter was at the World [Dairy] Expo, and she had on her Locke Organic Dairy shirt and she said, 'Dad, I wanted to cover it up because I thought I was going to ...' The sayings that were on the shirts in Wisconsin were just so against organic."

When I asked Martin Lawrence, one of the more "conventional" folks in my sample of organic farmers, and a commanding physical presence, "Did going organic change you as a person?" He answered, "It makes you stronger because you have to be willing to put up with grief. We have these leader meetings at OV all the time. I got up one time and I said, 'We're all leaders. Look what we've had to put up with every year. The outside sarcasm comes in towards us and we've stood up to it. I don't like having gone through that, and we all have.'"

The Santos family told me they were accused of fraud when they went organic. Frankie Santos said, "You should have seen people that told us we were criminal and we were awful. Criminal for going green. That we had no integrity. That we were awful. We were screwing the public and blahdy, blahdy, blah."

Suzanne Harris talked about the rift in her community. "There can be a lot of bitterness, between the people that were conventional versus us that were organic up here. Because really when you look at our operations, they are really not that much different. Why are you getting paid a better price and marketing your milk as something so much better, when we are doing basically the same thing?"

Skip Landreau tells me about his brother's resistance to going organic. "When my brother was conventional and he was going broke, my Dad would literally come over here and cry. So I go up to my brother's, and we sit down and we have some brandied cherries. We start talking about things. I've seen what was in his eyes when my brother was going broke. Finally, one day I cornered him up. I'm like, 'Hey dude, listen, I want to talk. Do you know what

bankrupt is? When you owe more than your cows are worth, you're done dude. Do you want to go down that road?' Then my Dad says, 'Yeah, you need to go organic.' And Davie goes 'Organic is bullshit. I don't believe it.' We went through that whole six months fight. Finally, the breeder and I convinced him."

Gaby Rasmussen, a music teacher and farmwife not far from the headquarters of Organic Valley, told me that kids would complain at her annual music festival that they had to drink organic milk (which was donated for free from Organic Valley). "The kids would always complain about, 'Why are we having this?' They wanted the regular carton milk."

Her husband, Harry, offers a different story. "I'm almost thinking the same thing about that football team. But now, for example, at the meeting we were just at, we had a conventional farmer who was there and she said they had to get milk for the football team, and she had regular milk and they took the organic milk over the regular until the organic was gone. She was surprised by that, as a conventional farmer. She was thinking maybe Organic Valley's the place to go. All the kids were going for it. She was like, 'Could be the future, there. They're choosing that product.'" In this enclave, where Organic Valley wasn't just a far-away buyer but a substantial local employer and philanthropic presence, organic was finally becoming accepted.

A cultural lens

In observing conventional farmers' various experiences transitioning to organic, we witness three phenomena. First, as illustrated above, we observe farmers making an "irrational" choice not to go organic when it is in their best interest. Second, as seen in Chapter Two, we witness formerly conventional farmers undergoing organification and realizing they had been wrong about organic. Third, as we'll see below, we observe that farmers who have experienced

organification often do not perceive the broader ecological relationships that underpin organic but are beyond the direct impacts that their farming practices have on their land.

These observations about the experience of transitioning provide a useful window into the political ecology of agriculture. It's helpful for explaining these observations if we think of environmental beliefs as similar to religious beliefs. And making these observations is helpful for advancing political ecology theory because they suggest that environmental beliefs can be usefully understood and perhaps manipulated if they are treated as having aspects of religious beliefs. Why should we think this way, if environmental beliefs are scientific and provable and faith beliefs are not?

Paul Richards (2004) explored conflicts over agricultural technology, such as the green revolution, as religious conflict, pointing out that what are often faith convictions are mistaken for logical problems to be solved be technical experts. "Environmentalism is concerned not only with the impact of technologies on nature and society, but also with how sustainable futures are envisaged. … [yet] Agenda-setting is often viewed by technologists as an issue of rational calculation. Send for the economists" (Richards, 2004:261).

This chapter takes a cultural approach to conventionalization and organification, or, more generally, the broad transitioning of our agricultural system towards something more agroecologically grounded and socially just. I draw on the Durkheimian analytical perspective (Durkheim, 1964, 1995; Richards, 2004; Stedman Jones, 2001) as well as a Bourdieusian analysis of fields.

Organic lies at the epistemic boundary of environmentalism and agriculture and, as such, observing the psychological experience of transitioning, a potentially major phenomenological

rupture, uncovers cultural commitments surrounding these epistemic objects, as well as the production of these commitments and their implications.

Forming a commitment to a particular idea of farming and of environmentalism can be better understood when compared with the shaping of religious belief. As described by Durkheim in "Elementary Forms of Religious Life," commitment is created (and reproduced) during moments of group excitement (collective effervescence), and regulated through shared representations (symbols, ideas, models, procedures) (Richards, 2004). Representations are impressed on members of the group through ritual. What results is a (more or less) internally consistent set of cultural beliefs; a multi-faceted vision of what "good farming" is and what "environmentalism" is.

Material reality is socially constructed through our cultural lenses. As an illustration, Harré (1972) pointed out that virus theory describes a real causal mechanism, but it could only by observed in the lab after it was imagined as an idea. And it could only become a social fact once it underwent the rituals of conference proceedings needed to attract bureaucratic funding that was approved by accountants (Richards, 2004). Once organic practices and ecological relationships are imagined as ideas and also observed, they still only become shared commitments through group excitement, symbols, and ritual. In other words, through religious experiences. From this cultural understanding of agricultural scripts as religious beliefs, we can better explore questions about cultural clashes.

For most of us, commitment to various imaginaries of organic, environment, and "good farming" is only partly explained by shared and internalized faith beliefs. Our commitments and our faith beliefs are usually also structured by our interests. Drawing on Bourdieu and the

science studies literature highlighted by Dupuis and Gillon (2009), I understand organic, environment, and "good farming" as epistemic objects, and I explore the boundary work performed by a subset of the actors in the field as they vie to define them. As defined by Rheinberger (1997), "epistemic objects" are knowledge products that are both material and conceptual and are created by collaborations of actors in a field. "Boundary work'' describes the discursive and material tactics and processes that people undertake as they struggle to define or preserve symbolic, technical, and social boundaries (Gieryn, 1999; Lamont & Molna´r, 2002). Dupuis and Gillon (2009) used this approach to understand how proponents of organic work to define organic and preserve its legitimacy. My focus here is more broadly on how various interests work to define agriculture, the environment, and organic, with a focus on conventional spaces.

Among farmers' hierarchy of needs is social capital (one's network of social relationships) and cultural capital (prestige and skill with symbolic objects) (Sutherland, 2013). These forms of power have emotional and psychological importance on their own, and they can be converted into economic capital (material and financial property) as well (Swartz, 1997). In this chapter, I focus on social and cultural capital with an understanding of its important potential role in generating economic capital (Sutherland & Burton, 2011).

Several authors have outlined how farmers gain prestige and cultural capital through salient mutually recognized symbols such has high yields, prize-winning livestock, and weed-free fields (Burton 2004; Burton et al. 2008; Gray 1998; Haggerty et al. 2009; Silvasti 2003; Setten 2004). Farmers, as people in general, don't necessarily weigh these things reflectively, but rather the "rules of the game" are internalized mostly unconsciously, and farmers don't

question them as they proceed from decision to decision, verifying that their choices match these cultural scripts.

Many of these scripts have been produced and reproduced through the American Farm Bureau Federation (AFBF), which has always prized specialized, high-technology, high-production agriculture (Berlage, 2016). Sutherland (2013) suggests that conversion to organic may have a cultural cost if it takes away these culturally valuable symbolic practices. As described below, my data also suggests that conversion to organic may carry a cost simply because organic is inherently linked to environmentalism, which the Farm Bureau, among other actors, has worked hard to define as profane. My interactions with farmers suggest that in most rural areas of today's politically polarized America, exhibiting signs of environmentalism (not land stewardship) risks detracting from one's cultural capital.

While on one hand the rules of the game have an enduring inertia, they also are subject to revision. Cultures and their symbols change. In several of my research sites, due to the high density of farmers who went organic to save their farms, organic has come to be understood less as a symbol of out-group membership, and more as a symbol of market-savvy. Rather than organic changing the norms of what "good farming" means more broadly, dominant ideas of "good farming" changed the meaning of organic from an environmental movement to a market strategy. You can see this in the above stories told by Harry and Gaby Rasmussen. In this way, the market has legitimized organic. This cultural change is likely unfolding unevenly across America's farmland. Organic may not carry the same symbolic meaning and may not offer the same cultural capital and legitimacy in areas where organic farms are less dense. Even in organic dense areas, the cultural meaning of organic farming is still highly contested.

Individuals, undergoing epistemic experiences

The organic dairy farmers I met through my research are unique individuals navigating these epistemic spaces.

After a number of interviews, I realized that "environmentalist" and "steward" are important epistemic objects and are the subject of active boundary work. It seems that while being a "steward of the land" is important to many farmers, they actively distance themselves from the word environmentalist. I got a chance to explore this with Danielle Zedler, who described herself as a steward of the land, but not an environmentalist. Here's how our conversation went.

Danielle is one of two sisters gradually taking on more and more of the farm responsibilities as their dad transitions into retirement. Neither of their husbands are involved. Danielle and I talk in a modern second-floor office, right over the milk tank. Danielle is a petite woman with dark brown hair. Although the family has shipped their milk to Organic Valley for five years, she wears a Clover Stornetta jacket against the chill, reflecting the decades they were with Clover, including through their transition to organic.

Danielle seems thoughtful and deliberate. She chooses her words carefully and she's precise about what she knows and what she speculates. Most of the organic dairy farmers I interviewed don't believe in human-caused climate change, and many have very strong feelings about it, as I'll discuss more in Chapter Four. But some of my interviewees, like Danielle, don't feel they have enough information to have an opinion. Between the dairy, her kids, and her service work for North Bay Dairy Women and other groups, Danielle doesn't have time to learn about climate change. But it sounds like she would be pretty concerned if she found out how severe it is, and she'd try to do something about it.

After she's told me what she knows and how she feels about climate change, I tell Danielle what I know about climate change. I ask her if she would be interested in educating farmers about climate change and the greenhouse gas potential of methane emissions, if she discovered that human activities actually are raising global temperatures and changing the climate in ways that would be devastating to people around the world.

"Yeah, on a small scale. I'm not going to go do a big old talk. But yeah, if I found the research, yes, I would definitely be talking about it, and having discussions, and getting other people interested to try and get them to educate themselves on it because it would be helping everybody."

"Why would it be helping everybody?"

"We're all the world, so it's all going to come back to haunt us if we do not take care of our world. That's being an environmentalist, stewardship of the land and all that."

Since she brought up environmentalists, I ask her, "Do you consider yourself an environmentalist?"

"Not an environmentalist, more of stewardship for our land and stuff like that, so in that respect, yes. We don't want to harm our land because it's what's keeping us going."

"How would you describe or define an environmentalist?"

"I think somebody who is looking out for the environment and who..." She hesitates, searching for the right thought. "There's definitely the *radical* end of it. I think most people probably are environmentalists in some way, but I think when people say "environmentalist" I think sometimes they go to the radical end of it and think of "those type" of people. I think right here, yes, we are environmentalists because we are taking care of our environment in this capacity, which is helping everybody because of where it goes. Our water flows into the creek

down there and it goes somewhere else, so we definitely have to take care of that and make sure that nothing, pollutants or anything, are getting into it."

I probe, "When I asked if you're an environmentalist, and you said, 'I'm not an environmentalist, I'm a steward of the land.' What is it that you're not?"

"I don't know. I'm not like Greenpeace. I'm not for not doing anything with your land. I don't know."

To many people, Danielle would sound like an environmentalist; she cares about her farm's impact on the environment and she would try to educate people about climate change if she were presented with compelling evidence of it. So I push a little further, laughing out loud at my own doggedness. "It seems to me like you are an environmentalist."

"I don't want to be the radical environmentalist, that everybody talks about." Now she laughs too. "I don't want be the radical group that you hear about on TV or see in the paper. That's not me. I consider myself a little bit more down to earth. I can see both sides of a lot of issues, and I think it just depends on the perspective you're coming from and your experiences with it."

Danielle's aversion to the label "environmentalist" suggests that a representation has been impressed on her, likely based on active boundary work, that successfully radicalized and disparaged this epistemic object. The boundary around steward includes "us" while the boundary around environmentalist includes "them." She's aware of the negative cultural capital that being labeled an environmentalist carries: "I don't want to be the radical environmentalist, *that everybody talks about*." It's very much a social identity.

In their interviews with farmers and other agricultural professionals in a rural Iowa community, Herndl et al. (2011) also found "animosity towards much green terminology but

widespread commitment to environmental preservation." Some notable quotes from their interviews include: "I'm not a tree hugger, but I have planted a lot of trees," "farmers may not be environmental activists, but a lot of them are active environmentalists." Instead of using words like green, sustainability, and environmental, their interviewees preferred words like conservative or steward. They found that rural community members strongly distance themselves from the language of environmental sustainability because it's highly politicized and associated with threatening outside forces and agendas.

Vince Alberto voices his feelings about environmentalists much more strongly than Danielle or Herndl et al.'s (2011) participants. "I love telling those environmental groups that they're not half the environmentalist that I am. We buy the land. We have to make a living on the land. I ultimately have a deeper responsibility to take care of it. And they're just playing with rhetoric, and they're just playing with species. I've really come to resent that whole movement because I've seen so much dishonesty. They're not really here to save the spotted owl or the Aleutian goose or whatever. That's just the species that currently works to carry their message. They're anti-growth. They're anti-capitalism. They're anti-business. They're anti-EVERYTHING. They want to pretend that if we did nothing it would be better."

Calling environmentalists dishonest and politicizing this label as anti-business is one variant of anti-environmental boundary work, but there is a softer form as well, that is also very powerful, perhaps especially with even-handed people like Danielle. She says, "I consider myself a little bit more *down to Earth*. I can see both sides of a lot of issues." A common perception among the farmers I spoke with are that people who favor strict environmental regulations may have good intentions but are out of touch and impractical, not "down to Earth."

This is consistent with several of Herndl et al.'s (2011) participants' views on environmental sustainability: "sorry, too practical . . . not that much of a visionary" or "that is admirable in a lot of ways. But it is very problematic in other ways, particularly for production agriculture." Drawing a boundary around environmentalist that excludes practical is powerful. Practical is a contested term. (It is gendered too.) Farmers are exposed to these competing worldviews whether they consciously pay attention or not, and they choose to attend to one over the other.

Herndl et al. (2011) suggest rhetorical strategies for promoting sustainable practices that avoid using language of sustainability. And, judging from my limited experience designing outreach training for farmers, this is exactly what extension agents and other educators are doing in counties across the United States. For example, it is often the accepted practice, in trying to persuade farmers to implement climate change mitigation and adaptation practices, to avoid any mention of climate change. Instead, agents are to stress economic co-benefits and weather-resilience. The successful boundary work to make profane the epistemic objects of "environmentalist" and "sustainability" has somewhat tied the hands of conservationists and created a situation of inefficiency within the extension system.

Herndl et al. (2011) didn't explore where these prejudices come from, except to note that farmers are more concerned with the financial aspects of farming. But, ultimately, a commitment to environmental sustainability requires questioning the actions of certain powerful interests, such as certain transnational agribusiness and fossil fuel corporations that contribute to environmental degradation and also actively engage in broad, multi-faceted boundary work campaigns to define such epistemic objects as environmentalist. Thus, true stewardship of the land is inherently political. The negative stereotypes about environmentalists have in part been

purchased by fossil fuel and other environmentally problematic industry groups, often masquerading as grassroots associations. Bell and York (2010), for example, document how the coal industry, working with a marketing firm, branded environmentalists and environmental regulations as anti-community and anti-man.

The boundary work around environmentalists reminds me of how boundary work has marginalized broadly supported ideas about women's rights through the use of rhetoric like "feminazi." In the environmental sociology class I teach, I once asked the class to raise their hands if they consider themselves a feminazi. No hands went up. When I then described the component beliefs, values, and public stances of people who get labeled feminazis (e.g., opposed to sexism, desire equal pay for equal work, upset by systematic violence against women), all of the students expressed strong support for these components. In that moment, we all saw how people who believe in the same thing can be turned against each other by the use of divisive, political labels. The invention of feminazis was an effective political strategy to deprecate commonly held values that threaten patriarchal hierarchies. How much of farmers' antipathy towards environmentalists has been strategically produced?

Farmers no doubt have good reason to interrogate environmental regulations and environmental projects. First of all, it's hard to make a living off the land, and environmental regulations can pose existential threats to farms, especially in our current political economy (where farmers can't pass costs on to consumers) and especially with capital-intensive farms like dairy. Second, often farmers are correct that environmental laws don't make a lot of sense. Developing parsimonious and enforceable environmental regulations to effectively manage complex and diverse agricultural systems is tremendously challenging, and only more so in a politically antagonistic environment with jurisdictional discontinuities. Furthermore, there

certainly are environmentalists who have been very wrong and ignorant, and who have pushed wrong and ignorant crusades in very arrogant, entitled, and disrespectful ways, often without consulting the farmers whose livelihoods are affected and who have valuable knowledge to contribute. Farmers often know their land and understand the farm economy in ways that outsiders simply cannot. These are very real (not politically produced) reasons for antipathy towards environmentalists and environmental policies.

But farmers often misunderstand their land and misunderstand the farm economy as well. Farmers tend to understand their land through available cultural lenses. As discussed in Chapter Two, so many of the farmers I spoke with only began to see the deep and complex ecology of their land after they transitioned to organic and started learning about it. Also, farmers often criticize environmental regulations that constrain their options or increase their costs when their ire would be better focused on the market relations preventing them from passing on to consumers the costs of appropriate environmental precautions.

So, while there may be some inherent tension between farmers and environmentalists, it does not fully explain the sentiments expressed by Danielle. "I don't want to be the radical environmentalist that everybody talks about." Danielle's words suggest that within important groups that structure her life, a clear message has been delivered and reinforced that she must be careful not to cross certain lines or else she may suffer social stigma. A division has been erected between "us" and "them," and common-sense environmental stances and actions have been deprecated and weaponized.

Post-structuralist political economic thesis of conventionalization

While this is not surprising to anyone who follows politics, it's worth taking a moment to appreciate the significance of this vilification of environmentalism across rural America as it affects the sustainable agriculture movement. Even if they wanted to, how are farmers able to prioritize social and environmental concerns in their private farming practices and their public roles in agricultural communities, if there are externally-imposed limits the crossing of which would deprive them of vital social (and thus material) support? And why would they want to in the first place? Where would they get the idea to want to try sustainable practices or support environmental initiatives, given the anti-environmental beliefs and values that are constructed and reconstructed at every dairy conference they attend and any farm journal they pick up?

This is perhaps a deeper, more insidious understanding of the political economic constraints to changing institutions within the U.S. capitalist system than has been highlighted in the "conventionalization" literature. Scholars critique Julie Guthman (e.g., 2004) and Michael Pollan (Pollan, 2001) for being too extreme in their assessment of the "inevitability" of conventionalization (Campbell & Rosin, 2011). But Guthman has not written about these social psychological aspects of capitalist cooptation. Seen in this light, things may be even worse than her dismal pronunciations. As Margaret Thatcher said, "Economics are the method; the object is to change the heart and soul." It is not just prices and the structure of economic constraints and incentives that shape conservation practices, but culture, emotions, and cognitions too. This analysis recognizes the micro-politics of legitimizing the unequal power relations more prevalent in conventional agriculture. In this light, farmers are complicit in their own exploitation, decline and subsumption by industrial agriculture.

Sites of belief production

Understanding environmental beliefs as shared faith commitments suggests looking for the sites of belief production, of collective effervescence, of boundary work, and of symbolically important rituals, and finding out what's happening there. The broad field in which beliefs about organic, environment, and good farming are formed are highly contested.

The prejudice against organic has been particularly strong in the United States, especially compared with many European countries or New Zealand. This is important to keep in mind when weighing the literature on "conventionalization." Within the United States, the stigma against organic has occupied all levels of farm professionals from farmers to university professors to the highest levels of government. In his history of the organic movement in the United States, Brian Obach (2017) writes, "The small handful of scholars and university-based scientists interested in alternatives to the industrial agriculture model were marginalized by their peers. Organic practices were not recognized by the federal government, and food industry scientists dismissed organic methods as a hoax promoted by subversive elements opposed to science and social progress." Indeed, in 1971, the US Secretary of Agriculture Earl Butz said, "Before we go back to organic agriculture in this country, somebody must decide which 50 million Americans we are going to let starve or go hungry" (Lockeretz, 2007).

Klintman and Boström (2004) specifically compared how organic was framed in the United States and Sweden, finding that debates over organic labeling in the United States are more adversarial, more controversial, and more polarized than the same discussions in Sweden, which were aimed at consensus. Constance and Choi (2010) document the many ways that the U.S. lags behind Europe in public and governmental support for organics. For many years, EU governments have officially recognized the superiority of organic and the EU directly subsidizes

transitioning farmers. In the US, the NOP laws were very careful never to state a value judgement between conventional and organic and only recently even began to fund organic research. The Land Grant University system openly criticized and opposed early efforts at organics, scientists who researched organics were criticized, and extension agents were uninformed and uncooperative with farmers wishing to transition.

While ideologically organic and sustainable groups like Acres USA can provide and spread vital knowledge and social support for "authentic" organic farming, it appears that the actors who profit from the industrial agricultural system have an outsized influence on many of the sites of acculturation and ideology formation in rural America. Agribusiness firms that profit from the agricultural treadmill set cultural norms through their presence in farm journals, which survive on their advertisements; through their paid consultants, who go from farm to farm evangelizing their message in the guise of impartial nutritionists; through their politicking with key farmer opinion-leaders; and through their influence on putatively grass-roots farm associations. These are some sites of belief production.

I saw this at work twice when a nutritionist visit interrupted an interview and I got to tag along as they discussed the farms' TMR (total mixed ration of the cows' feed) and production statistics. I saw this in the farm journals that often live in baskets next to the toilet in the farm bathrooms. But most starkly, I saw this during participant observation at the WI Dairy Business Association events at the World Dairy Expo, at two county Farm Bureau meetings in Wisconsin, at the annual Organic Dairy Association meeting, and at the California Dairy Alliance (CDA) annual meeting.

Groups like CDA and the Farm Bureau strongly constrain the potential of organification and play an important and previously un-discussed role in promoting conventionalization. Anti-environmentalist policing is at times severe at these events. My data suggest the potential cooptation of groups like the California Dairy Alliance and the Farm Bureau by the agricultural industrial complex and even the fossil fuel industry. This is related to the neoliberalization and politicization of the environment more generally, and illustrates how money from industry can result in farmers "voting against their interests."

I attended the annual California Dairy Alliance (CDA) meeting in Rohnert Park, CA. CDA is an association of California dairy farmers, including both conventional farmers, many from the Central Valley, and organic farmers, primarily from the North. Many of the organic farmers I interviewed are members of CDA, primarily for the help that CDA provides in complying with California's labyrinth of environmental laws, and the legal support they offer for labor disputes. The meeting was a mostly two-day event that featured sessions on labor (titled "Are your workers' comp injuries milking you dry?"), dairy pricing forecasts, environmental permitting workshops, and the annual meeting of members. The featured banquet speaker was Dr. Alexander Gonda, an alt-right military and intelligence analyst and former Fox News contributor who, it turned out, would soon become a deputy assistant to US President Donald Trump. I wasn't sure what Dr. Gonda had to do with dairy until the association's state and federal lobbyists presented their update reports and I began to perceive the intimate relationship of CDA to a cadre of other industry and political groups in Washington D.C. (and Sacramento).

The meeting reminded me of Durkheim's description of Aboriginal Australians who come together once a year for religious experiences that reinforce their images of the world and

their place in it. The program was punctuated with diverse rituals. There was the annual Ladies Day Program, where the dairy wives reunited in the hotel lobby in the morning and left to spend the day together catching up, getting manicures, shopping at Crate & Barrel, and visiting a historical site; the physical act of the manicure solidifying the status of those who do not labor with their hands. There was the annual banquet dinner, honoring a beloved member who had recently passed; members all donned black hats – his signature garb. There was the afternoon golf, the men's shared ritual of physical excitation and bonding. The labor lawyer's presentation – a ritual that effectively dehumanized brown-bodied workers and generated a collective euphoria of supremacy.

There was the annual report on California milk: celebrating the attendees' spot as the king of milk production, but warning of potential challenges from Wisconsin and New York; we must not slouch. And in the same session, yet not in the slightest way connected to the information about high production, was the upsetting report on milk prices and the dismal discussion of global inopportunities: EU's lifting of its quota created over-supply and the government is paying to build powder storage facilities. Russia has started a policy of limiting imports. High production in New Zealand. It was an emperor wears no clothes moment; a faith moment, where high yield for the sake of high yield was confirmed as unquestioned dogma, despite the perverse impacts of overproduction on the livelihoods of many of the less huge farmers present, who suffer from consequent low prices. Not to mention its impact on the dead zone in the Gulf of Mexico, the children whose well-water is contaminated with nitrates, and other related environmental crises.

And there was the annual meeting of members; where democracy and self-direction were performed.

Three moments from the meeting struck me as especially relevant to understanding the boundary work around environmental epistemic objects: the demonization of environmentalists by the CDA CEO, the intervention by the association's paid federal lobbyist during member voting on by-laws and policy resolutions, and the report on lobbying activities by this same lobbyist.

The CEO of CDA is a tall and large-boned woman with long, died-blonde hair, wearing heels and fitted jeans with gold and rhinestones on the back pockets. She is confident and brash and has a sharpness to her. She performs the role of MC, taking the mic between presentations, and adding some comic relief. The time comes for her to announce the afternoon's session on environmental permitting. She stands just below the stage, speaking into the mic. It's only a brief moment, but its imprint remains with me for a long time. She's praising CDA's environmental compliance specialist, and as she goes on to say the word environmentalist, she mimics a person having an epileptic seizure. En…vi…ron…men…tal…ist. It takes her six convulsions to get the whole word out. It's not a subtle gesture, but exaggerated full body movements. I am shocked, but no one else seems to be. It appears to hardly even be funny, because it lacks the element of surprise. The boundary work of CDA and its CEO to define the epistemic object of the environmentalist is not subtle.

A window into the mechanisms of top-down acculturation and perhaps cooptation comes the next morning during the annual meeting of members. This is a time when members sit together at tables according to the district where they farm. They each have a copy of the by-laws as well as the policy resolutions that have been proposed by the leadership, both of which they've had a chance to review and discuss prior. In a few minutes, they will vote on these.

They work together in their district groups to discuss these materials and to finalize their thoughts on any new resolutions or changes to the by-laws they would like propose. The time comes for a full-group discussion, when district delegates stand up and share their proposals. An important point to all of this is for their lobbyists to have a clear statement of the association's policy goals, so they know what angles to pursue and have a written document from this grassroots group to use in the press and with lawmakers.

At one point, a delegate presents his table's ideas about a national GMO-labeling law. Vermont implemented a statewide labeling law earlier in the summer and Maine and Connecticut have passed laws but they are not near implementation. The farmers are concerned about a state-by-state patchwork approach to labeling that would be difficult to comply with. The delegate proposes that CDA adopt a resolution supporting a national GMO-labeling law. In this moment, I notice that their federal lobbyist has stood up and started paying close attention. He is agitated and seems to be calculating how to intervene. Soon he moves from a chair at the edge of the room towards the center. He interrupts the discussion to clarify how this concerning situation should be addressed. He explains that what is actually needed is a federal law *preempting* GMO labeling. The farmers don't seem to care, as long as the regulatory landscape is uniform and easy to comply with.

If I had stepped out of the room for a moment, I would have missed it. This brief intervention suggests two important ideas. First, it's possible that these farmers are not necessarily against GMO labeling laws. This conforms with what I've heard from farmers, that farmers are proud of their practices and they believe in their product, GMO or not. And they believe the public has a right to know what's in their food. They both are honest and feel they have nothing to hide. Second, and more alarming, while CDA is paying the lobbyist to advocate

for their interests in Washington, the lobbyist is, in essence, lobbying them, and I can only wonder for whom. He is shaping their interests, and he's shaping it in line with the interests, in this case, of Monsanto. He appears, in this way, to be surreptitiously lobbying the dairy farmers on behalf of agribusiness interests.

I think back to this lobbyist's presentation the day before. This is the third moment I mentioned above. I see, in retrospect, the extent that he was educating the farmers as much as reporting back on his activities on their behalf. For example, on immigrant labor, a very important issue to farmers, the lobbyist was emphatic that "We just want legal labor. Pathway to citizenship is NOT our fight." He also advocated for provisions that would allow GMO feed in milk labeled GMO-free. The lobbyist appears to have an important independent role in shaping what the dairymen of California want or say they want in their official resolutions and then pressing lawmakers with these claims. Milk oversupply is what is on everyone's mind, but nothing is proposed to curb that; only measures that would have the opposite effect.

From my conversations with the members of CDA, I've gotten the sense that they are there largely for the ritual. In one man's words, "you've got to be part of something." They don't have the interest or time to gather information, form their own opinions, or understand these issues deeply. They trust CDA and they are willing to vote in support of the by-laws and resolutions that the leadership and their lobbyist has proposed. They don't necessarily see themselves as rubber stamping, but that is how it appears to me.

Who do you trust?

How do my organic dairy farmer participants feel about the California Dairy Alliance? During my interview with Danielle, it occurred to me that CDA may be a source of information that she would trust on whether climate change is real and human-caused.

I mentioned above that I had asked Danielle how she feels about climate change. This is what she said:

"Wow, I really don't know that much about the climate change, so I don't know if I have an opinion on it one way or another. I think it's happening. I think that we are definitely seeing a shift and I'm not sure why that is."

"What makes you say you think there's a shift?"

"Well, because I just think that with the drought that we just had and everything. We're usually a temperate climate here, and it just seems like it's definitely shifted a little bit, our weather patterns. Not dramatically, but with not getting any of the rain and then we just had how many inches of rain in March. We usually don't get that. That was a lot of rain in March. We didn't take our cows out for three weeks."

"I bet it was difficult."

"It was really difficult. We usually don't get that much rain. In December we get a lot of rain and January, but not March, so that was strange. It was well-needed, so that was good. But it makes you adjust how you're running your business, too. We definitely had to make a few adjustments to it. But again, a lot of that could be just because we've had four years of drought. Sporadic rain and then pretty much status quo."

"Weather changes," I say.

"Weather changes, you're right, it does."

I suggest that some people think these weather variations amount to climate change and that it's caused by carbon dioxide and other greenhouse gasses generated by humans.

Danielle replies quickly. "I don't know if I agree with that. Again, I don't know a lot of research on that, so it's not something I've studied. I'd have to learn about it and then make an educated decision and then see. I'd definitely have to read up on it and see what's being said and what their research base is, just on those different things, and see is there something. Because, obviously, if there's something that we can do to help reduce that, we would definitely be willing to try that."

Danielle describes her frustration with government environmental regulations they're forced to follow on their farm that they don't understand, haven't seen the supporting research for, and don't feel they've had any input into. As with many of the farmers I spoke with, her farm relies on the expertise of CDA for help complying with environmental regulations. As I mentioned, CDA is a California-specific dairy business association that has both conventional and organic members. "We work a lot with them and they're very helpful in facilitating a lot of these things [complying with environmental regulations]. They're pretty good about explaining why we're doing them. Again, they have the resources and they understand, and they can present it to us in a way that we probably would never understand otherwise."

This is where I seek out whether the California Dairy Alliance is a source of information that Danielle would trust about climate change. I ask her, "So you're saying you're in this camp where you would want to learn a lot about [climate change] before you have a stance or an opinion. Is CDA a source of information that you would trust?"

"Yes, I would." She doesn't hesitate. "They understand what their membership means and what they're looking for, so I think that's a really good barometer to see where we should go and what we should be doing. I think they definitely have our interests in mind."

I ask, "Are there other places where..."

Danielle jumps in before I even finish the question. "The Farm Bureau. [Our] County Farm Bureau does a lot with that kind of stuff, and the California Farm Bureau Federation. They do a lot of research, and we have a local area, they're at the state and DC, so we listen to a lot of stuff that they have to say. They have some really good speakers and policy people in place that could help you with that." And by "that," she means climate change.

CDA and the Farm Bureau are Danielle's trusted sources on climate change. This makes sense. They are the presiders over the rituals that give meaning to the farm communities' lives. They provide valuable services like insurance, environmental compliance, and protection from labor discrimination and workman's comp claims. These two groups have set themselves up to have extraordinary influence on the knowledge production of dairy farmers, both conventional and organic.

This made me wonder where the Farm Bureau narratives come from, how do they manage rituals and boundary work?

Farm Bureau: grass roots or AstroTurf?

Across the country, local Farm Bureaus and their six million members feed the kinds of institutions and activities needed to maintain a vibrant civil society. In my travels through the dairylands of Wisconsin and California, I found the Farm Bureau often to be associated with warmth, community, local empowerment, and knowledge. In coordination with county fairs, 4-

H, FFA (formerly Future Farmers of America), local school boards, and innumerable other associations, the Farm Bureau helps bring people together and engages them in important skill-building and community building, often in ways that are fun and deeply meaningful. The Farm Bureau is present at the county fairs, where youth show their prize calf for the first time, or auction off the pig they raised for the inflated price paid by the supportive owner of the local insurance firm. In her book, Farmers Helping Farmers, Nancy Berlage (2016) offers a rich history of Farm Bureau associationism for fun and profit. For over 100 years, the Farm Bureau has offered spaces for rural people to share and expand their knowledge, enrich the social life of farm children, hammer out complex issues of the state, fight collective problems like bovine tuberculosis, and even for women to exert a certain authority. It has been a nexus for progress, but also much needed amusement. Much of their messaging was communicated through songs and cartoons. The Farm Bureau handbook specifically recommended group sing-alongs to inspire allegiance to the bureau and conviviality. Here's a 1928 song that was part of the Farm Bureau's campaign to fight bovine tuberculosis. It jests with Prohibition as it highlights the positive results of implementing improved cow comfort and nutrition:

Bovine Prohibition

Oh, the cows all ‘round about here,
Gave us an awful shock one day
They joined the W.C.T.U.
And swore no more to stray.
It was old time local option,
I recall with a sigh”
The day our cows all organized
And voted to go dry
Then we all rose up in a fury
Because the milk and cream we need,
We made a lot of changes in
The barn and in the feed,
Gave them alfalfa, corn silage
And all the grain we could get,
“Twas then the cows were satisfied
So changed from dry to wet.

– To be sung to the tune of the Long, Long Trail [a popular World War 1 song]
(Berlage, 2016: 81)

In theory, the policy positions of the American Farm Bureau Federation reflect the interests of their members. The national Farm Bureau policies (AFBF, 2018) are decided by state representatives who were elected by county representatives, who were elected by local farmers. At the local level, the Farm Bureau is an important democratic force that responds to changing times and needs. At the Manitowoc County Farm Bureau meeting I attended, the members voted to support a resolution calling to raise the county gas tax, vehicle registration fees, farm truck registration fees, environmental fees, and/or other fees in order to pay for the improvement of local roads and bridges. At the same time, they voted to change the name of the “Women’s Committee” to “Promotion and Education Committee.” While to some, 2016 might seem quite behind on gender equality, this vote (passed with 100% consensus), illustrates the democratic process of that community and shows that this Farm Bureau’s institutions are living institutions.

Yet this rosy picture hides the role the Farm Bureau plays in thwarting environmental protection and social justice. Grassroots voting on Farm Bureau policy resolutions hides the extent to which the narratives that permeate the nationwide farming community are created and meticulously packaged at the federal level, with the help of professional marketing firms and often in conjunction with transnational agribusiness corporations and the fossil fuel lobby. Why did so many of the farmers I spoke with have the same reaction when asked about climate change – that it's not the United States' responsibility when none of the other countries (especially not China) are doing anything about it? Perhaps because that is the deflective stance that was developed at the federal headquarters and spread through meetings, events, and messaging. As stated in the Farm Bureau Policies for 2018, they oppose: "Any climate change legislation until other countries meet or exceed U.S. requirements" (AFBF, 2018: 106).

The Farm Bureau represents the interests of an industrial agriculture system based in chemical- and fossil fuel-intensive farming that is responsible for a host of ecological crises from surface water eutrophication and groundwater pollution to biodiversity loss and climate disruption. It supports "Big Ag," not family farmers, as its members have learned when they've tried to protect family farms from CAFOs and other industrial interests (Shearn, 2012).

The Farm Bureau has a long history of anti-environmental activism. For example, on climate change, the American Farm Bureau Federation's spokesperson Mace Thornton put it: "We're not convinced that the climate change we're seeing is anthropogenic in origin. We don't think the science is there to show that in a convincing way" (Biello, 2013). Their official Policy Book opposes, among other things, cap-and-trade or any taxes on carbon emissions, any regulation of GHG by the EPA, and any mandatory restrictions to achieve reduced agricultural greenhouse gas emissions (AFBF, 2018).

The farmers I've met have demonstrated their willingness to be team players, to lead by example, to work hard and sacrifice. These environmental positions do not appear to me to represent how they would approach environmental policymaking were they well-informed. In Danielle's words, "yeah, if I found the research, yes, I would definitely be talking about [climate change], and having discussions, and getting other people interested to try and get them to educate themselves on it because it would be helping everybody." … "We're all the world, so it's all going to come back to haunt us if we do not take care of our world. That's being an environmentalist, stewardship of the land and all that."

A recent series of articles in Inside Climate News documents the Farm Bureau's tight relationship with the fossil fuel industry (Banerjee, Gustin, & Cushman, 2018; Gustin, Banerjee, & Cushman, 2018). The Farm Bureau worked to abolish the EPA in 1980 and it has long fought efforts to increase air and water quality standards and protections for endangered species, often in coordination with industry and fossil fuel lobby groups (Banerjee et al., 2018). In the 1990s, the Farm Bureau was an active and important member of the Global Climate Coalition (GCC) which included the American Petroleum Institute, Exxon, and other industry lobby groups. At an historically key moment, in 1997, the Farm Bureau partnered in a $13 million campaign to block the two-thirds senate majority needed to ratify the Kyoto protocol. Through its relationship with the Heartland Institute – a fossil-fuel funded conservative lobbyist think tank – the Farm Bureau progressed through various stages from actively denying climate science to disputing the mainstream economic view that addressing climate change would result in net savings. The economic analyses of Farm Bureau economists, who worked jointly with the

Heartland Institute, has directly contradicted analyses by the USDA that cap-and-trade revenue would buffer farmers by offsetting increases in fuel costs.

The Farm Bureau might not have the financial resources of its partner lobby groups, but its grassroots network of six million members has been a key element in anti-environmental GOP politics. In the words of Andrew Holland, who worked for Republican Sen. Chuck Hagel of Nebraska, "They're like the NRA. They get their members ginned up about something and then they call the Hill" (Gustin et al., 2018). They spread anti-environmental rhetoric and disinformation through their dense communication network, active in every corner of the country, and trusted. For many rural people, the Farm Bureau is associated with sunshine, fairs, shared dinners, and smart people they trust.

Recently, the Farm Bureau has officially partnered with the FFA,[5] to better spread its message among youth. FFA is a federally chartered national youth organization of 650,000 student members associated with almost 8,000 local FFA chapters. The partnership MOU recognizes the role of school-based agricultural education in telling the story of agriculture and also allows the American Farm Bureau Federation (AFBF) to serve as a member of the FFA Agricultural Policy Committee. According to the FFA website, “Based on the MOU, FFA will use AFBF-branded advocacy resources and materials to train state FFA officers and find ways for FFA and AFBF members to interact during policy discussions or in policy communications” (FFA New Horizons, 2017).

Farmers often talk of the need “to tell the story of agriculture,” an idea and a phrase they’ve heard and adopted from their Farm Bureau leadership. This conjures images of school groups visiting farms while farmers hold calves for them to look at and even touch. Children and

[5] FFA formerly stood for Future Farmers of America, but it has been disassociated with this name in order to include non-farmer food systems people.

adults alike have become disconnected from where their food comes from and the Farm Bureau literally has a "Playbook" to tell the story of agriculture. The Farm Bureau trains young people in rhetoric and public speaking, including hosting speech contests and debate teams. While this sanguine image of farmers welcoming school groups is very real and young people truly benefit from this training, the protagonist in that playbook is industrial agriculture and one of the most dangerous villains it must fight is environmental regulations, including groundwater protection regulations and any regulation of greenhouse gasses. "Telling the story of agriculture" and "strengthening agriculture," two common buzz-phrases in agricultural communities, are dog-whistle codes for stifling environmental resistance to industrial agriculture. For farmers like Danielle Zedler, busy with her kids and her farm, strengthening agriculture sounds like strengthening the family and keeping alive the traditions that have given meaning to her life. But as we'll see next, Paul Locke hears the call to fight GMO bans.

Brock and Barham (2013) use the economics concept of bounded rationality to explain why dairy farmers didn't go organic when it was clearly the economically rational choice. Bounded rationality refers to what most of us do most of the time. Most of us, most of the time, don't have the time or desire or ability to figure out what's the best choice of action, so we follow some general guidelines and wing it. Usually this involves trusting others. The Farm Bureau and CDA have successfully established themselves within the oligopoly of trusted opinion-leaders.

The civic in industrial agriculture

Paul Locke is a tall man with long legs, broad shoulders, and thick forearms. His form and his can-do attitude remind me of Paul Bunyan. He's warm and kind, and he's been friendly and patient with me every time we've met or talked on the phone. He strikes me as forthright and diplomatic at the same time. I suppose that's how he's sustained his engagement in so many different agencies, boards, and associations over the years. The agricultural community certainly has been his home and he's played a leadership role. He was a Board Member of the his County Fair for over 10 years, and he served as President, Vice President, and Board Member of the his County Farm Bureau.

Paul's wife Robin and their daughter Emily, both tall, blonde, practically dressed, and no-nonsense, also join us at the kitchen table for part of the interview.

The Locke ranch perches within a mile of a beautiful wetland lagoon not far from San Francisco – an environmentally sensitive spot in an environmentally sensitive community. For Paul, part of championing agriculture has meant working with (which usually means against) conservation groups. He's been the chairman of a resource management group and has worked with his county Resource Conservation District (RCD) and the Natural Resources Conservation Service (NRCS) on water quality, nutrient and pasture management projects. When the California Tiger Salamander (CTS) was listed as a federally endangered species, he worked on his County CTS Task Force.

Paul and his young adult children together milk about 320 cows on 400 acres. They officially converted to organic in 2007 to take advantage of the stable price. It wasn't a big change. The dairy had been close to organic since the 1950s when it stopped using chemical fertilizers and began emphasizing pasture. They're in a good spot for it – prime agricultural

ground, and especially lucky because they have received free tertiary treated water for irrigation from the nearby town.

About going organic, Paul says, “We were already pasture-based, so let's just get the land done and go back to doing things that my grandpa did.” This includes using eggs to fight scours. “I can remember being a kid. I'd walk through the breezeway at my grandparent's house and my grandfather would hand you an egg and said, ‘ok this calf,’ and we'd shove the whole egg and shell and everything down their throat. Well, now what a lot of these guys are doing is they're cracking the egg. They're not using the shell but they're cracking the organic eggs and mixing them into the milk to keep that protein level up.”

After farming organically for eight years, Paul doesn’t think it’s any better than conventional. To him, “milk’s milk,” and he feels protective of conventional farmers. He tells me a story of how he led the fight against a county-wide ban on GMOs.

“We ran the thing through our Farm Bureau. We spent almost $600,000 to win, and we won handily, we kicked their butts all over the place. But it was the way it was written.”

Apparently, his opposition team was able to get the language of the proposed ban to be worded that you could not grow *or use* GMO organisms in the county.

“The only way we won was that we were able to get it down to saying that puppy parvo vaccines, there are a lot of vaccines that are genetically modified, you could not use them in the county.”

Puppy parvo refers to parvovirus, one of the core vaccines that puppies get between 6 and 16 weeks old. They had basically made the county voters chose between having GMOs and healthy puppies or no GMOs and puppies at risk of disease.

Sadly, for Paul, the proponents of the ban recently got enough signatures to put it back on the ballot. He's not going to try to fight it this time because they wouldn't be able to raise enough money, now that so many dairy farmers have gone organic.

"How do you go get money from probably 90% of the people that we got money from last time, that now are huge into organic? I mean, our feed companies – if it wasn't for organic dairy, the feed companies would be out of business because the conventional guy wasn't even paying the bills."

He pauses and shakes his head. "The problem is that you just tie certain farmer's hands. We have two or three guys that grow Roundup ready corn, so they're going to have to find another product to feed their cows."

Civic agriculture means fighting environmentalists

Paul isn't fighting the GMO bans for his own direct personal interest. He's never used GMOs on his farm. He's doing it because he's loyal to the agriculture community he knows and loves, in the image of the American Farm Bureau Federation, which has been his home his entire life. His grandmother was on the Farm Bureau board. He grew up in 4-H and Future Farmers of America. Not only does he value the Farm Bureau community, but they value him too. Paul was the first organic farmer to be president of any county Farm Bureau in the country. Wherever he goes, people are shocked that an organic farmer could get elected as president of a Farm Bureau. While part of the reason he was elected, even as an organic farmer, reflects the county he farms in – organic is justified because land prices are too expensive not to sell milk for the organic premium – it also reflects what a Farm Bureau team player Paul has been. He's deeply committed to the agricultural community. When he was elected president of his County Farm

Bureau, his main goal was to keep the agricultural community together – meaning no bitterness between organic and conventional farmers. "Milk's milk," as he says. In 2018, two years after our interview, Paul continues to be a pillar of the agricultural community, receiving the 4-H Alumni Recognition Award and being recognized as Dairy of the Year by the County Fair Board of Directors. Paul is about as civic as it gets.

Dupuis and Gillon (2009) discuss the creation of alternative markets as part of civic agriculture (Lyson, 2004). What I discovered in my interviews with farmers and my participant observation at county fairs and farm meetings is that conventional dairy farmers are very civic as well. They volunteer, they associate, they deliberate, they socialize, they are interconnected, and they deeply care. Exactly what they care about and what they believe depends on the tactics and boundary work of the actors in their community field, but in general they want to get behind things because it feels good.

The farmers who chose to stay conventional because they thought organic was fraudulent, those who did certify but resisted going deep because they didn't think organic was superior, and farmers who believe in organic but not the regulation of greenhouse gasses or well-water extraction illustrate a problem with implying that conventional farmers are not civic. These individuals illustrate an important micro-level impetus for conventionalization that has not received attention in the literature. Far from the winds of political economy, these often hard-working, honest, self-sacrificing, volunteering people who care about family and community, but whose epistemic objects have been bounded by industrial agriculture interests and whose collective rituals have been co-choreographed by fossil fuel lobbyists are resisting sustainable agriculture because that is what the people they trust tell them.

I'm not the only one to notice that civic commitment and resistance to environmentalism often go together in rural spaces. Mcguire, Morton, Arbuckle, and Cast (2015) identified four distinct farmer identity types – Productivist, Conservationist, Naturalist and Civic-minded – using principal component analysis based on survey answers of Iowa row crop producers, and they tested how these identities predicted support for soil and water resource protection farm policies. Contrary to their expectations, they found that for all four of the conservation policies, the civic-minded identity was the only identity not to support them. They opposed three policies to protect water quality and wildlife habitat, make farm benefit eligibility conditional on erosion prevention, and establish a drainage-wetland system that would have a collective community level impact, and this group was also the only identity to oppose more money for conservation because it might mean more regulation. The authors were surprised by their findings and they went back and reviewed the items within this component. The items matched their characterization of the civic-minded identity: active in the community, a community leader, active in farm organizations, helps friends and neighbors, and shares knowledge and equipment. In their discussion, they hypothesized that the Civic-minded identity is committed to the current voluntary system and would oppose regulations to stem excess agricultural nutrients and sedimentation of streams, lakes, and rivers. But this does not explain why these farmers would respond in the opposite direction from the others, including the productivist farmers.

It may be that more civic-minded farmers are more exposed to the negative messaging about environmentalism and environmental regulations that is generated at national-level and disseminated through coopted grassroots farmer organizations. Having high social capital and cultural capital, they may also be more attuned to the meaning of and skilled at manipulating symbolic objects within the rules of these contexts.

As a community leader, Paul has tirelessly fought against what he sees as a steady onslaught of misguided environmental initiatives that will hurt agriculture. This came up many times during our interview, including when I asked Paul and his wife Robin about the different roles they play that are important in their lives. "Steward of the land" was at the top of the list for both of them. But it turned out that "steward" had a very particular meaning for them, especially regarding exactly what they were stewards of and for whom. Paul's idea of steward was shaped by his experience with the Farm Bureau.

I ask the family, "One question I've asked people is what they see as their roles. We all take on different roles in life, sometimes people give us these roles and other times we choose them ourselves. You can be father, you can be mother, you can be businessman, church member, coach, environment, anti-environmentalist, we have some of those in our family."

Robin looks at Paul. "I think your role is more of a voice for ag."

Paul agrees, "I just need to say no, I need to learn how to say no."

Robin explains to me, "He's on every board trying to battle against environmental issues."

Paul clarifies, "It's not about 'against them.' It's somehow bringing that common sense." (There's that idea again.)

I confirm, "Kind of a big giver?"

Robin says, "Oh yeah!"

Then she describes her important roles. "We've always said that we were the stewards of the land. My aunt always said, 'I am the steward of this land, to keep it for the next generation.' That's what she always said. She goes, 'This is my role. I am the steward, to keep this land

together.' My aunt Dorothy. She's passed away, but that's what she always said, she goes, 'I am managing this land for the next generation.'

I ask Robin, "How do *you* feel? How do you embody that role?"

"You keep the business going for that next generation, which is what she was saying. You don't compromise that land. That land is the most important thing for the business. If you didn't have the land, you wouldn't have any cows, you wouldn't have that… Like Paul was saying about the flowers, it's so frustrating when you can't use the land that you pay property taxes on, you can't use it."

By "the flowers," Robin is referring to the three types of endangered flower species that have made a home on their land, along with the endangered California tiger salamander. As discussed in Chapter Two, one thing many dairy farmers have discovered when they transitioned to organic was all of the life that showed up in their fields. Sally Alberto talked about the "kamikaze" frogs and all the spiders. The Rasmussens mentioned the finches, butterflies, and insects. Mick Banker talks about his beloved worms, "Don't break up the party. They do all the work!"

In all, the Lockes own about 130 acres of land that they can graze and spread manure on, but they cannot disk or till because of the endangered species. I think a lot of environmentalists would consider an endangered species to be an appropriate object of stewardship, but Robin sees the business as what needs protection, and the flowers – or rather the government – as the threat. Ultimately, for Robin, stewardship seems to be about the business interests of landed farmers.

I probe a little deeper. "You're talking about your role as steward of the land. Where do you draw that line of what you are a steward of and for whom are you stewarding the land? You want to protect the land for the next generation, but what about it?"

"My aunt always said, 'for the next generation.' We are lucky in West Marin where we have the ability to sell our development rights to Marin Agricultural Land Trust, which is a private entity. We needed money for when my aunt Dorothy passed away and we had to pay estate taxes, so we took some of the development rights on one of our pieces of property and paid that off. That land will always stay as agriculture because of those development rights."

Stewardship for Robin seems to be fairly tightly contained around keeping a viable farm business for her progeny. She and Paul have three lovely children, all of whom recently graduated from college and are creating and moving into their own roles in the family business.

Paul also feels that steward of the land is an important role for him, and in his mind that is tied to the Farm Bureau. "Oh yeah, that's my role. We don't have enough time for that one. I got involved with Farm Bureau around '87 to '88, somewhere in there. I got on the Farm Bureau board, followed my grandmother on that board and my dad's looking at me going, 'What are you doing? I said, 'Well, you got to see what's coming.' That was kind of my, what's coming. I went from that to sitting in Washington D.C. with the undersecretary of the interior talking about the tiger salamander."

Paul's referring to his efforts at the federal level to bring "common sense" to how the tiger salamander is protected on private lands. For Paul as well, steward seems to be about taking care of the business interests of landed farmers and doing it through the Farm Bureau. Paul sees regulations at the top of the list of challenges facing California's dairy industry. "Water quality, air quality and animal welfare. People are sitting in their offices making rules that affect all of agriculture who have never run a business, been on a farm, or understand the passion farmers have for their animals and land."

To Paul and Robin, being "a voice for ag" and being generous with their time spent helping the community means fighting environmentalists.

Identity-protective cognition

Paul's beliefs about environmental regulations and environmentalists seem to be shaped by identity-protective cognition. Identity-protective cognition refers to the tendency of people to selectively credit and dismiss (or notice and ignore) evidence that reflects the beliefs that predominate in their in-groups. In no instance during our three-hour conversation did he ever concede that any environmental initiative had any merit or logic. He characterized environmentalists and environmental regulations as ignorant, impractical, and incompetent. In drought-prone California with famously shrinking aquifers, he doesn't think he should have to monitor his well water usage. He says, "It's my property, I drilled the well." When I ask them about climate change, Paul tells me he doesn't know if he believes in it. He hasn't learned enough about it, he says, because it doesn't interest him. What he does know about (regarding climate change) – what he selectively attuned to – are the uneven regulations about which regions have to smog check their engines. Sometimes one person has to, but their neighbor, whose land happens to fall in a different zone, doesn't. He has spent enough time looking into that to finally learn that the current geographic boundaries were drawn in from old mining maps. Paul has the resources to investigate climate change; might it be that he avoids doing so to protect his cultural identity as a booster of agriculture where the anti-environmentalist Farm Bureau is his culture?

The emotional labor of contradictory epistemic objects

I'll close my empirical data presentation with the younger generation of organic dairy farmers, and the struggles they face in this fraught world. Paul's daughter Emily also supports GMOs. She recently graduated from Chico State, the only U.S. university that offers a Bachelor's in organic dairy, and now she farms full-time with her dad and brother. She was recently elected to the board of the Organic Dairy Association (ODA).

Emily tells me a story about the time back in high school when she took the very unpopular stance of standing up for GMOs in a school debate. She was a senior and her school was in the extremely progressive town of Sebastopol.

"We're 10 minutes from [a really liberal town] where we were very odd ducks when I was at [the local high school]. There was a proposed GMO ban…"

Paul interrupts giddily, "I made her get up. I put her in a debate."

Emily continues. "We had a debate with the [high school] Speech and Debate against the FFA Debate Team."

At this point Paul is cackling with laughter.

"My English teacher was not happy that I did that. You were looked at very differently when you stood up. But to me, what we've been growing up learning, and even when it comes to the dairy industry, milk is milk. I say that I don't care if I'm organic or conventional. At the end of the day, milk is milk. We follow the same rules when it goes, when it leaves my farm. We did this [went organic] because it was something that kept our farm alive."

Here, Emily catches herself and quickly clarifies, "Not saying that I don't believe in it. You know, I've learned to do a lot of things that even my dad said my great grandpa did, like

feeding eggs to calves. You know? So, it's certain things that we've gone back to in a sense, but we've always pastured our cows."

This seems like what Hochschild (1983) would call "deep acting" emotional labor, or attempting to align privately felt emotions (not just public display) with normative expectations. Emotional labor refers to the process by which paid employees are expected not just to perform their explicit job, but also to manage their feelings in accordance with their organization's rules (Hochschild, 1983; Wharton, 2009). It is a useful metaphor for understanding the experience of farmers who go organic yet want to maintain their stature in their community. It seems to be important for farmers to believe in what they do. This is one reason so many chose not to certify organic.

I can see how Emily might be in a tough spot here. Her family believes organic's no better. The farm community doesn't think it's better. But she graduated with a B.A. in organic dairy and she sits on the board of an important organic dairy association.

Emily does something similar later on, when she's telling me about her experience on that board. "It's a different kind of board. You have people who are the believers of the organic and don't use any tools. There's some guys on there, like myself, who are the believers of 'don't take tools that are okay to use away from us.' Especially when you come to like NOP or the NOSB. They're trying to kind of choose some parasiticides and some other things, so it's kind of like 'don't take tools away from us.' Yet we have people on our board that are like 'yes do it.' It's a little difficult."

"It's not like we don't believe in it [organic]." Here again, Emily is quick to clarify. "Because I definitely don't go first thing to an antibiotic. I try any organic method I can but there is an instance where you have to use it and that animal is out of your herd. Some of the people

on the board are like ‘nope, don't even try it.’ We're like ‘don't take things away from us if they're able to be used,’ is my thought.”

Conclusion

The chapter analyzes what we can learn by examining dairy farmers’ experience of transitioning to organic. This experience sharply highlights the dominant cultural beliefs about environmentalism among farming communities. In going organic, civic-minded conventional farmers are risking social status by engaging in an inherently environmental practice. For people outside that world, it’s surprising that more farmers didn’t certify organic sooner, it’s surprising that they were unaware of the negative impacts conventional practices were having on the land and animals until they did go organic, and it’s surprising that once they underwent organification, they often were remained anti-environmentalist.

To understand these contradictions, it’s useful to see environmental beliefs as faith beliefs, as in the Durkheimian tradition, and also to understand environmental (or anti-environmental) performances as symbolic means of achieving valuable cultural capital, as in the Bourdeusian tradition. This points us to the sites of cultural production and brings our attention to boundary work within the agricultural field (and, it turns out, the national political field). While there are many important sites of knowledge production for any individual or community, this chapter explores two especially important ones – CDA and the American Farm Bureau Federation – and exposes the fingerprint of the fossil fuel and agribusiness lobby on their putatively grassroots politics and discourses. The organizations are powerful not only for rational market reasons, but because of their importance in bringing people together and hosting the rituals that give meaning to their lives.

Through tracing the personal stories of two families, informed by 58 others, this chapter illustrates a previously untold vehicle of conventionalization. By attending to the feelings and meaning-making of individuals, what started out as a post-structural analysis ends up supporting a fairly straightforward political economic story in which the economic elites profit from the exploitation of small farmers. The twist is that farmers are complicit in their exploitation because they accept the knowledge produced by economic elites but packaged in civic meaning.

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Chapter 4 : Conventionalization, Masculinity, and Climate Change

Derek Wells is not large in stature. Be he's tough. A rugged, young Marlboro man. His movements and thoughts appear precise and calculated, and it's as if an iron cage locks up his emotion. His voice is low and monotone, and he seems too busy to smile much. Derek's presence conveys a palpable sense of discipline and carries a remote threat of violence should a mistake be made or a rule crossed. You wouldn't get this just by reading on paper the words he said, but the tone of his voice and even the silences have a chilling effect on me.

This is the largest farm in my sample. Derek and his dad milk nearly 2,000 organic cows over two adjacent ranches near the California coast, yielding several massive truckloads of milk every day. He's been expanding his herd steadily over the years, which involves risk: he is closing the margin of error between what his own pasture can produce in a given year, what the Midwestern grain farmers can sell at a decent price, and the nutritional requirements of the growing herd.

Derek drives up to meet me at the farmhouse. We immediately jump into his dusty pickup to return him to where he had been overseeing the wrangling of some escaped heifers. Derek's dad is on the 4-wheeler with Derek's eight-year-old son. "Eight going on eighteen," by Derek's reckoning. The grandfather is working with their lean and agile border collie, Charlie, whose full attention is focused like a laser on two cows down by an underpass below the pastures. For the most part, Charlie is in control. He knows what he needs to do to get two stray heifers back to the herd. But here and there the grandfather intervenes. "Walk up," he commands Charlie in a terse tone. The dog drops low and moves closer to the cows. "To me." Charlie skirts around the cows and his presence pushes them towards the 4-wheeler. "Come by."

Charlie pushes the heifers in the direction of the farm outbuildings, to our left. The cows seem wary of the dog and a little on edge, but not scared. I'm amazed at Charlie's intelligence and discipline, and his comprehension of different verbal commands. Separate commands regulate his speed ('take time') and even his voice ('speak up'). You can see Charlie's mind's wheels turning as he processes the commands in light of the cows' position and the ultimate task.

Derek tells the grandfather what needs to happen next with the cows, and we get back in his pickup. The day is warm, and the sun is bright. We drive carefully over the bumpy pastures to where some of his employees are moving an irrigation line. They're digging a long trench, about one foot wide by 100 yards, which meanders across a couple of lush fields on a gentle slope. Derek and I get out so he can check in and make sure they're following instructions and making good decisions when unexpected issues come up. Derek is unusual in having learned a rudimentary command of Spanish, limited mostly to farm vocabulary: words like hose, trench, rotation. He tells them exactly what to do and he does so in language they clearly understand. He commands respect from his employees.

I can see that Derek is the master of dog and man on this ranch. But perhaps not in all realms; his wife has some say over manners. In my dogged insistence on a 100% response rate (so as not to select on my dependent variable, cooperation), I had been leaving messages with Derek for weeks, trying to schedule an interview, and he hadn't returned my calls. Finally, on a tip from another dairyman, I called Derek's wife, who was friendly and said she'd pass on the message about my research and the interview. Derek called me back the next day and I was over the following afternoon.

After my interview with Derek, I drive back to my lodgings in the artsy seaside village of Mendocino, with its wonderful bookstore and bakery. As I pass by the natural foods store, I slow down to let a middle-aged couple cross the street in front of me. They each are carrying a canvas bag full of groceries and they are walking slowly, almost distractedly, with no sense of rush and hardly an awareness of the car waiting for them. They seem happy and relaxed. I've known Mendocino for years, visiting frequently to stay with an old friend, yet coming back from Derek's ranch, it suddenly looks different. As I watch this couple, I feel afraid for them, ashamed for them even. I see them through the eyes of a tough dairyman. They seem idealistic and naïve, oblivious to the harsh battle of life. They seem weak, and almost arrogant to feel entitled to such vulnerability. The man's clothes and the way he walks are androgynous. He is slight-bodied. In fact, the man and the woman look quite alike – they both have short but not close-cut hair, and they're wearing practical sweatshirts, comfortable jeans, and walking shoes. The bizarre thought crosses my mind, 'what if someone like Derek sees them. In the right set of circumstances, they could be the target of violence.' My feelings seem to be telling me that they are breaking some important social rules. But what rules are they breaking? Why do I think "entitled?" Why do I feel this way?

In that moment, it dawned on me for the first time, that the masculinity learned by the farmers I'd gotten to know was part of what was preventing them from believing in human-caused climate change. Among other things, believing in climate change means admitting you're wrong – or your team is wrong – and admitting that you've made a mistake. And admitting you're wrong or have made a mistake is a violation of the rules of prevalent types of rural and other varieties of dominating or monologic masculinity (Peter, Bell, Jarnagin, & Bauer, 2000). As a man, ascending to power, or just defending your place on the hierarchy, requires

certain concessions: you must enforce the rules that maintain the hegemony of male power. If you don't, there will be consequences (Reigeluth & Addis, 2016). If, for example, you are openly gay, then you may be the victim of violence. Much has been written about hegemonic masculinity. Often it is described as a set of characteristics – physical strength, affluence, virility, whiteness, and such – with the caveat that what constitutes hegemonic masculinity changes depending on the social context. The key point is that these characteristics and behaviors *naturalize* male dominance. Believing in climate change means admitting that you and the system that empowers you (and male dominance) need to change. This feeling I had, that this Mendocino man crossing the street was somehow entitled, reflected that he seemed to feel perfectly deserving of a good life even though he was breaking the onerous rules of masculinity. In this case, the rule he was breaking was not dressing in a way that differentiated him from a woman, not looking tough, precise, and calculating; not acting dominant.

Introduction

This chapter explains the connection between organic farming, different varieties of masculinity, and attitudes about climate change. I explore how organic dairy farmers' masculinities are likely to shift as the sector conventionalizes, and what impacts these changes might have on environmental beliefs, including about climate change. Most organic dairy farmers don't believe in human-caused climate change. This is a significant problem because of the role that agriculture, and cattle in particular, plays in emitting and potentially sequestering greenhouse gases. While the political forces described in Chapter Three play an important role in producing climate change denial, understanding the role of masculinity further refines our

theory. Through ethnographic data and a review of the literature, this chapter argues that the conventionalization of organic shifts the distribution of farmers' masculinities towards more controlling and monologic varieties, and that some farmers assume certain anti-environmental attitudes and behavior in part as a performance to signal their masculinity for the purpose of securing material and social rewards.

When I designed my field work, and in particular my interview instrument and my participant observation guide, gender was not on my radar. The argument in this chapter is more constructivist and interpretive. I rarely asked people about gender directly and I did not set out looking for evidence of gender as a causal factor. The original data that set me on course to write this chapter were observations made during interviews with farm families and participant observation at farmer gatherings.

The chapter proceeds as follows: First I review the literature on farmers' climate change beliefs and I outline how the feminist commitments of the organic movement have changed over time. Next, I explore the gender dynamics and the climate beliefs of an organic dairy family I stayed with in northern California. This is primarily for expositional purposes, to give readers a sense of what monologic masculinity and climate denial feel like and what this kind of language sounds like. The rest of the chapter is devoted entirely to reviewing the literature to understand what a preliminary analysis of interview and observational data suggests may be a potential link between climate change denial and dominating masculinities. I review the literature on critical gender theory and masculinities studies to reinterpret key scholarship on gender and environment, and I combine this analysis with insights from the limited literature on masculinities and environment. I argue that anti-environmental attitudes and behavior as well as climate change indifference or denial can be explained in part as performances enacted to signal

a masculine identity in order to access material and social rewards in androcentric societies where eco-friendly attitudes and behaviors are considered unmanly.

Most organic dairy farmers don't believe in climate change

Most of the organic dairy farmers I interviewed across California and Wisconsin don't believe in human-caused climate change. Only one was truly concerned. I've found that this is surprising to many people, even some who study sustainable agriculture. The farmers in my sample may be aware of broader climatic shifts, beyond normal weather variability, but almost none of them believe these shifts are related to human activity. Survey research suggests that my sample is not unusual. In the United States, only 66% of farmers believe that climate change is occurring, and only 41% believe climate change is at least partly anthropogenic. Few see climate change as a threat to their farm (22%), and few believe the government should do more to fight climate change (23%) (Prokopy et al., 2015). Research also suggests that farmers are under-prepared to adapt to the climatic changes that will be experienced in the upcoming decades, both with respect to risk mitigation (delayed planting and weed management activities due to increased spring precipitation, increased freeze/thaw events occurring with increased winter temperatures) and opportunities (earlier planting dates, increased windows for cover cropping) (Prokopy et al., 2015).

This is especially surprising considering the dramatic impact that climate change is having and will continue to have on agricultural production systems (Hatfield et al., 2014). Organic dairy farmers face unique risks related to climate variability and change, in addition to unique opportunities for greenhouse gas mitigation. For example, while confinement operations can adapt to rising temperatures by adding fans or changing their feed sources, organic farmers

who are committed to 30% dry matter intake from pasture must employ other strategies to cool their cows and provide nourishment. With reliance on mechanical weed management (which requires heavy machines in the fields) in place of herbicides, organic row crop yields can decrease by approximately 20% during years with excessively wet springs because farmers don't want to ruin their fields by driving heavy equipment over them and thus farmers cannot employ timely and effective weed management.

The majority of survey respondents in Prokopy et al.'s (2015) research on farmers' climate beliefs were conventional farmers; but remember that most of my interviewees converted to organic from conventional, and did so entirely for financial reasons.

How might the conventionalization of organic affect gender and climate beliefs?

Conventionalization extracts farming practices from feminism

The literature debating conventionalization (Campbell et al., 2012; Guthman, 2004; Lockie & Halpin, 2005), described in Chapter Two, is insufficiently explicit about what point in the organic agricultural movement it considers as baseline for comparing with today's "conventionalized" organic sector. Most of the research focuses exclusively on the agricultural practices and the merit of these practices with respect to farm size and environmental sustainability. To more meaningfully assess the degree to which organic agriculture has taken on the characteristics of mainstream industrial agriculture, in the United States, it would be necessary to compare it with the more holistic and interconnected organic movement that existed before the USDA published the National Organic Standards. A pivotal aspect of conventionalization that has received less attention is its extraction of certifiable agricultural practices from a multi-faceted counter-culture movement that valued social justice, including

gender equality. The conventionalization debate addresses extracting certain types of agricultural practices – those that are certifiable – from a wholistic approach to ecological farming (often described as "input-substitution"), but it does not address the extraction of farming practices from the broader movement. Extracting certifiable practices from a wholistic farming approach is a symptom of extracting farming practices from the wholistic organic movement.

When I think "organic," the vision that comes to my mind is a station wagon plastered from tire to roof rack with liberal bumper-stickers. Not a hypothetical station wagon, but the one that Sheryl Jackson drove, often stuffed with a spinning wheel and heaps of sheep fleeces. Jeff and Sheryl Jackson owned the small, diversified organic farm that I worked on after college. As one who participated in the organic movement of the late 1990s, just as the National Organic Standards were being drafted, my sense of the people involved in the earlier movement is that they were driven by a broad idealism and a sharp critique and deep mistrust of industrial society and politics, including sexism. While quite heterogenous (Obach, 2017), in general the early organic movement in the United States strove for a whole constellation of interconnected social ideals: pro-environment, anti-nuclear, anti-capitalism, anti-war, and feminist. Back-to-the-landers often saw all of these as part of the same path towards "the good life:" a hard-working and life-affirming rejection of oppressive consumerism and small-minded social norms, of wearing a tie, of working in an office all day, and of making money by exploiting others and the environment – more or less what sociologists today call the treadmills of production and consumption. For many earlier organic people, you could not separate out the agricultural component from caring about the earth and each other.

The early organic, back-to-the-land, and communal movements were not exactly pockets of gender paradise (e.g., Farnworth & Hutchings, 2009; Hall & Mogyorody, 2007), but sustainable agriculture certainly has opened up spaces for men and women to take on all kinds of roles they are discouraged from in productivist agriculture (Trauger, 2004). Trauger (2004), Peter et al. (2000), and others have pointed out that farming in the United States has traditionally been an enterprise controlled by men, with men assumed to be the ‘‘farmer’’ and women assumed to be the ‘‘farmwife.’’ Trauger (2004) writes, “In the case of patriarchal agricultural communities, social narratives of what constitutes good farm men and good farm women come into conflict when women transgress their socially inscribed role of ‘farmwife’ and self-identify as farmers in public space.” There are also more female operators in sustainable agriculture, and many women feel like the kind of farming they want to do – often less capital intensive and more civically-oriented – is recognized as *real* farming in sustainable agriculture communities (Trauger, 2004).

In their study of Iowa farmers, Peter et al. (2000) found that the kinds of masculinity adhered to by farmers engaged in conventional farming had more rigid gender expectations and clearer distinctions between men’s and women’s roles. They called this *monologic* masculinity. On the other hand, farmers engaged in sustainable agriculture through the Practical Farmers of Iowa were more likely to be socially open, less likely to need to dominate nature, and more open to admitting and talking about mistakes. They called this *dialogic* masculinity. They found a strong connection between the types of masculinities that farmers embodied and their overall approach to farming.

In my personal experience with organic farming in the 1990s, it seemed that many male organic farmers, while often embodying traditional gender norms, considered themselves

committed to gender equality. They were more *aware*. Many had grown up in gendered homes and communities, so that is what they knew, but they tended to be more self-reflective and relatively open to criticism. This is true of Jeff and Sheryl Jackson, on whose small, diversified farm I worked.

Jeff and I were the ones who shoveled the manure out of the horses' stalls every morning at 6 a.m., and sometimes we snuck away to get coffee afterwards at the gas station (Sheryl didn't approve of coffee and there wasn't any in the house). One morning, as we're driving along in the farm van, feeling the caffeine, Jeff, a rather stoic and quiet man, tells me a story about his mother's funeral. He was young, about twelve. His family and the other mourners were gathered around the grave at the cemetery. Jeff was standing next to his father and he was crying. Jeff tells me that his father looked at him, and he asked Jeff, 'What are you crying about?' Jeff had been raised with very conventional gender norms, much of which stuck with him, but he was aware of how harmful they were, and he was actively open to changing. Jeff and Sheryl were not in organic for the money. They weren't in it just for the Earth or the farming either, but for the whole thing, including cracking the locks that held men back from crying at their own mother's funeral, and held women back from speaking as often or as loudly as men when decisions are being made.

The above review of the literature on gender in sustainable agriculture suggests that the conventionalization of organic means there will be more controlling, monologic masculinity and less open-minded, dialogic masculinity. How does the ascendance of more dominating forms of masculinity affect environmental beliefs among organic dairy farmers, particularly about climate change?

Vince Alberto's dominating masculinity

My stay on the Alberto ranch gave me some clues about this question. The family is close-knit, with each of the three children – all in or just out of the same college their parents attended – occupying their own specialized role in the family business. Vince and Sally actively instill competitive values in their children, and they are a winning family. They are unified in their support for each other and the family brand, and it's hard not to want to join their team.

I sit with Vince at his long kitchen table, in what is a rather California gourmet style kitchen for a farmhouse. Vince is a strong man, but not tall. His thick brown hair – not quite a mullet – frames his face and moves as he talks. He is at the same time friendly and inviting, but also observant with an air of being ready to pounce. His wife Sally is at the sink finishing up dinner prep. She's tall and elegant, smartly dressed, with stylish brown hair. She seems serious, but quick to smile and laugh.

During our conversation, Vince scolds Sally for her inefficiency and incompetence in scouring out a vinegar jug, and to school her in the basics of washing big jugs with small round holes. His performance seems targeted to communicating his dominance, or a ritual re-establishing Sally as something along the lines of irrational or daft. It's playful and light-hearted, but at the same time it clearly expresses a hierarchy of who is allowed to be disrespected and who is dominant. Throughout my time on the ranch, Vince constantly interrupts Sally and talks over her. At the time, I was reminded of how I felt with Derek Wells, the giant organic dairyman who we met at the start of this chapter.

I start to ask them about their family's history with dairy farming. "So, tell me about the first generation of…" I stumble over terminology; this is my first interview back in California after a break in Wisconsin. "…of dairymen. That's what they say out here, right? Dairymen?"

We all laugh and end up talking at the same time. Vince is the loudest. "Yeah yeah, sure sure."

I laugh, but cover my bases. "I always feel a little awkward, because Sally's obviously from a dairy family."

Sally assures me, "I'm okay with that term. Yeah I'm good."

Vince says, "There's awkward terms. Right, and she does work really hard on the dairy. Yeah, we're good with that."

With an air of grace and something between satisfaction and pride, Sally pronounces, "My role is his support," her voice melodiously going up and then down.

Sally has made an elegant dinner of fresh albacore wrapped in bacon, rice made with stock from their own chickens, and kale from the garden. They call their kids down to the table – Emanuel, Sabrina, and Rylan – and we dig in.

During dinner, we can hear children running around and making noise outside. Vince and his son Emanuel make clear their thoughts on gender and especially masculinity, criticizing a boy who doesn't act tough, and blaming this shortcoming on the feminine culture he was raised in, in which everyone is valued as an important individual whether they deserve it or not. Today is the annual calf relay, where the Albertos (or their employees) host a bunch of kids on the ranch and they play with the baby calves.

Vince is looking out the window and telling us what he sees outside. "This little boy, and his mom. He let's go of the calf, you know because the calf gave him a little challenge,… because he's raised in a feminine culture." Vince was mocking the boy's fear and blaming it on feminine values.

Emanuel says sarcastically, "there's nothing wrong with that, nothing at all."

Vince says, "Yeah it's like, 'step up son, get it right.'" Then he changes his tone in sarcasm, "'Ah… it's ok to sit in the corner and whine though because, you know, you're an important individual.'"

Rylan, their youngest son, and the least macho and most open-minded of the crew, comments to me almost apologetically, "this is our sociology lesson for the day."

I try to make comic relief of the moment, addressing my own sarcasm to Sabrina, who is an ag business major. "So, you've taken a lot of gender and women's studies classes at college, eh?" To which I add, "because your dad recommended them?"

Emanuel says under his breath with a sneer, "gender and women's studies… wasn't that on the list of demands?" He explains to me that the LGBTQ community at their college posted a list of demands for faculty.

Rylan corrects him. "It was the Diversity Group, which encompasses LGBTQ, but is mainly different minorities."

Vince and Emanuel together start listing them off, sarcastically, "The farmers, the Republicans, the tall white men… all the minority groups."

Throughout my time at their ranch, Vince continually performs dominance displays and frequently asserts his vision of gender, especially of masculinity. It seems like performing your

masculinity is very important in this family, and if you don't, you'll be disrespected. Emanuel often joins in, but usually not Rylan. In general, except for Sally, the family seems to gang up on Rylan. It's apparent that he's the only child who paid any attention to who the Diversity Group actually is, what they really wanted, and why.

After dinner, I find out how the family feels about climate change. They are fairly extreme deniers, not just unsure or skeptical. At the end of this vignette, you can see Vince insulting Rylan (playfully) by accusing him of believing in climate change.

"Let me go back to the first thing I think I said when you walked into the room." Vince raises climate change on his own. We're all relaxing in the family room after dinner – Sally and Vince Alberto, their three kids, and me. He continues, "Be careful what you read. Be careful what you learn. Be careful what you think you know. So, we talk truth in our house. And I know that you're living in a world where truth is obscure, and truth is… occasionally ignored. You said you were on some project for global warming. So again, that's a whole nother political… politicized situation. Where the truth is just really really rare. Really rare."

I ask Vince how serious he thinks climate change is for the world.

"Zero. Zero. I believe it's the sun's ability to put out heat that changes over time. And it literally goes up and down. And the sun has these blank spots or dark spots. Those are… you know, it burns out here. I don't know how the sun's built, it's not my call. But it's a solar cycle. It's maybe a 150-year cycle.

Emanuel corrects him. "1,500-year cycle."

"It's something like that. That is what controls everything. We know that, right? All this energy comes from the sun. So, if it's turned on high or medium, it's going to make a

difference down here. Now all this stuff we do, this carbon, and sequestering carbon. The atmosphere is made up of four percent carbon? Is that correct? And of that four percent, ninety-some percent of that is in the form of… I don't know, I can't tell you. And there's about five percent of that that is affected by what we're talking about. So, we're pretending that this five percent or four percent that we're affecting is controlling the earth?!"

I say, "It sounds like you're a little bit skeptical."

Vince laughs and says sarcastically, "Yeah, just a little. I could be wrong. I know that. I know that. But yeah, that's how I see it. That's the data I've seen. I've got smarter people than me that are coaching me and telling me the truth. And I believe that. From what I know about politics, I know that this is a political issue, not a scientific issue."

I ask, "why would someone make it a political issue?"

"Why? Are you serious? Because oil is evil."

"But why is oil evil?"

"Because somebody decided it was. Because it's environmentally wrong. So why was it wrong before it was environmentally wrong? Dunno. Because it was supposedly not a renewable resource. It got labeled as that, even though it's not true. That's me saying it's not true. It happened once. It's still happening." Vince is saying that petroleum is still forming (as heat and pressure are applied to carbon-rich dead organisms under ground), and he seems to believe it's forming as fast as we are removing it.

I clarify, "So the people arguing we're taking out oil faster than it could ever be regenerated, they are the ones who made up the climate change hoax."

"I don't know. I'm not really clear on all this."

I ask, "But why would people make it up?"

Emanuel interjects, “And literally, it’s whether you watched a video of a guy playing the piano with glaciers falling off a cliff or you watch the other side of the globe, where they don’t have a video but it’s pretty obvious that this glacier’s growing.”

Vince tells a story about a ship full of climate scientists traveling up to the Arctic. They had to be rescued when they got stuck in ice that wasn’t supposed to there. “How can they be researchers and knowledgeable people and can’t even predict the weather tomorrow? I mean I’m just a stupid dumb farmer and that’s insane. These people aren’t qualified to talk, much less have an opinion on this. They can’t even predict what the weather’s going to be next week when we’re up there. And that ice didn’t happen in the week or the month that they planned their trip. It was there the whole damn time. They just don’t believe that it’s there. They choose to believe that it’s not there. That’s politics. They’re not stupid.”

“I just don’t see why someone would invent climate change.”

“First of all, nobody sets out to invent climate change. Nobody makes up the stuff. It happens. You know, it could be a small group of people having conversations about something. Maybe it was the oil business. And then they tried to make a connection, and connect a couple of dots, and they thought, oh wow, I think that connects. And then it just spreads. Then, when somebody says, we want to go develop this or that, a new city, more industry, bigger cars that burn more fuel… As our country got richer than all the other countries, rich enough you can afford it to have environmentalism, fat and rich enough to where you invent environmentalism, then you get all these other ideas and I believe the start of the global warming – I want to call it a craze or fad or something – and scientists decided that oh, global warming really it’s true. And then, well, we have been cooling for 15 years, so it doesn’t make sense to call it global warming; let’s call it climate change. Okay, so that’s politics.”

"But the statistics show that we're getting warmer and warmer, almost every year."

"From where? It's a 150 years cycle. I mean, we know that glaciers came through Wisconsin. So, I realize that that happens. So, are we warming since then, or did we cool between then and now? Answer that one."

"The warming correlates with parts per million of carbon dioxide in the atmosphere."

"Forget the gobbledygook and step back."

"But we have a record that shows a change in global temperatures and carbon dioxide concentrations since we began burning coal in the industrial revolution."

"NOOOO! That's not true. That's absolutely not true. I just told you that the carbon that's getting the black eye is a fragment of one percent of the entire carbon in the atmosphere. Look those stats up. The carbon that's getting the black eye, what percentage is that of the C in the atmosphere? What are we really talking about? As grass grows and forage grows and everything green grows and then dies and turns brown and just waves in the wind. And animals don't come through and knock it down or eat it? That releases the carbon. When the animals come through and knock it down, now it gets bacteriorized or whatever and the biology takes over, whether it's earth worms and everything. And they put it into the soil. So, there was less of that when? Now? Or or or…."

Vince seems to lose his thought, and Emanuel takes over. "We're organic farmers. To be against the climate change argument and to be an organic farmer is kind of an oxymoron." His argument seems to be that their position on climate change has legitimacy because they have adopted environmental messages and practices in the past when they were correct.

Sally changes the subject. "Cows are walking back to the pastures."

"Good." Vince turns to the TV. It's the runup to the 2016 election. "Bernie started without us."

Rylan asks, "Can you feel it?" He's referring to Bernie Sanders enthusiasts, who "feel the burn."

Sabrina rolls her eyes. "You're sooooo dumb." They all giggle in chorus.

Vince smiles flatly, tipping his head in Rylan's direction. "He believes in global warming too."

Rylan protests quickly. "No I don't!" But I wonder. I add believing in climate change to the list of insults the family has loaded onto Rylan during my brief visit.

What explains Vince's extreme climate denial? He understands ecology and soils, and he can talk about organic farming at an informed and high level. Yes, he went organic purely for profit, but he's a staunch believer in organic methods now. In fact, he's almost competitive about it. Referring to organic farmers in another county, he says, "I think that the farmer model over there… They need to get their head out of their ass. I've attended some of those pasture meetings. You know, they asked me to attend. They wanted my input, until I start talking and then they're like, I don't want to hear this. They're not doing things. They're not planting the brassicas. They're not planting a different variety of fields. They plant rye grass and that's what they do. And they do the same thing every year, year after year. It's like they have narrow-minded blinders on. They're not embracing this education that we've got and this understanding of soils and diversity, and they're not building organic matter. We have done so much on our ranches. I can show you some examples of here versus there what it used to be. And it WORKS! We use less water than we used to and we have a lot more production than we used

to. Over time, it pays. It takes faith and dedication, you know, to dig in." In Vince's mind, he's a much better organic farmer.

Does a masculinity lens help explain Vince's climate denial? The vignette presented here proves nothing. It presents the story of one person who both exhibits sophisticated climate denial as well as dominating masculinity and androcentrism, but it provides no evidence that one might be causally related to the other. This vignette, however, is representative of observations made during other interviews and participant observation, and the patterns are strong enough to suggest a link. Investigating this link requires a careful re-analysis of my interview and participant observation data to test hypotheses and refine my theory. This data analysis is on-going and results will be forthcoming in another paper. The remainder of this chapter presents the results of a literature review I undertook to understand the link between different varieties of masculinity and climate change beliefs. Drawing from the literature on critical gender theory, masculinities studies, and gender and environment, I develop a theory suggesting that climate change denial can be performed to signal a masculine identity in order to access material and social rewards in androcentric societies where eco-friendly attitudes and behaviors are considered unmanly.

Anti-environment as performance of masculinity

Research on gender and environment has mainly focused on how women are disproportionately affected by and try harder to resist environmental destruction, with scant attention paid to how different masculinities influence environmental problems and resistance (Hultman, 2017). Ecofeminist scholars have long proclaimed the connections between social

oppression (with particular attention to the oppression of women) and environmental destruction. Yet there has not been a deep and sustained investigation into how different masculinities (as an unmarked category) are connected to environmental phenomena, a lacuna that gender and environment scholar Sherilyn MacGregor calls "curious, given the role that hegemonic forms of masculine power – in institutions of the state such as the military and scientific agencies, as well as in corporations and environmental movement organizations – have played in shaping both environmental problems and how they have (not) been addressed" (2017, p.5). Men tend to be portrayed as "the bad guys" without much sustained analysis of why they come to think and act as they do (Connell & Pearse, 2015, cited in Hultman, 2017).

Recent environmental sociology scholarship has begun to understand masculinity through a critical gender theory lens (e.g., Bell & York, 2010), incorporating insights from the field of masculinities studies. This approach understands gender as a social structure and a power relation rather than simply as learned characteristics that individuals internalize into their core identities (Connell, 2016). Gender is something one does, actively, to achieve valuable outcomes, rather than something one naturally is (Fenstermaker & West, 2002) or even something stable that one performs consistently (Butler, 1993). Multiple different ways of doing masculinity and femininity arise in different cultures, historical time periods, social categories of men and women (Connell & Messerschmidt, 2005), and even within the same individual at different moments. While all performances are active, they vary from subconscious choices not felt to be choices at all, to various degrees of self-reflective intentionality.

The prominent gender theorist Raewyn Connell conceived of masculine *practices* as meso-level patterns of behavior performed by situated agents grappling with the situations they face, as they perceive them (Ferree, 2018). This helps us see how masculinity is both a social

structure and is also embedded in individuals, who enact different masculine performances depending on their perception (conscious or sub-conscious) of what the specific context demands. For example, the main practice explored here is climate change skepticism or denial, or, more generally, adopting an anti-environmental stance. Rather than taking environmental concern at face value – as one's actual motivation to protect natural resources and ecosystems – a critical gender theory lens explores how people instrumentally use their stance towards the environment as a signaling device to convey a masculine identity and to influence their social status.

To understand why individuals choose certain practices and why certain masculinities arise where they do, it is critical to recognize that in modern industrialized nations male power is largely hegemonic. This means that men have power over women and this power is largely unquestioned, unseen, and accepted as natural. As explored here, this insight is a vital contribution of critical gender theory to environmental sociology and it should be one of the decisive contributions of sociological theory to popular understandings of the gender divide in environmentalism. Enacting overtly masculine performances is often critical to accessing material rewards, social status, esteem from others, connections, jobs, and autonomy (Connell, 2005). Furthermore, because of the structural subordination of women, the core elements of many masculine performances serve to construct or reinforce a gender binary that dichotomizes gender into two non-overlapping categories and to distance oneself from the feminine (Bosson & Michniewicz, 2013).

Patriarchal structures and hegemonic male power don't only spur hyper-masculine performances, including anti-environmentalism, in men. In an androcentric society, where the masculine is valued above the feminine, all genders, including women and transgender people,

may at times enact masculine performances to access power and authority. While men more than women learn that they are entitled to domination (Johnson, 2017) and the rewards that accrue for enacting masculine-coded performances are often limited to men, an intersectional analysis suggests that certain rewards will be available to certain categories of women who perform masculinity in certain ways. Consider Sarah Palin's chant, "drill baby drill" or Anne Gorsuch, who gutted the EPA under Reagan. Or the CEO of CDA. Indeed, women who enter politics are coached in how to project power: wear a man's suit in a different color.

Over time and place, there has been tremendous variation in both the degree of gender dichotomization and in the specific behaviors that count as idealized or even acceptable masculine performances (Brandth & Haugen, 2006; Schrock & Schwalbe, 2009). During the masculinity crises of the 1920s (Dubbert, 1979; Rome, 2006) and the 1980s (Kimmel, 1987), men's insecurity about their manhood and the devaluing of the feminine, brought on by broad social changes, led to compensatory hyper-masculine norms that hamstrung the environmental movement (Rome, 2006). Researchers have explored the phenomena of cowboy rural masculinities (Campbell & Bell, 2000), hipster urban masculinities (Bridges & Pascoe, 2018), managerial businessman masculinities (Sinclair, 1995), and the strength and endurance of manual laborer masculinities (Paap, 2006). Recently, an anti-green stance or environmental indifference has itself become a masculine performance/characteristic in many sub-cultures (Brough, Wilkie, Ma, Isaac, & Gal, 2016), in part due to political messaging and marketing campaigns by extraction industries that have explicitly connected environmentalism with anti-man and loss of male privilege (Bell & Braun, 2010; Bell & York, 2010).

Performances of masculinity not only enforce a hierarchy between men and women but also a hierarchy among different categories of men. Critical gender scholars often use the term

hegemonic masculinity to describe an idealized type of masculine performance that has especially strong access to power, that naturalizes gender inequality, and that subordinates other categories of men (Connell & Messerschmidt, 2005).

Anti-green stance signals valuable masculine identity

There is a robust literature showing the tendency for men to report less pro-environmental values, beliefs, and attitudes and fewer private environmental behaviors than do women (Kennedy & Dzialo, 2015; McCright & Xiao, 2014; Yates, Luo, Mobley, & Shealy, 2015). For example, McCright (2010) found that 37% of women but only 28% of men believe global warming will threaten their way of life. Xiao and McCright (2014) found that 48% of women but only 39% of men report that they "always or often reduce the energy or fuel you use at home for environmental reasons." While this "environmental gender gap" has been the subject of much discussion and debate, it is most often explained by gendered socialization in values and personality (e.g., women as more empathetic and altruistic; men as more detached and competitive) and/or to different social roles (women in mothering/caretaking roles and men in bread-winner/market/public roles) (Arnocky & Stroink, 2011; Dietz, Kalof, & Stern, 2002; McCright, 2010; Zelezny, Chua, & Aldrich, 2000).

My analysis of the literature suggests that rather than taking environmental concern or resistance at face value or as an expression of one's altruism and empathy more generally, an environmental stance, pro or anti, can *also* be understood as a signaling device to convey identity and to achieve particular social consequences. While an environmental stance can be enacted to signal various identities – e.g., partisan identity or a rural vs. cosmopolitan identity – this review

of the literature explores how some situated actors perform an anti-environmental stance to signal masculinity.

This approach does not dispute gender socialization explanations, but it relies less on them, recognizing that learned characteristics of gender are neither entirely stable nor performed in a consistent way in people's daily lives (Butler, 1993). Rather, gender is strategic, and different gender identities can be signaled at different times to advance specific goals. Furthermore, gender identities and practices are not random assortments of characteristics, but rather are continually shaped by a gender order in which male power is hegemonic. Thus, it's not that men simply learn at an early age to repress empathy or to be indifferent about the environment, but rather these are strategies to signal a valued (often dominating and hierarchical) masculinity in androcentric cultures where masculinity confers material and symbolic rewards.

As used here, "strategy" does not necessarily connote a consciously thought-out plan to achieve a specific goal. Rather, it highlights that people perform different culturally-shaped skills and habits – what Bourdieu (1977) calls "practices" – depending on the situation they face. While the beliefs, symbols, and stories that one adopts to solve the problem at hand may be consciously worked out, often gender performances emerge unconsciously from the matrices of embodied dispositions that constitute one's habitus. A habitus, according to Bourdieu, is "a system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a *matrix of perceptions, appreciations, and actions* and makes possible the achievement of infinitely diversified tasks, thanks to analogical transfers of schemes permitting the solution of similarly shaped problems..." (emphasis in original) (Bourdieu, 1977:82-3; quoted in Swidler, 1986).

Anti-environmental masculine overcompensation

Evidence that environmental stance is used instrumentally specifically to signal masculinity comes from Brough et al. (2016), who found that when their masculinity was threatened in an experimental setting, men in their sample reacted with anti-environmental behavior. Based on past research suggesting that "going green" is considered more feminine by a majority of Americans (Bennett & Williams, 2011), Brough et al. (2016) test the hypothesis that men's unwillingness to engage in pro-environmental behaviors stems from a cultural association of green and feminine. Their experiments first confirmed the association between green and feminine, both for green products and for green behaviors, and both among men and women. They then demonstrated that even subjects' own gender self-perceptions can be manipulated: subjects told to write a few sentences about an action that was environmentally friendly reported feeling more feminine compared with those describing an action that harmed the environment. Next, they administered a previously verified masculinity threat to an all-male sample, instructing all participants to imagine receiving a $150 gift card from coworkers with a note saying, "we thought this card was perfect for you—happy birthday!" and varying whether participants got a pink floral card with Happy Birthday written in frilly font or an age threat control group card. Compared with the control group, respondents receiving the feminine, masculinity-threatening card were significantly more likely to choose conventional products over environmentally-friendly options. In contrast, in a separate masculine affirmation experiment, male participants whose masculinity was affirmed by feedback that they have a very masculine writing style were significantly more likely to choose an environmentally-friendly product over a conventional option compared to men in the control condition.

These results suggest that environmental concern is, to a significant degree, flexible and plastic, performed inconsistently and used instrumentally to signal gender identity based on immediate situational cues interacting with embodied gender structures. The random assignment to experimental condition essentially controlled for stable differences in environmental concern or socialized characteristics like empathy, altruism, hierarchism, individualism, social class, or partisan identity. Among men, the manipulated desire to signal masculinity had an independent and important influence on their environmental behavior.

Insights from critical gender theory enrich Brough et al.'s (2016) interpretation of their results by incorporating the ideas of hegemonic masculinity and masculine dominance hierarchy. Brough et al. (2016) highlight that men tend to be more concerned than women with gender-identity maintenance because they face greater penalties for gender inconsistent behaviors (Bosson, Vandello, Burnaford, Weaver, & Wasti, 2009, cited in Brough et al. 2016). Critical gender theory helps understand this. Rather than seeing a masculine identity as more or less just another important in-group – like being a Chicago Bears fan vs. a New England Patriots fan – critical gender theory emphasizes the power and dominance of the masculine identity over the feminine identity and the rewards conferred to particularly masculine men over other categories of men in patriarchal societies.

Brough et al.'s (2016) study is an example of a larger experimental literature on *masculine overcompensation*, the phenomenon wherein men react to insecurity about their masculinity with hyper-masculine behavior to recover their masculine status (Willer, Rogalin, Conlon, & Wojnowicz, 2013). In numerous experiments, men have responded to masculinity threat with more negative views of homosexuality, more support for war, less support for gender equality, more derogation of women, greater probability of subsequently sexually harassing a

woman, and more risk-taking in the stock market (Bosson et al., 2009; Kosakowska-berezecka, Besta, & Vandello, 2016; Maass, Cadinu, Guarnieri, & Grasselli, 2003; Willer et al., 2013). In a review of this literature, Willer et al. (2013) concluded that "the core aspect of masculinity that men enacted in the face of threats was dominance, a fundamental basis of hierarchy and status differentiation among men and boys" (2013, p.1013). This jibes with research findings that a heightened orientation to social dominance independently mediates the gender-environmentalism link (Milfont & Sibley, 2016).

In the competitive masculine dominance hierarchies that characterize today's industrialized agriculture, a man's status is never guaranteed, but rather has to be continually affirmed interactionally, and if economic status does not generate enough reward in itself, more can be gained by putting other men down. The "policing" that men face, largely from other men, for not conforming with rigid expectations about appropriate male behavior commonly includes verbal harassment, physical violence, and social exclusion (Reigeluth & Addis, 2016). Because one's masculinity is inherently relative to other men, and when the markers are inconsistent, it becomes *precarious* (Vandello, Bosson, Cohen, Burnaford, & Weaver, 2008), creating a continual anxiety that often leads to hyper-masculine performances (masculine overcompensation) to protect threatened masculinity. Brough et al.'s (2016) "eco-friendly is unmanly" results add environmental violence to the list of experimentally-tested responses of domination, including sexual violence and homophobia, in the face of a masculinity threat.

Why is eco-friendly feminine in the first place?

Some have conjectured that the green-feminine stereotype may have arisen from marketers using feminine branding to sell eco-friendly products to the majority female market for domestic goods (Brough et al., 2016; Stafford & Hartman, 2012). Critical gender theory would suggest several important alternative/supplementary explanations. Most basically, environmental concern signals feminine-coded empathy and caring for other people and even non-human beings. It signals an appreciation of interconnection and inter-dependence over the hegemonic masculine values of independence and individualism. In patriarchal hierarchies, competition and dominance are legitimized (Schrock & Schwalbe, 2009), whereas being green requires cooperating with instead of dominating over nature. Practicing sustainable agriculture, on the other hand, requires respecting ecological processes and engaging in a back-and-forth dialogue with nature, in contrast with a desire to control nature through chemicals and big machines (Peter et al., 2000). Alternative and organic farmers historically have subscribed to more egalitarian gender norms and have had more egalitarian relationships in general, including with the earth. Michael Bell calls these contrasting kinds of masculinity "monologic" and "dialogic" masculinity (Peter et al., 2000).

Additionally, green became feminine, in part, due to the historical contingency that women have always constituted a substantial presence among environmentalists (Rome, 2003, 2006). In this way, green is not actually the *new* pink; green has always been pink. During times when women have been extremely constrained in what they are allowed to do publicly, "municipal housekeeping" and preserving nature were arguably their most legitimate public activities (Rome, 2003, 2006). While absent from most historical accounts of U.S. environmental movements, including those of environmental sociologists (e.g. Brulle), women

have been indispensable in environmental activism long before Rachel Carson published *Silent Spring*.

Finally, the green-feminine stereotype has been strategically enhanced by marketing and political campaigns that have explicitly connected extractive industries to idealized male identities as a way to reduce community resistance to ecologically destructive activities. The coal industry in Appalachia, for example, has run commercials associating coal with the traditional male identities of protector, defender, hero, and bread-winner, while equating environmentalism with anti-man attitudes and loss of male privilege (Bell & Braun, 2010; Bell & York, 2010).

Hierarchism, individualism, and identity-protective cognitions

Another line of research supporting the idea of anti-environmental stance as identity-signaling device, and in particular as signaling core elements of prevalent masculine identities, is the Cultural Cognition Project (CCP). Over many studies, including many experiments, the CCP has found that people arrive at their environmental views through a largely pre-conscious process of *identity-protective cognition*, whereby selective interpretation of environmental information preserves valued identities and social relationships, often at the expense of logical and scientific analysis of information (Kahan, Braman, Gastil, Slovic, & Mertz, 2007).

The CCP divides individuals into groups along the "cultural worldview" axes of hierarchical vs. egalitarian, and individualistic vs. communitarian. Those with a *hierarchical* cultural worldview expect that authority, rights, duties, and goods will be unequally distributed on the basis of certain social characteristics. *Egalitarians*, in contrast, subscribe to a worldview where power should be distributed more equally, and no one should be barred from any social

role. On the other dimension, *individualists* believe that people have the right to live as they see fit, without regard for others, and people are responsible for securing their own livelihoods without collective interference or assistance. In contrast, *communitarians* see people as inter-dependent – that our actions strongly affect others and we are strongly affected by the actions of others – and that we thus need to make decisions and act collectively (Kahan 2007; Douglas & Wildavsky 1982; Rayner 1992).

People who share hierarchical and individualistic cultural worldviews with important social networks will tend to downplay environmental risks relative to people with egalitarian and communitarian cultural worldviews (Kahan et al., 2012). Importantly, the CCP understands cultural worldviews and perceptions of environmental risk as shared values that bond people together (Douglas & Wildavsky, 1982). It is often far more consequential to an individual to conform with their in-group than to accurately assess environmental risk. Dan Kahan and his colleagues call this the "tragedy of the risk-perception commons" (Kahan et al., 2011).

Cultural worldview predicts environmental risk perception because acceptance of environmental risks both signifies an indictment of the established system and licenses collectively-determined restrictions on commerce and industry. Such a view would be anathema to hierarchical individualists, who are loyal to established social hierarchies and who prize the free market, commerce and industry. But it would be congenial to egalitarian communitarians, who are suspicious of commerce and industry, to which they attribute social inequity (Kahan et al., 2012).

Kahan et al. (2007) explicitly link the gender gap in environmental concern to hierarchism and individualism, two core performances of prevalent hegemonic masculinities. They investigate the "white male effect" – a widely accepted finding that women and non-white

men are significantly more concerned about environmental risk than are white men. They conclude that while it appears that gender and race are driving differences in climate change skepticism and other environmental risk perceptions, the more influential factor is hierarchism and (to a lesser extent) individualism, and white males tend to be more hierarchical and more individualistic.

While this empirical evidence is extremely useful, their interpretation of the data could be enriched by an intersectional analysis that understands the multiplicative impact of multiple social locations on what identities are available to different people (Collins, 2005). The rewards that accrue for performances of hierarchical and individualistic worldviews may be circumscribed for many women and for many non-white men, and the penalties for attempting those performances may be higher. In their review of the literature on African-American masculinity, Nickleberry and Coleman (2012) point out that African American expressions of masculinity represent the skills, beliefs, and values necessary to cope with racial discrimination. Understanding race as a social construction highlights the ways that hierarchical and individualistic worldviews may be part of whiteness intersectionally performed with masculinity. Furthermore, Kahan et al. (2007) reduce gender too readily to sex category when they argue that hierarchism and individualism – two core performances of gender that are often only safely performed by men – are more influential in environmental concern than gender. Similarly, McCright and Dunlap (2011, 2013), in their very useful findings that the white male effect is actually a *conservative* white male effect, also treat gender more like sex category and they do not explore in what ways conservatism may reflect performances of masculinity. Re-framed in these ways, the Kahan et al. (2007) results (as well as McCright and Dunlap (2011, 2013)) help us understand the pathways through which race and gender influence environmental values.

Conclusion

This chapter explores how the varieties of masculinity that typify conventional agriculture – and typify organic agriculture more and more as it conventionalizes – may influence the environmental beliefs of organic dairy farmers. I focus on climate change denial for several reasons. First, it is a key environmental issue of our current era and farmers' aggregate management decisions have a substantial impact on greenhouse gas emissions. Second, it is a useful metric because climate-related farm management practices are not addressed by the National Organic Program so farmers have no incentive to become engaged. The organic premium legitimized organic practices, but it can't, on its own, legitimize climate action.

Based on a wide review of literature in critical gender theory, masculinities studies, and environmental sociology, this chapter develops a theoretical bridge between Vince Alberto's dominating masculinity and his staunch and elaborate denial of climate change. In a hierarchical family, in a hierarchical industry, the expectation is that there are winners and losers, and that one must protect themselves and their reputation or else they'll fall, or be pushed, into the latter group. Performing dominance and "manning up" is indispensable. In a world where green is feminine and male power is hegemonic, performing anti-environmental beliefs or resistance to pro-environmental behaviors is a useful strategy to communicate valuable masculinity.

But male power is not uniformly hegemonic across cultures. Many (but certainly not all) of the early adherents to organic agriculture also embraced a commitment to gender equality, and the literature indicates that sustainable agriculture communities in general have more flexible gender norms and provide more opportunities for female farmers. This chapter suggests that as

the organic sector "conventionalizes," one mechanism that causes consequent lower environmental concern is the related dichotomization of gender and the deprecation of the feminine.

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Chapter 5 : Conclusion

This dissertation describes the experiences of conventional dairy producers who transitioned to organic in order to be more reliably profitable. Together, these chapters take advantage of the unique window into how environmental beliefs and values are produced and reproduced that was opened by the rise in organic dairy and the ways conventional dairy farmers perceived organics before and after they transitioned. This transition experience exhibits certain characteristics of an experiment. The subjects are swallowing a pill they didn't design or want, in a room they didn't choose.

Chapter Two describes the unexpected agronomic results that these conventional dairy farmers discovered. This is a straightforward chapter, but an important story to tell. Producers found that despite medical tools being taken away from them (antibiotics, for example), their cows' health improved. Once they stopped using the chemical inputs on their land (primarily pesticides and fertilizer), they discovered that their land (with a little help) contained its own ecosystem of fertilizers and pest controls. Many farmers reveled in the greater potential to learn and experiment offered by organic. Telling the story of organification, however incomplete it is, is important for motivating more integrity in the organic standards.

As I point out in Chapter Three, the not-purely-rational attitudes of conventional farmers towards organic and towards environmentalists, including choosing to suffer financially rather than farm organically, reveal a story that cannot and should not be ignored and likely has repercussions and reverberations throughout all levels and sectors of the United States: the deprecating of progressive people and practices, in this case organic farmers and environmentalists. Chapter Three explores the production of these politicized beliefs. I find that

grassroots farm associations, important sites of meaning-making in rural communities, have been coopted to a certain degree by vested national business interests who engage in boundary work to define organic and environmentalist as impractical, dishonest, and anti-business.

Chapter Four explores a complementary explanation for conventional and conventional-turned-organic farmers' resistance to environmental concern. I argue that early organic adherents, and practitioners of sustainable agriculture more generally, tend to be more committed to gender equality compared with conventional farmers. As the organic sector conventionalizes, the predominant forms of masculinity move towards more controlling and monologic varieties, and with that transition comes greater skepticism about environmental risk. This chapter describes the dominating masculinity and the extreme climate denial of a conventional-turned-organic farm family in order to illustrate patterns that are common in today's organic dairy communities. I then review the literature in critical gender theory, masculinities studies and environmental sociology to understand what, if any, link might exist between different varieties of masculinity and environmental attitudes. I develop the argument that because environmental concern is associated with femininity, in cultures where male power is hegemonic, performing anti-environmental beliefs or resistance to pro-environmental behaviors is a useful strategy to communicate valuable masculinity.

The chapters of this dissertation complement a second dissertation that will be submitted to the Environment & Resources PhD program at the University of Wisconsin-Madison in July 2019. This Environment & Resources dissertation tells the story of conventionalization at the sectoral level, including fraudulent behavior essentially condoned by the USDA; the rise of "paper coops" and broker firms whose structural position allows them to profit with minimal liability while the burden of over-supply falls onto farmers; and how farmers' knowledge is

produced about the facts of the situation, their options, what it is they think they want, and how to get it. Also included in the Environment & Resources dissertation is a story about the met and unmet potential for actors that Legun & Bell (2016) call "conducers" – or entities that facilitate virtuous markets – to play in the organic sector. In particular, I analyze the role of the CROPP Cooperative (Organic Valley), the USDA, organic farmer associations, and the independent certifiers.

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