UNIVERSITY OF CALIFORNIA,
IRVINE

Producing Environmental Injustice:

Legitimation Struggles Facing Pesticide Intensive Agriculture in Ventura County

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Urban and Environmental Planning and Policy

by

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2020

DEDICATION

For the farmworker community

Thank you

Para la comunidad campesina

Gracias

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ABSTRACT OF THE DISSERTATION

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Doctor of Philosophy in Urban and Environmental Planning and Policy

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The intensive use of hazardous pesticides in California agriculture disproportionately harms farmworkers and their families, the majority of whom are low-income, Latina/o immigrants. While many stakeholders, such as advocates and farmworkers, oppose existing pesticide use practices due to disparate pesticide-related health impacts, other stakeholders, such as agriculture representatives and government bureaucrats, defend existing practices. Addressing pesticide-related health disparities has involved intensive conflict and debate due to the diverse interests, competing demands, and uncertainties involved. Stakeholders in Ventura County have debated the legitimacy of local pesticide use practices for decades. I explore how stakeholders cope with pesticide-related health disparities and unpack the underlying dynamics that make it difficult to challenge power asymmetries in public debate and problem-solving efforts.

Through a qualitative, ethnographic case study of Ventura County, California, this study answers the following questions: 1) How do local stakeholders' positionalities, claims, and

rhetorical strategies around the legitimacy of existing pesticide use practices impact public debate and problem-solving efforts? 2) How do the interests and concerns of farmworkers and their representatives become obscured and disregarded in public debate? To answer these questions, I employed an interpretative, grounded theory approach to data collection and data analysis. I conducted in-depth qualitative interviews with 91 agricultural health stakeholders, as well as over 200 hours of participant and non-participant observations. I also collected numerous archival materials. I analyzed the positionalities and discursive practices of four different stakeholder groups – advocates, farmworkers, agriculture representatives, and government bureaucrats.

I found that while all these stakeholders support reducing hazardous pesticide use to some extent, they also share a dominant discourse that depicts pesticide use as necessary for achieving high agricultural yield. This taken-for-granted assumption limits stakeholders' capacity to envision pesticide use alternatives in agriculture. Furthermore, I found that the rhetorical strategies of dominant groups, including agriculture representatives and government bureaucrats, are effective at legitimizing established pesticide practices and reinforcing inequality by obscuring farmworkers' experiences and realities, disregarding social and racial injustices, and concealing dominant ideologies. An advocate-grower partnership named the Miracle Group overcame some of these challenges by coproducing proposals related to farmworker health. They were able to acknowledge farmworker concerns, particularly in relation to the need for a hotline and expanded pregnancy leave options, by negotiating the use of different frames, claims, and rhetorical strategies in relation to specific projects. However, they did not resolve all the asymmetries and invisibilities that argumentation dynamics of pesticide use debates reinforce. For example, while the group members recognized concerns related to

social inequality, they omitted language that would acknowledge inequality from their proposals in order to conserve the possibility of reaching agreement.

CHAPTER 1

INTRODUCTION

On November 15, 2016, the Department of Pesticide Regulation held a public hearing at the Oxnard Performing Arts Center in Ventura County, California regarding proposed regulations that would place restrictions on pesticide use around schools. The event attracted numerous attendees, including agriculture representatives, farmworkers, advocates, government bureaucrats, school district personnel, community members, and politicians. Forty stakeholders presented comments that reflected strong contradictory positions in relation to the proposed regulations. Agriculture representatives, such as growers, pesticide control advisors, and trade association staff, were opposed to any additional restrictions on pesticide use near schools. Labor, environmental, and social justice advocates felt that the proposed regulations were watered down and needed to be more restrictive. Farmworkers supported the proposed restrictions around schools and explained that they were fearful for their children, who went to school near agricultural fields. They told stories of their children being born with birth defects or suffering from asthma and described how they too experienced pesticide-related health issues, like headaches, nausea, and rashes.

The public hearing became antagonistic as opposing sides used portions of their three-minute comment period to respond to each other, making statements such as “Don’t bite the hand that feeds you!” “I think farmworkers put the food in your mouths,” and “Does the shaking in my voice sound political to you?” As some farmworkers spoke, they broke into tears. Some audience members shook their heads, rolled their eyes, and stormed out of the room mumbling, “No can do.” Department of Pesticide Regulation staff would reflect during an outreach event several weeks later about how difficult it was to observe these public hearings and how they could not

relate to some of the participants, particularly the advocates and farmworkers who were strongly opposed to existing pesticide use practices. While the public hearing allowed the Department of Pesticide Regulation to collect data on stakeholders' positions and concerns about regulating pesticide use near schools, it also reinforced animosity around pesticide use in the community.

In November 2000, the hazardous insecticide chlorpyrifos drifted onto Mound Elementary School from an adjacent strawberry field while students were arriving to their classes, causing children and staff to experience acute pesticide illness.[1] This incident was an impetus for ongoing debates about pesticide use in the community and for implementing mitigation measures around schools. Over the past decades, California has experienced substantial growth and the extension of the agriculture-urban interface. In 2014, Ventura County was ranked number one in the state for the number of schools located within a quarter mile of agricultural fields (California Environmental Health Tracking Program, 2014). Some of the most hazardous pesticides, including various fumigants that are prone to drift from the application site, are applied to farmland around schools in the county (California Environmental Health Tracking Program, 2014).

At the time of this writing, public debate around the positive and negative consequences of conventional farming practices have placed the legitimacy of established pesticide use practices at the center of discussion. In addition to debate around pesticide use near schools, stakeholders in Ventura County are struggling over the legitimacy of using particularly hazardous pesticides, like fumigants and organophosphates, and local groups are seeking to address concerns around pesticide exposure during pregnancy. For example, environmental

[1] Corley, R. (2000, November 19) *Who Will Protect the Children at School?* Los Angeles Times. https://www.latimes.com/archives/la-xpm-2000-nov-19-me-54512-story.html

justice advocates with the Central Coast Alliance United for a Sustainable Economy (CAUSE) and the Abundant Table have mobilized in support of statewide efforts to ban chlorpyrifos, a hazardous organophosphate insecticide that causes neurodevelopmental harm. The Central Coast Alliance United for a Sustainable Economy and the Mixteco Indigena Community Organizing Project (MICOP) staff have also called for the implementation of local initiatives to ensure pregnant farmworkers receive job status protected pregnancy leave when they are the most vulnerable to pesticide exposure. Through a case study of Ventura County, California, this dissertation examines how the positions, claims, and rhetorical strategies around the legitimacy of existing pesticide use practices in agriculture impact public debate in order to better understand and improve pesticide reform efforts.

Background

California produces over one-third of the United States' vegetables, over two-thirds of the country's fruits and nuts, and accounts for over 13 percent of the nation's agricultural value (CDFA, 2018). In order to ensure high productivity and profitability levels, conventional farms across the state have come to rely on the intensive use of pesticides. In 2017, California's reported application of pesticide active ingredients totaled 204.7 million pounds (CDPR, 2019a) Different types of pesticides have been designed to protect crops from fungi, micro-organisms, weeds, insects, and other pests that threaten crop health and yield (Anthony et al., 2010; Busby & Eckstein, 2009; Cabrera, 1991). While growers rely on pesticides to protect their crop and increase yield and profitability, many commonly used pesticides in California are associated with adverse health effects to humans (APHA, 2007; Busby & Eckstein, 2009; Cunningham-Parmeter, 2004; J. Flocks et al., 2012; Lucas & Allen, 2009).

The immediate health effects of pesticide exposure can include headaches, nausea, vomiting, abdominal pain, diarrhea, skin irritation, eye irritation, dizziness, muscle weakness, difficulty breathing, respiratory irritation, disorientation, blurry vision, convulsions, coma, respiratory failure, and death (Anthony et al., 2010; Arcury & Quandt, 2003; Busby & Eckstein, 2009; Cabrera, 1991; Cunningham-Parmeter, 2004; Das et al., 2001; GAO, 2003; Lucas & Allen, 2009). Chronic pesticide exposure can cause harmful effects to the nervous, endocrine, immune, respiratory, and reproductive systems, and have been associated with carcinogenic and mutagenic effects (Anthony et al., 2010; Arcury et al., 2010; Arcury & Quandt, 2003; L. M. Brown et al., 1990; Busby & Eckstein, 2009; Cabrera, 1991; Cunningham-Parmeter, 2004; Dich et al., 1997; GAO, 2003; Gunnarsson & Bodin, 2017; Li, 2015; Lucas & Allen, 2009). Epidemiologists and toxicologists have linked chronic pesticide exposure to certain cancers, such as leukemia, prostate cancer, multiple myeloma, non-Hodgkin-lymphoma, and breast cancer (Bassil et al., 2007). Children are particularly at risk for pesticide exposure effects. Exposure to commonly used pesticides have been associated with birth defects, as well as respiratory and neurological harm at different stages of children's development (Eskenazi et al., 2006; Raanan et al., 2015; Rauh et al., 2006, 2012; Shelton et al., 2014).

In 2017, pesticide handlers in Ventura County reported the application of 6,318,994 total pounds of pesticide active ingredients during that year, the majority of which was applied to agricultural fields (CDPR, 2019b). Ventura County is home to 91,350 acres of irrigated cropland and grosses approximately $2 billion in value from the production of crops (CAC, 2018). The most commonly produced crops in the county include strawberries, lemons, celery, raspberries, avocados, tomatoes, peppers, and cabbage. Strawberries are the most pesticide intensive commodity and the most lucrative agricultural crop in the county. Pesticides used in strawberry

production account for approximately 45% of all reported pesticide applications. The top five pesticides used in strawberry production are all classified as potential carcinogens – these pesticides also include reproductive and developmental toxins, mutagens, teratogens, and lung damaging agents. Stakeholders, such as environmental justice advocates; and many farmworkers, community members, and consumers, oppose industrial agriculture's intensive pesticide use because it poses risks to human health. However, they also view pesticides as an important technology needed for growing food.

Mexican Immigrants and Environmental Injustice

The environmental justice movement stresses that all communities, regardless of their socio-demographic makeup, should have an equal right to a safe and healthy environment (Banzhaf et al., 2019; Bullard & Johnson, 2000; Bullard, 1990; Camacho, 1998; David & Pellow, 2016; Faber, 2008; Mix, 2011; Morello-Frosch et al., 2002; Portney, 2005). The Environmental Protection Agency (2020) argues that "[Environmental justice] will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live learn, and work" (para. 1). Intensive pesticide use in agriculture is an environmental justice problem because low-income, Mexican immigrant communities are disproportionately impacted by pesticide exposure and pesticide-related illness and injury (APHA, 2007; Busby & Eckstein, 2009; Cunningham-Parmeter, 2004; J. Flocks et al., 2012; Lucas & Allen, 2009). Compared to the general population, farmworkers have a greater likelihood of suffering chemical exposure (Anthony et al., 2010; Cunningham-Parmeter, 2004; Garcia, 2016). Additionally, their interests and concerns are often marginalized and disregarded in public debates regarding pesticide use and its adverse impacts (Harrison, 2006).

Approximately 68% of the farmworkers employed in the US are Mexican immigrants, 80% identify as Latina/o, and 72% are foreign born (NCFH, 2012; Arcury et al., 2010; Arcury & Quandt, 2007; Garcia, 2016). The negative reception of Latina/o immigrants in the US labor market heightens farmworkers' vulnerability to environmental injustices (Flocks, 2012). Farmworkers are economically exploited and socially excluded. They are segregated into sub-standard and close-quartered housing; often lack safe drinking water due to pesticide contamination of groundwater; endure labor-intensive working conditions; and have fewer opportunities for schooling. Additionally, farmworkers earn wages below the federal poverty level (Cunningham-Parmeter, 2004) and about half of farmworkers are undocumented (APHA, 2007; Arcury & Quandt, 2007; CAUSE, 2015; Das et al., 2001; Garcia, 2016). Undocumented immigrants lack fundamental protections provided to residents and citizens and they are not empowered to exercise the rights they are entitled to. These injustices contribute to the cumulative impact of pesticide-related harm by making it harder for farmworkers and their families to avoid pesticide exposure in the environments where they work, play, and learn.

Within the farmworker community, indigenous Mexican farmworkers are disproportionately burdened by occupational hazards (Chavez, 2013; Garcia, 2016; Holmes, 2013). While the majority of farmworkers are men originating from west central Mexico (NCFH, 2012), 22% of farmworkers are female and at least 20% of farmworkers originate from southern Mexican states where many indigenous Mexicans reside. According to farmworkers and community leaders in Ventura County, the percentage of indigenous Mexican farmworkers is much higher in strawberry production where pesticide use is intensive and labor demands are high (person communications). One Mixtec harvester who works in strawberry production estimated that about 75% of his co-workers were indigenous Mexican immigrants who speak

languages such as Mixteco, Zapoteco, and Triqui (interview with Mixtec farmworker). Most indigenous Mexican farmworkers are contracted harvesters – the most physically demanding position in agriculture (Chavez, 2013). Indigenous Mexican farmworkers are more likely to experience adverse health effects associated with farm labor, including back and knee pain, miscarriages, developmental malformations, and premature births (Holmes, 2013; Lopez & Runsten, 2004; Mines et al., 2010).

The health risks that Mexican immigrants face in California's agricultural regions is part of the larger story of the incorporation of Mexican immigrants into the US labor market. Factors, such as race, social capital, and changes in the labor market, have contributed to a negative mode of incorporation and hostile reception for Mexican immigrants in the US. Mexican immigrants have been characterized as manual laborers and stereotyped as "illegal," "other," and "temporary/disposable cheap labor." Mexican immigrants' racialized experience and the fear and intimidation that they experience serve as a backdrop to the everyday practices and discourses of farmworkers, agriculture representatives, government bureaucrats, and advocates. The practices and power dynamics among stakeholders in farmworker communities shape the management of occupational risks, such as pesticide exposure and illness.

Pesticide-Related Health Disparities as a Wicked Problem

I conceptualize pesticide-related health disparities as a wicked environmental justice problem. Batie (2008) defines wicked problems as "dynamically complex, ill-structured, public problems" that are characterized by high levels of uncertainty between the cause and effect of the problem; high levels of value conflict and disagreement about how the problem should be defined and addressed; interdependency of many socio-political factors and biophysical complexities influencing the problem; and interconnection between the problem and other

problems in the sense that the problem is both the symptom and the cause of one or many other problems (Batie, 2008; Dunec & Dunec, 2016; Edirisinghe, Stranieri, & Blismas, 2016; Head & Alford, 2015; McCall & Burge, 2016; Ney & Verweij, 2015; Termeer, Dewulf, Breeman, & Stiller, 2015). Moreover, there are no definitive or final solutions to wicked problems and attempted solutions can create new problems (Conklin, 2006; Rittel & Webber, 1973). It is difficult to identify one optimal solution for all relevant stakeholder groups due to competing demands and conflicting interests (Frame, 2008; McCall & Burge, 2016; Weber & Khademian, 2008). The best solution for one stakeholder group can threatened the interests of other groups (Carcasson, 2016; Roberts, 2004; Young et al., 2012). Foreman (1998) argues that most environmental and public health issues are plagued with these factors: they are controversial, involve conflicting interests, deal with tradeoffs, and are highlighted by scientific uncertainty.

Pesticide-related health disparities are wicked because a) regulatory processes have been unable to eliminate scientific uncertainty when predicting the risks that pesticides pose to human health and the environment; b) the problem involves numerous stakeholders with diverse worldviews; c) there are trade-offs between economic and environmental health benefits; and d) there are high levels of value conflict around appropriate pesticide use and pesticide reform (Busby & Eckstein, 2009; Cabrera, 1991; Cunningham-Parmeter, 2004; Das et al., 2001; Li, 2015; Reeves et al., 1999, 2002; Reeves & Schafer, 2003).

The high levels of uncertainty in pesticide risk assessments make it difficult to evaluate risks and take appropriate actions to mitigate harm (Hill & Sendashonga, 2003). Many factors impact experts' ability to understand the risks posed by pesticide use practices. For example, gaps in knowledge make it difficult to predict the effects of exposure to low doses of pesticides and exposure to the pesticide combinations that are commonly used in agricultural settings

(Harrison, 2011; Thornton, 2003). There is also little understanding about how hormones and receptors in the human body will react to pesticide exposure. Furthermore, various socio-demographic factors compromise experts' ability to track and predict pesticide-related illness and injury, including "the ways that poverty, job insecurity, language barriers, and legal status both exacerbate pesticide exposures and obscure them from official pesticide illness data sets" (Harrison, 2011).

Another obstacle to negotiating solutions to pesticide-related health disparities are stakeholders' divergent conceptions of risk – which is important to their worldviews (Harrison, 2011). For example, farmworker advocates, who aim to protect and empower farmworker communities, tend to adopt the precautionary risk management approach – arguing that the potential for harm should trigger reform. Advocates adhere to the precautionary principle, which maintains that "in cases of serious or irreversible threats to the health of humans or ecosystems, acknowledged scientific uncertainty should not be used as a reason to postpone preventative measures" (Martuzzi & Tickner, 2004). On the other hand, agriculture representatives, who aim to protect the economic viability of farming operations, tend to adopt a reactive risk management approach – they argue that irrefutable evidence of harm should precede reform. The reactive risk management approach views health hazards as quantifiable and assumes that scientific risk assessment can predict and manage pesticide exposure risks (Thornton, 2003).

The current pesticide regulatory framework and risk paradigm in the United Sates is more reactive than precautionary (Thornton, 2003). Government agencies, like the Environmental Protection Agency and the Department of Pesticide Regulation, often must wait for more accurate scientific data before they can take action to prevent harm (Martuzzi & Tickner, 2004). This constraint can lead to remedial action after adverse effects have occurred, rather than

precautionary or preventative action, which can have serious social and economic costs. Advocates' participation in public debate and policy making have, nonetheless, encouraged government agencies to implement some guidelines and regulations that aim to prevent harm despite gaps in knowledge (Harrison, 2011). The dominant risk paradigm is not impervious to change.

As stated above, addressing pesticide-related health disparities is also challenging due to trade-offs between economic and environmental health benefits (Foreman, 1998). Modifying pesticide use practices to prevent health risks can create other risks and undesired consequences for various groups. Pesticide reform can be costly for growers to implement and make it harder for them to compete in a global marketplace. Farmworkers, who bear the brunt of health effects, can also bear the brunt of economic challenges. Growers who go out of business or who have difficult years due to low productivity or profitability often layoff seasonal workers (BOS archives, 2016-2020). Layoffs contribute to farmworkers' financial insecurity.[2] Identifying appropriate solutions to address pesticide-related health disparities requires decision-makers to consider both the adverse effects of existing pesticide use practices and the economic impact of pesticide reform.

Range of Actions to Mitigate Pesticide-Related Harm

Given the competing demands, diverse interests, and uncertainties involved in agricultural pesticide use practices, there is no definitive solution to pesticide-related health disparities. Therefore, I do not argue for taking an all or nothing approach to pesticide use (e.g.

[2] Lawrence, (2013, September 27) *Impact of California Mushroom Farm's closing spreads to community, state, and nation*, VC Star. https://insurancenewsnet.com/oarticle/Impact-of-California-Mushroom-Farms-closing-spreads-to-community-state-and-nat-a-395859#.X1WGBHlKjIU

prohibiting all chemical pest management options). While there is no on/off switch to pesticide use, there are a variety of potential actions whose implementation can help protect the farmworker community from pesticide-related harm. These actions range from updating the interpretation of pregnancy leave law to banning particular pesticides, like chlorpyrifos, that are particularly hazardous, unnecessary given existing alternatives, and difficult to control.

Farmworkers can be exposed to hazardous pesticides via pesticide drift, inadequate personal protective equipment, or direct contact with treated soil or crops (Reeves & Schafer, 2003). Farmworkers' families are also vulnerable to pesticide exposure since farmworkers can bring pesticide residues home on their shoes, clothes, and skin. Measures to prevent pesticide-related illness and injury should minimize opportunities for pesticide exposure through these pathways. For example, one potential action would be to provide all farmworkers with protective gear, such as heavy-duty gloves, boots, and masks, to wear in the fields. Many farmworkers are not provided minimal protective equipment, such as gloves and masks, to limit exposure when they are working with treated crops (personal communication). Typically, workers are expected to bring their equipment and oftentimes will use makeshift fabric masks to protect themselves (personal observation). Similarly, farmworkers are often expected to remove their shoes before entering their cars and homes, change their clothes and bathe before interacting with their children, and launder their work clothes separately. However, farmworkers often do not have the means to complete these steps feasibility due to substandard, crowded living quarters and limited access to laundry facilities. This issue can be mitigated by providing farmworkers with onsite shower and laundry facilities where workers can decontaminate before leaving work.

Other potential actions include enhancing pesticide safety training and providing training in a language that workers can understand; implementing buffer zones around sensitive sites like

homes, schools, and parks; applying pesticides after business hours when other workers have left the field; ensuring that workers would not need to walk through treated fields to reach their vehicles if they have not left work yet; improving posting and notification practices around pesticide applications; hiring integrated pest management experts to the local County Agricultural Commissioners' office to encourage diverse pest control strategies; requiring job accommodation for pregnant farmworkers; educating health care workers about pesticide-related harm and reporting requirements; implementing screening tools for diagnosing pesticide illness and injury in health-care settings; and improving the enforcement of laws that are already in place. While there is a lot that can be done that goes above and beyond current regulations to protect farmworkers, it is also the case that many existing pesticide use laws are not followed consistently. Pesticide use violations are commonplace in agriculture. Many farmworkers have reported, for example, that pesticides are often applied nearby when they are working and that they have been asked to enter the field immediately after pesticides are applied (personal communication). Others have reported that they never received pesticide safety training, that the training is minimal, or that they did not receive the training in a language they understand. Pesticide use violations do not only hurt farmworkers but also hurt growers who do follow pesticide laws and regulations since they must compete with other growers who do not. Some growers have reported feeling overregulated and underenforced and would support increased enforcement through increased, unannounced inspections by government agencies (personal communication). For growers dedicated to following the law and providing safe working conditions, increased enforcement would not increase their costs and would help them be more competitive among their peers.

Uncertainties Related to Economic Impact

Given difficult farming conditions and increasing cost pressures in Ventura County, a lot of skepticism related to new regulatory action is grounded in concerns of economic feasibility. It is commonly argued that increasing restrictions on pesticide use will have a negative impact on production levels and crop price. The economic viability of the mitigation measures discussed above varies for different growers. Some measures, such as adopting a new interpretation of pregnancy leave law to provide women the option of paid pregnancy leave early in pregnancy, would not substantially increase costs for any local growers. However, other measures, such as providing personal protective equipment, improving training, and providing on-site facilities for showering and laundering may be more economically viable for large farming operations than small operations. Additionally, measures like banning the hazardous insecticide chlorpyrifos could be costly for some growers (e.g. berry and lemon growers) but not others (e.g. tomato growers).

In Ventura County, chlorpyrifos use had decreased significantly in the years preceding its removal, making it a good candidate for removal without severe economic consequences (Donley, 2019). According to the data from the County Agricultural Commissioner's office, there were 6,366 gallons of liquid chlorpyrifos used in Ventura County during 2017.[3] That number dropped to 750 gallons used in 2018. The number of chlorpyrifos applications also dropped from 556 applications in 2017 to 286 applications in 2018. According to the Country Agricultural Commissioner, there had only been 13 chlorpyrifos applications between January and May of 2019.

[3] Hersko, T. (2019, May 8). *State ban on toxic pesticide chlorpyrifos wins praise in Ventura County*, VC Star. https://www.vcstar.com/story/money/business/2019/05/08/state-ban-toxic-pesticide-chlorpyrifos-praised-ventura-county/1142732001/

In the past five years, restrictions on the use of hazardous pesticides like chlorpyrifos and on pesticide use around sensitive sites have increased. However, over those five years, only seven growers notified the Ventura County Board of Supervisors that they were closing their farms (pursuant with the Worker Adjustment and Retraining Notification Act). Four growers notified the board that they were closing their farms in 2016 and only three growers notified the board that they would be closing their farms between the years of 2017 and 2020 (BOS archives, 2016-2020). Four of the seven closures were of strawberry operations, two were raspberry operations, and one was a celery, cabbage, and lettuce operation. Ventura County is home to approximately 1,000 growers. Therefore, less than 0.01 percent of all growers reported closures over the last five years. It is unclear whether these closures were associated with increasing restrictions on pesticide use. While growers are not required to provide a reason for terminating their farming operations, most did mention that they were closing for economic reasons. One company was in a dispute with the United Farm Workers (UFW) union at the time of closure and another had recently paid $815,000 in a legal settlement for wage theft when they shut down operations.[4] Labor attorney, Rob Roy, who represented at least one of the growers, blamed a difficult regulatory climate in California. He argued that the benefits and wages that California requires for farmworkers makes it hard for growers to compete with other states.

The economic viability of different actions aimed at preventing pesticide-related harm is an open question than can be challenging to answer (Donley, 2019). Cost-benefit analysis is a difficult exercise that is characterized by high levels of subjectivity and uncertainty. Studying the economic viability of different mitigation measures would require data on the economic

[4] Wilson and Covarrubias (2016, June 16) *Oxnard berry farm's closure tied to retirement amid rising economic pressures,* VC Star. http://archive.vcstar.com/news/local/oxnard-berry-farms-closure-tied-to-retirement-amid-rising-economic-pressures-355a838e-72cb-302d-e053-383343711.html

vulnerability of different types of farms (e.g. based on farm size and crop type), as well as more information about the factors contributing to farm closures and layoffs. Additionally, it would be helpful to know more about the value of land that has been farmed conventionally compared to organically. More research is needed on the economic benefits that organic farms provide, such as protecting pollination services, biodiversity, and water quality.

The costs associated with implementing mitigation measures are also compounded by a variety of factors that can have a negative economic impact on growers. In 2019, the estimated gross value of agriculture in Ventura County ($1,990,100,100) decreased 5% compared to 2018. While the sales price per ton of strawberries, Ventura County's highest value crop, grew during 2019, the acreage in Ventura County dropped, resulting in a 24% decrease in the value compared to 2018 (CAC, 2019). Growers and regulators in Ventura County argue that the local agricultural industry is under stress and in decline due to a myriad of local challenges, such as unexpected weather events, heat waves, labor and water shortages, and the high value of land (news archives and personal communication, 2016-2020). The CEO of the Farm Bureau claimed that the decline in acreage and gross value was due to uncertain water supply and farm labor shortages.[5] However, large strawberry growers in the area do not believe that the decline in strawberry production will continue.

Importance of Studying Discourse and Public Debate

Reaching a decision about how to address pesticide-related health disparities and farmworker labor conditions has involved intensive conflict and debate due to the competing demands, diverse interests, and uncertainties that characterize these problems. The discursive

[5] Wilson, K. (2020, August 16) *Strawberries fall in value, still king of Ventura County crops as newcomer hemp climbs onto list,* VC Star. https://www.vcstar.com/story/news/2020/08/16/strawberries-remain-top-crop-hemp-production-increases-ventura-county/3358003001/

processes involved in public debate are important aspects of pesticide reform efforts and struggles to improve farmworker labor conditions. For example, discourse was a critical component in the success of the United Farm Workers (UFW) in the 1960s and 1970s (Ganz, 2000). Prior to the 1960s multiple efforts to unionize California's farmworkers had failed to build a stable membership or to win union contracts. The UFW was able to attract internal and external supporters and to encourage farmworkers to take risks by framing their efforts as an extension of the Civil Rights movement and by aligning with Mexican tradition, particularly in relation to the Catholic faith.

UFW leaders held meetings with Mexican farmworkers at a Catholic church and framed the 1965 grape strike as a nonviolent struggle in order to garner support from church groups and to align with the Civil Rights movement (Ganz, 2000). Over time, the UFW was able to foster a sense of courage and commitment in Mexican farmworkers, recruit church leaders, and garner support from civil rights groups and the wider public. In particular, UFW's march from Delano to Sacramento attracted public attention due to its alignment with tactics used in the Civil Rights movement. UFW leaders also fostered a religious commitment from Mexican farmworkers by framing the march as a pilgrimage and a form of penance. These framing efforts led to the first of many successful union contracts that improved farmworker labor conditions. The Agricultural Workers Organizing Committee (AWOC), a more resource-rich organization that did not align with the Civil Rights movement or faith, failed to build a stable membership, or win union contracts like the UFW did.

The 1960s and 1970s were also a time of increasing awareness around the health and environmental impacts of synthetic pesticide use in agriculture. Maguire and Hardy (2009) describe how changes in the discourse about the insecticide Dichlorodiphenyltrichloroethane,

commonly known as DDT, in the 1960s resulted in the abandonment of DDT use in the 1970s. In 1962, DDT use was widely considered to be necessary, effective, and safe. However, by 1972, taken-for-granted assumptions about DDT had changed – DDT was no longer viewed as necessary and was not considered safe for the environment or human health. Despite prior research linking DDT use to adverse health effects, widespread beliefs about the safety and necessity of DDT use did not begin to change until the publication of Rachel Carson's influential book *Silent Spring* in 1962. Carson was highly critical of pesticides like DDT and provided a new language for talking about pesticide use.

Silent Spring begins with a story of a fictional town that is marked by a "shadow of death" because pesticide use has resulted in "new kinds of sickness" and the death of children and wildlife. While spring used to bring birdsongs, "only silence lay over the fields and woods and marsh" (Carson, 1962:2). In the conclusion, Carson argues that DDT and other synthetic pesticides should be replaced with biological pest controls. Carson's problematizations of DDT encouraged scientists in disciplines like ecotoxicology and ecology to begin studying the impacts of DDT (Maguire & Hardy, 2009). This research helped create a new body of scientific knowledge about DDT and challenged the dominant position of research stemming from economic entomology. *Silent Spring* was also widely read in the public arena and sparked public debate that helped delegitimize DDT use over time as members of the public, environmental advocates, and politicians increasingly spoke out against the pesticide. The creation of the Environmental Protection Agency in 1970 was also attributed to the publication of *Silent Spring*. Given the intense public and political interest around DDT, one of the agency's initial priorities was to regulate the pesticide. In 1972, the Environmental Protection Agency banned DDT use based on adverse effects to the environment and harm to human health.

Discourse has also played an important role in agriculture industry representatives' ongoing efforts to defend pesticide use practices and counter increasing pesticide restrictions (Harrison, 2006). Harrison (2006) found that agriculture representatives and pesticide regulators in California engage in scale-based discourse to frame pesticide exposure in ways that promote regulatory inaction despite ongoing harm. The way problems are framed has material consequences because the frame determines what solutions appear to be most appropriate. Scale-based discourse can impact the scale at which an issue is addressed and can shape the solutions considered. Harrison (2006) shows how regulators and agriculture industry representatives use scalar discourse to frame pesticide drift incidents as isolated 'accidents' and justify regulatory inaction. This representation pushes down the scale at which pesticide drift is considered and results in control measures that focus on responding to incidents at the local level, rather than addressing the widespread use of hazardous, drift-prone pesticides in agricultural regions.

In contrast to efforts that minimize the scope of the pesticide drift, environmental and labor advocates have worked to push up the scope of the problem in order to legitimize more impactful regulatory actions. Advocates describe pesticide drift as a "systemic, common problem across agricultural regions whose solution will require significant precaution-based pesticide restrictions at the state and federal level" (Harrison, 2006). Pushing up the framing has facilitated some statewide pesticide reform efforts. For example, Californians for Pesticide Reform, a coalition of grassroots organizations across the state, helped secure the implementation of the Pesticide Exposure Response Act, which provides victims of drift with medical reimbursements and enhances statewide incident response protocols. Harrison's (2006) work suggests that it is critical for farmworker advocates to counter regulators and agriculture industry representatives' downscaled framings of pesticide-related harm in order to challenge regulatory neglect.

Contributions of the Study

Studying how the positionalities and discourse among multiple groups shape public debate about pesticide use practices in agriculture advances our understanding of wicked environmental justice problems and how to address them.

Moving from a Static to a Process-Based Approach

One of the major themes of the environmental justice literature has been to examine different frames or discourses of environmental justice and to interrogate their implications for challenging environmental inequalities (Beretta, 2012; Pellow, 2000; Schlosberg, 2013; David Schlosberg & Carruthers, 2010; Sze & London, 2008; Taylor, 2000). For example, scholars have distinguished between environmental justice frames that focus on the (mal)distribution of environmental harms and benefits, and frames that focus on asymmetries in decision-making processes. Schlosberg (2013) argued for the extension of environmental justice discourse to reflect diverse concerns and to accommodate new problems, populations, and sites of analysis. Harrison (2011) explored how multiple stakeholders, such as pesticide regulators, growers, and advocates, discursively frame justice in relation to pesticide drift and examined the implications of these different justice frames for environmental problem-solving.

Previous environmental justice literature has focused on identifying the most effective way to define or discursively frame justice and environmental justice (Beretta, 2012; Pellow, 2000; Schlosberg, 2013; Schlosberg & Carruthers, 2010; Sze & London, 2008; Taylor, 2000). Similarly, previous wicked problems research has focused on identifying the variables that contribute to the intractability of wicked problems and identifying the most effective strategies for coping with those problems (Conklin, 2006; Dunec & Dunec, 2016; Head & Alford, 2015; Roberts, 2001). For example, scholars have argued that deep disagreements, lack of consensus,

and contradictory problem frames across groups make it difficult to cope with wicked problems (Dunec & Dunec, 2016; Roberts, 2001). Since lack of consensus between relevant stakeholders make it difficult to cope with these problems, scholars have also argued that it is necessary to negotiate shared understandings of the problems and potential solutions across diverse groups (Conklin, 2006; Head & Alford, 2015).

These two lines of research within the environmental justice and wicked problem literatures have followed a static approach to theorizing about complex problems. A static approach to theorizing considers discrete entities, like discourses and coping strategies, as sufficiently meaningful regardless of how they are used or enacted. However, this approach is problematic because discourses and coping strategies are not defined by stable characteristics. Rather, they take on meaning through their production and enactment in everyday practice. For this reason, Sze and London (2008), argue that we need a more nuanced understanding of how diverse stakeholders shape the production and struggles related to environmental justice. Additionally, while research on wicked problems argues that diverse stakeholders' competing frames contribute to the persistence of wicked problems (Head & Alford, 2015), it lacks a nuanced analysis of how framing processes heighten intractability.

I contribute to environmental justice and wicked problems scholarship by moving from a static approach of theorizing about complex problems to a process-based approach. I explored how stakeholders produce or enact environmental justice discourse through their discursive practices and examine how notions of environmental justice change as stakeholders produce it. I also unpack how stakeholders work to cope with wicked problems on-the-ground and analyze how underlying dynamics reflected in stakeholders' framing practices make it difficult to challenge power asymmetries in public debate. This approach allowed me to gain a nuanced

understanding of the argumentation dynamics that dominate public debate around pesticide use in agriculture and allowed me to examine and inform the discourse of advocates and other stakeholders on-the-ground who seek to challenge environmental inequalities.

Research Questions. My research contributes to scholarship on environmental justice and its wicked problems through a case study of Ventura County, California. I explore the following research questions: 1) How do local stakeholders' positionalities, claims, and rhetorical strategies around the legitimacy of existing pesticide use practices impact public debate and problem-solving efforts? 2) How do the interests and concerns of farmworkers and their representatives become obscured and disregarded in public debate? My research identifies courses of action to address power asymmetries in public debate, reconcile diverse frames and claims, and enhance the deliberation of collaborative groups.

Methodology

I conducted a qualitative, ethnographic study to understand how stakeholders in Ventura County were addressing pesticide-related health disparities in their community. I employed participant observation and in-depth qualitative interviews, to explore stakeholders' positionalities, claims, and rhetorical strategies around the legitimacy of pesticide use practices. I also collected archival materials. I conducted my fieldwork over the course of two years – between August 2016 and May 2018. Over the course of my fieldwork, I conducted interviews with 91 stakeholders and conducted over 200 hours of observations. I collected multiple sources of evidence, referred to as data triangulation, in order to improve the validity of my findings (Hesse-Biber & Leavy, 2011; Jick, 2012; Yin, 2009).

I took an inductive, grounded theory approach to data collection and data analysis (Glaser & Strauss, 1967). Following an interpretive approach allowed me to explore how people make

meaning and how subjective understandings can affect social action (Feldman, 1995; Schwartz-Shea, 2014). According to Hansen (2006), ethnographic methods, such as field observations and in-depth interviews, allow the researcher to make interpretations regarding the influence that context has on stakeholders' interpretations of reality. I immersed myself in a diverse network of agricultural health stakeholders, including farm laborers, farm management, bureaucrats, growers, and advocates from numerous organizations in order to be close to the contexts and circumstances where stakeholders attach meaning to their social actions (Small, 2009). Engaging closely with agricultural health stakeholders and embedding myself in their social realities was essential for generating valid interpretations of their practices and perspectives (Becker, 1996; Goffman, 2001). The National Institute of Health (2016) defines "agricultural health" as "the study of environmental, occupational, dietary, and genetic factors on the health of farmers, farm families, pesticide applicators, and others who work with and are exposed to agricultural chemicals" (para. 1).

Field Site. The setting for this research is Ventura County at-large. Ventura County is located in the southern part of California but is also considered the southernmost point of California's Central Coast. The county shares its borders with Santa Barbara County, Kern County, and Los Angeles County. The cities that make up Ventura County include Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Santa Paula, Simi Valley, Thousand Oaks, and Ventura. The largest city based on population is Oxnard and the largest city based on area is Thousand Oaks (US Census Bureau, 2010). While many cities in Ventura County are suburban, there are over 2,000 farming operations and over 90,000 acres of irrigated cropland located predominantly in Oxnard (74% Latina/o), Santa Paula (80% Latina/o), and Fillmore (75% Latina/o) which are predominantly Latina/o and low-income (CAC, 2018; US Census Bureau,

2010). Pesticide handlers and regulated businesses in Ventura County reported the application of 6,318,994 pounds of pesticide active ingredients in 2017 (CDPR, 2019b). According to the former County Agricultural Commissioner, Ventura County is home to the most expensive row crop land in the state (CAC, 2016).

Research Participants. I have categorized participants who were interviewed and/or observed, into four different agricultural health stakeholder groups: agriculture representatives, government bureaucrats, farmworkers, and advocates. As Table 1 shows, various types of individuals form these stakeholder groups. For a numerical breakdown of interview participants, see Table 2 in the Interview section below.

Table 1.

Stakeholder group	**Actors Interviewed and/or Observed**
Agriculture representatives	*Growers.* In Ventura County growers manage the production of a variety of fruits and vegetables. In order to operate their farms, growers manage ground preparation, planting, watering, fertilization, harvesting, and pest control. They also manage labor, budgeting, and the scheduling of water and pesticide spraying.
	Pest Control Advisors. Pest control advisors are responsible for inspecting farms to see what pests are present, submitting inspection reports to growers, and, if there are pests that cause economic damage, they recommend pesticide sprays. Growers can hire their own pest control advisors, but often they will subcontract pest management to pesticide control firms.
	Trade Association Staff. Growers pool their resources to organize trade associations and fund trade association staff who lobby on their behalf. Trade association staff monitor elected boards and public agencies; they also testify at meetings and public hearings to advance growers' interests.
	Consultants. The consultants that I observed included a facilitator and a coach. The facilitator was hired by growers to facilitate cooperative working group meetings with advocates. The coach was also hired by growers to develop a certificate program aimed at developing the leadership of frontline managers.

(continued)

Stakeholder group	Actors Interviewed and/or Observed
Bureaucrats	*Pesticide Regulators.* I observed and conducted interviews with bureaucrats who are responsible for instituting and carrying out pesticide laws and regulations at the local, state, and federal level, including the former County Agricultural Commissioner for Ventura, the interim County Agricultural Commissioner, public agency employees, a former Department of Pesticide Regulation staffer, the Department of Regulation outreach specialist, an official at the Department of Regulation, and a former Environmental Protection Agency official.
	Cooperative Extension Agents. The federal Cooperative Extension Service promotes the dissemination of new scientific developments in agriculture. The UC Statewide Integrated Pest Management Program works through the Cooperative Extension Service to help growers, pest managers, and other constituents address pest problems.
Farmworkers	*Harvesters.* Harvesters work in crews of 20-30 people and are primarily responsible for harvesting the crop and organizing the crop in packages. However, they perform other duties as assigned by their frontline managers as well, such as planting, pest scouting, ground preparation, tying plants, and assisting with irrigation.
	Ponchadoras. The ponchadora is responsible for quality control, reviewing all packages the harvesters submit and sending back those not meeting certain standards. In the past, ponchadoras, who are predominantly female, would record the work done by harvesters on a punch card. The Spanish word *ponche* originated from the English word *punch*.
	Frontline managers. The surquero and the foreman are frontline managers who manage crews in the field. They communicate directly with the company and receive operative instructions daily. Surquero stems from *surco*, which is Spanish for *trench*. The trench refers to the long ditch separating rows of crops.
	Supervision. Supervisors, production assistants, and food safety coordinators work at a higher management level than foremen and surqueros. They frequent multiple fields and oversee numerous crews to evaluate progress and quality and to report back to the company.
	Pesticide handlers. Pesticide handlers mix, load, and apply pesticides and keep pesticide treatment records. Pesticide handlers typically hold other positions and conduct other farming tasks as well. For example, it is common for pesticide handlers to be responsible for watering.
Advocates	In Ventura County, the non-profit organizations that are most active in pushing for pesticide reform are *Central Coast Alliance United for a Sustainable Economy, Mixteco Indigena Community Organizing Project, Lideres Campesinas, and United Farm Workers*. The advocates who work for these organizations seek to promote economic, social, and environmental justice and to develop community leadership and unity.

Observations. During my fieldwork, I attended meetings and events that allowed me to observe the everyday actions of agricultural health stakeholders. I conducted observations at collaborative working group meetings; government meetings; advisory committee meetings; outreach events, such as health fairs, informational fairs, and pesticide safety presentations; public hearings; labor forums; rallies; a sustainable farm tour; and a civil trial. I also shadowed

the outreach work of local regulators with the County Agricultural Commissioner (CAC) and the Department of Pesticide Regulation (DPR). The meetings and events I observed were organized by a variety of organizations and agencies, including the Ventura County Board of Supervisors, the Agricultural Policy Advisory Committee, the County Agricultural Commissioner's office, the Department of Pesticide Regulation, the Mexican Consulate, the Ventura County Farm Bureau, the Central Coast Alliance United for a Sustainable Economy, the Mixteco Indigena Community Organizing Project, Lideres Campesinas, and the Abundant Table.

I attended meetings and events that expanded my understanding of stakeholders' diverse perceptions of pesticide use and the community's efforts to address pesticide-related health concerns. Some of the meetings that I attended focused on concerns that were not related to pesticides, such as farmworker housing, labor and water shortages, overwork, and wage theft. Attending these meetings gave me a broader understanding of stakeholder concerns and how different stakeholders prioritize and perceive various issues.

Over the course of my fieldwork, I became immersed in a diverse network of agricultural health stakeholders, including farm laborers, farm management, bureaucrats, growers, and advocates from numerous organizations. In addition to engaging with stakeholders while visiting public venues, I also embedded myself in a collaborative working group consisting of three growers and four advocates called the Miracle Group. I was welcomed as a guest to observe this groups' monthly meetings over the entirety of my fieldwork and continue to be invited to their meetings at the time of this writing. By engaging closely with this group and becoming a familiar attendee, I am now able to effectively interpret and analyze how these typically polarized stakeholders were able to transcend their differences and collaborate to initiate positive change.

Interviews. I conducted in-depth, semi-structured interviews with 91 agricultural health stakeholders, including local public officials and regulators, federal officials and employees, Spanish and Mixteco speaking farmworkers, community organizers, pesticide handlers, field supervisors, growers, a pesticide control advisor, pest management experts, a union coordinator, a lawyer, and physicians.

Table 2.

Stakeholder group	**Individuals interviewed**
Agriculture Representatives	5
Government Bureaucrats	13
Farmworkers	51
Advocates	16
Other (e.g. physicians, lawyers, epidemiologist)	6
Total	**91**

Individuals were eligible to participate in interviews if they were an agricultural health stakeholder; an adult (18 years or older); and live, work or do outreach in Ventura County, California. As mentioned above, agricultural health, is the study of pesticide related health outcomes for individuals, like farmworkers and their families, who are exposed to or work with pesticides in agriculture (NIH). Agricultural health stakeholders are the individuals who have a stake in or are concerned about pesticide use and pesticide related health outcomes. Interviewees were offered compensation in the form of a $15 gift card for their participation in the study. The interviews explored how diverse stakeholders perceive agricultural health by examining 1) their perception of the nature of pesticide related injuries and illnesses; 2) their first hand or second

hand experiences with pesticide related illnesses or injuries; 3) their role in efforts to address pesticide use concerns; and 4) the solutions, in relation to both policy and practice, that they perceive were necessary to mitigate the concerns identified. The interview guide was flexible in order to allow the interviewee to steer the conversation towards the issues and concerns they found important. I allowed the interviewee to steer the interview style based on their preference and comfort level – some interviewees were eager to tell their story and I only interrupted them to turn on my audio recorder or to ask follow up questions, other interviewees wanted to engage in conversation over lunch or coffee, many participants preferred a formal interview structure and gave me plenty of space to ask questions, and others requested my interview guide in advance and prepared comprehensive answers to each potential question. Using a flexible and, when appropriate, conversational interview style allowed the participants' perceptions to emerge during the interview process and invited participant storytelling (Holstein & Gubrium, 1995).

I cultivated relationships and gained access to farmworker, advocate, and policy stakeholders during my prior work in the community. As a master's student, I worked alongside staff from three local non-profit organizations, including the Mixteco Indigena Community Organizing Project (MICOP), the Central Coast Alliance United for a Sustainable Economy (CAUSE), and Lideres Campesinas. My relationship with these three organizations enabled me to carry out my dissertation research. Prior to beginning data collection, I met with the Director of MICOP and a policy analyst from CAUSE to discuss my research project. I initiated formal collaborations with both MICOP and CAUSE. These organizations designated members of their staff as points of contact for my research project and gave me permission to interview their staff and observe the events and meetings they organized.

During the data collection process, I hired a community leader affiliated with MICOP who, at the time of data collection, worked as a farmworker and volunteered his time to advocate for his community. This community leader was paid an hourly wage for his work as a Mixteco interpreter and research assistant on the project. He worked for over a year and participated in various research activities. In addition to interpreting during Mixteco interviews, he helped design the interview guide by writing questions, revised questions, and improved Spanish and Mixteco translations. Additionally, he recruited participants, scheduled interviews, navigated the city of Oxnard as we interviewed farmworkers in their homes, and participated in semi-structured interviewing by asking participants follow-up questions. Working alongside a community leader was crucial for building trust and gaining access to the farmworker community.

In addition to recruiting participants through my existing connections with local organizations, I also employed snowball sampling and theoretical sampling to recruit participants for in-depth qualitative interviewing (Glaser & Strauss, 1967b). Individuals with public contact information were recruited via email and phone call. I also recruited participants (e.g. farmworkers and their families, and advocates) at community events held by community organizations and government agencies at schools and community centers. My research assistant and I approached these individuals in-person. Interested individuals were asked to provide their names and telephone numbers and were contacted by phone to schedule an interview for a later date at a location and time convenient for them (e.g. their office, home, or another public space in the community where they felt comfortable). A final recruitment strategy was snowball sampling – each participant was asked to recommend other individuals who they felt were appropriate for the study.

Data Analysis

I began data analysis by engaging with the data and worked towards a theory that is grounded in and generated from the data (Hesse-Biber & Leavy, 2011). Consistent with Emerson, Fretz, and Shaw's (2011) suggestions for coding ethnographic field notes, I first open-coded the data, reading line-by-line and identifying themes that the data represent, and second I engaged in focused-coding, looking at how themes weave together into topics of particular interest. I referred to the literature as themes emerged in the coding process. I iterated between coding and literature review several times as I gained clarity about the theoretical tools that were best suited for structuring my analysis.

During the analysis process, I found that critical discourse studies, particularly those focused on discursive struggles over the legitimacy of institutionalized social practices, were valuable for understanding the themes emerging in the data. In subsequent rounds of coding, I focused on segments of data where stakeholders made claims about pesticide use. These claims often arose from breakdowns (departures from expectation) that occurred during the field work or when participants were being prompted to discuss controversial topics or views. Breakdowns were frequent when different stakeholder groups worked together or participated in the same meeting. I also brought up controversial topics and caused breakdowns during informal conversations and interviews.

Stakeholders' claims or explanations either legitimized pesticide use through various discursive strategies or delegitimized pesticide use. Through critical discourse analysis, I learned that stakeholders used different rhetorical strategies and made different claims about pesticide use. Subsequently, I returned to the data to explore the ways that stakeholders' organizational affiliations, roles, responsibilities, and backgrounds shaped their claims. Consistent with

Emerson et al. (2011) who argue that documenting unprompted storytelling and member description uncovers how actors are "making-meaning" out of their daily experiences, in this phase of analysis, I focused on instances of naturally occurring storytelling; for example, when participants would tell stories about their career trajectory or about circumstances that shaped their perceptions of pesticide use.

Summary of Chapters

The following chapters present the major themes and findings that emerged from the research. I explore how stakeholders' positionalities, claims, and rhetorical strategies interact to shape public debate and problem-solving efforts related to pesticide use practices. I found that while all agricultural health stakeholders support transitioning away from hazardous pesticides to varying degrees, dominant discourses that portray pesticide use as inevitable limit stakeholders' ability to envision and enact alternative farming practices and mitigation measures. In addition, the argumentation dynamics that dominate public debate about pesticide use reinforces pesticide-related health disparities by obscuring farmworker realities, social injustices, and dominant ideologies. The discourses of stakeholders with symbolic power, including agriculture representatives and government bureaucrats, served to legitimize the status quo. While the advocate-grower partnership named the Miracle Group was able to gain some traction on these seemingly intractable challenges by coproducing problem definitions and solutions, they did not resolve all the asymmetries in public debates regarding farmworker health.

The first empirical chapter, which I discuss in more detail below, explores the claims that agricultural health stakeholders – agriculture representatives, government bureaucrats, advocates, and farmworkers – make in relation to the legitimacy of pesticide use practices and how their positionalities shape those claims. The second empirical chapter examines the rhetorical

strategies that stakeholders use in public debate about pesticide use practices (i.e. the methods they use to prove the authority of their claims) and how these strategies affect their ability to communicate across stakeholder groups. The third empirical chapter examines the deliberations of a grower-advocate partnership in Ventura County called the Miracle Group and suggests the possibilities for and limitations on these stakeholder groups working together to cope with wicked problems. In the concluding chapter, I identify actions that stakeholders can take to improve deliberations among polarized groups, reconcile contradictory claims, and challenge power asymmetries in public debate.

Chapter 2 explores the (de)legitimation claims that agricultural health stakeholders make about pesticide use in agriculture and why they make certain claims more than others. I focus on how the positionality of agricultural health stakeholders shapes the claims they make about pesticide use practices. Positionality is the social context that shapes how stakeholder's view the world, including stakeholders' values, responsibilities, and personal histories. In this chapter, I draw from critical discourse studies (Fairclough, 2003; Van Leeuwen, 2007), practice theory (Bourdieu, 1990; Giddens, 1984), and narrative theory (Brown, 1998; Czarniawska, 2011) to analyze the claims and positionalities of each stakeholder group. I consider each of their situations in turn, presenting evidence from interviews and field notes.

I use critical discourse analysis to explore power dynamics in social settings. Focusing on the social settings where text and talk is developed is important for understanding why certain positions and claims become more influential than others. I found that, to varying degrees, all stakeholders share a dominant discourse that presents pesticides as necessary for achieving profitability and high productivity in agriculture. I also uncovered a prominent overlap between the claims that agriculture representatives and government bureaucrats make about pesticide use.

In this chapter, I provide a thick description of the claims stakeholders make and how stakeholders' diverse positionalities shape those claims.

Chapter 3 shifts from the previous chapter's focus on 'what' claims stakeholders make about pesticide use and 'why' they make those claims to 'how' they make claims. In this chapter, I examine the rhetorical strategies that stakeholders use to legitimize or delegitimize existing pesticide use practices. I draw on the conventionalist perspective (Boltanski & Thévenot, 2006; Moody & Thévenot, 2000) as a theoretical tool to identify the rhetorical strategies that stakeholders use and to deconstruct the framing dynamics that reinforce environmental injustices. This chapter contributes to public policy literature on wicked problems (Batie, 2008; Head & Alford, 2015). While research on wicked problems argues that diverse stakeholders' competing frames contribute to the intractability of problems (Head & Alford, 2015), it lacks a nuanced analysis of how framing processes heighten intractability. By unpacking these processes, I provide context for designing, scoping, and implementing solutions that multiple stakeholders can support.

I found that the rhetorical strategies stakeholders use re-produce injustices by disguising power relations and rendering the experience, interests, and concerns of farmworkers invisible. Stakeholders with symbolic power, including agriculture representatives and government bureaucrats, use rhetorical strategies that consistently disregard other stakeholders' claims. The dominant rhetorical strategies in the debate exclude the experience of vulnerable groups; obscure implications for local communities; disregard social and racial disparities; and conceal power relations and dominant ideologies. The argumentation dynamics result in stakeholders talking past each other and produce contradictory claims that are difficult to resolve or reconcile.

Chapter 4 explores how a grower-advocate partnership in Ventura County called the Miracle Group jointly defined problems and solutions aimed at improving farmworker labor conditions in Ventura County. In this chapter, I draw on public engagement literature (Bryson et al., 2015; Feldman & Khademian, 2000; Innes & Booher, 2004) and the concept of coproduction (Quick & Feldman, 2011; Torfing et al., 2019; Voorberg et al., 2015) to examine how the members' diverse positions and claims impacted the way they co-produced problems and shaped the outcomes of coproduction. While public engagement scholars have explored the conditions, objectives, and outcomes of coproduction (Torfing et al., 2019; Voorberg et al., 2015), they have not examined the rhetorical strategies stakeholders use during deliberations and how those rhetorical strategies shape coproduction. In this chapter, I extend coproduction scholarship by analyzing how the Miracle Group members make claims and how those claims shape their joint proposals.

When making claims in a small group setting, growers and advocates continued to express their different frames of reference through different claims. Nonetheless, by focusing on the details of specific projects and by integrating multiple knowledges, growers and advocates were able to come to agreement on problem definitions and create joint proposals – an accomplishment that seemed impossible from a higher level of abstraction. By coproducing the definitions of problems and solutions, working together on specific problems, and bringing contradictory claims in relation to each other, the Miracle Group was able to overcome polarization and jointly recommend proposals to protect farmworker health. However, the group's work proceeded in part by leaving some of the power dynamics and associated challenges intact. For example, while the Miracle Group members recognized concerns related to human rights and social justice, they also deliberately omitted language that would reflect those

principles from their vision, problem definitions, and proposals because they were deemed too controversial. In this way, they accepted the logic of farmworkers and their representatives, while also reinforcing some of the harmful invisibilities discussed in Chapter 3.

In Chapter 5, I describe how the findings contribute to a deeper understanding of pesticide-related health disparities as a wicked environmental justice problem and of the ways discursive strategies legitimize the status quo. I discuss opportunities for addressing power asymmetries in public debate, enhancing collaboration among polarized groups, and reconciling opposing arguments. In addition to interpreting the findings and discussing the study's contributions to environmental justice and wicked problems literature, I also describe the limitations and provide suggestions for future research.

CHAPTER 2

MAKING SENSE OF PESTICIDE USE IN AGRICULTURE

The claims that agriculture representatives, bureaucrats, farmworkers, and advocates in Ventura County make about pesticide intensive agriculture are diverse and present conflicting narratives about the appropriateness of existing pesticide use practices. They tell stories and provide explanations that portray existing pesticide use practices as both legitimate and delegitimate. All relevant stakeholders believe that, under existing circumstances, pesticide use is necessary for agricultural production and profitability in the county. However, they also argue to varying degrees that current pesticide use practices need to be modified in order to address adverse outcomes for human health and the environment. In this chapter, I explore the logic behind stakeholders' divergent positions by analyzing how their professional responsibilities, organizational affiliations, practices, and goals shape their (de)legitimation claims.

Our everyday experiences take on meaning and become reified through the consumption and dissemination of narratives – stories, myths, reasons for doing, reasons for not doing, and excuses (Berger & Luckmann, 1966; Brown, 1998; Pentland, 1999). Scholars argue that individuals make sense of the actions, objects, and events in their social worlds through narratives (Brown, 1998; Czarniawska, 2011; Maguire & Hardy, 2009; Pentland, 1999; Phillips et al., 2004). Narratives reinforce certain perceptions of truth and "hook into normative ideas and common-sense notions…[that produce] shortcut paths into ideas which convey messages about…'good' and 'bad,'…'morality' and 'immorality,'… and acceptable and inappropriate behaviors" (Carabine, 2001, p.268). Since narratives shape the way individuals see the world, they also influence individuals' actions and expectations.

In this chapter, I combine critical discourse analysis, practice theory, and narrative theory into a single framework. Practice theorists, such as Giddens (1984), Bourdieu (1994), and

Feldman and Orlikowski (2011), argue that our actions are productive in shaping our social realities and recursively shaping the structural contexts which enable or constrain our actions. Similarly, discourse theorists (Maguire & Hardy, 2009; Phillips et al., 2004) and narrative theorists (Brown, 1998; Czarniawska, 2011) argue that what people do and how people explain what they do are mutually constitutive – the way people interpret narratives stems from people's practices; the meaning people attach to practice stems from narratives, shaping the way people experience their social reality. It is also the case that our everyday language is social practice. Through our everyday language, storytelling, and interactions, each person helps reinforce the accounts of reality that become dominant, socially accepted, and taken-for-granted.

According to Rojo and van Dijk (1997) legitimating explanations can cause people to "see no realistic alternative to the status quo," thus preserving the way things are currently done, reinforcing disparate power relations, and privileging dominant interpretations of events (p.529) (see also Brown, 1998). Actors can omit and manipulate information in the narratives they disseminate in the attempt to protect their own interests (Brown, 1998; Gounari, 2006; Rojo & van Dijk, 1997). According to Brown (1998), "our description of [stories] are in effect representational devices that privilege, suppress, and marginalize voices as part of an authorial textual strategy" (p.38). The political implication of narratives is that they can highlight certain interests and aspects of a situation and marginalize others and can be used to privilege some voices and suppress others.

Power is not a resource that one group has, and another does not. As Giddens (1984) describes, "resources are media through which power is exercised" and power is "the capability of the individual to 'make a difference' to a pre-existing state of affairs or course of events" (p.16). Some of the resources through which power can be exercised include money, legal

authority, land ownership, control over wages, social ties, academic qualifications, and cultural capital. While all stakeholders have agentic capacity to 'make a difference' in some way, they do not have equal capacity for action (Feldman & Orlikowski, 2011). Actors often have disproportionate access to resources, as well as access to different types of resources that allow them to frame arguments and shape discourse in ways that other groups cannot. All stakeholders, even those whose choices are severely constrained, can access resources whereby they can influence the activities of others – and in some cases enact substantial change. As discussed in the previous chapter, farmworkers successfully won union contracts with large growers through their creative alignment with Mexican tradition and the Civil Rights movement, and far reaching changes in pesticide regulation and discourse have been credited to the work of Rachel Carson, a writer and scientist who was an outsider to the dominant discipline studying pesticides at the time. Exploring how power is exercised, rather than who has power, focuses our attention on the ways that actions and claims become imbued with power and the opportunities for stakeholders to increase their influence by mobilizing resources in new ways.

Bourdieu explains that certain individuals, particularly those with economic power, can develop symbolic power – the power to influence the way we think about and understand the world (Bourdieu, 1986, 1990; Bourdieu & Passeron, 2000). These individuals have more agency in defining which practices are considered legitimate and become socially accepted. Individuals with symbolic power, such as agriculture representatives, are perceived by others as legitimate and can use their authority to privilege the social realities they perceive as valuable (Hallett, 2003). These individuals are also subject to the enactment of power, they internalize discursive representations of the world that are not their own and use those representations as a platform to influence shared understandings of the social world. However, Bourdieu (1990) reminds us that

the logic of practice ensures "the simple possibility that things might proceed otherwise than as laid down by the 'mechanical laws' of the 'cycle of reciprocity'" (p.99). While certain social practices may be probable, there is never complete certainty – there is always uncertainty, there is always an opportunity to act in a way that defies dominant discourses and works towards transforming the status quo.

Dominant strategies, discourses, norms, and dispositions are always being (re)negotiated among relevant stakeholders and, therefore, are subject to struggle and change regardless of how stable they appear (Feldman & Orlikowski, 2011; Phillips et al., 2004). In the context of controversial actions, stakeholders struggle over multiple interpretations of what is true, what is moral, and what is necessary. Over time, as individuals translate counter-narratives into their language and develop new bases of allocative and authoritative resources through which they can exercise power, discourse can change in ways that challenge institutionalized practices (Maguire & Hardy, 2009). Since social practices are always at risk of losing their institutionalized or taken-for-granted status, legitimation is an ongoing process (Maguire & Hardy, 2009).

When institutionalized practices become threatened by counter-narratives, stakeholders must actively convince themselves and others that the practice is legitimate in order for it to maintain its institutionalized quality (Maguire & Hardy, 2009; Rojo & Van Dijk, 1997). Legitimacy is a quality of being recognized as appropriate, desirable, reasonable or right (Brown, 1998). Vaara & Tienari (2008) define legitimation as the process of "creating a sense of positive, beneficial, ethical, understandable, necessary or otherwise acceptable action in a specific setting" (p.986). Individuals can legitimize or garner support for their actions through persuasive discourses, or explanations (Berger & Luckmann, 1966; Maguire & Hardy, 2009; Rojo & van Dijk, 1997; Vaara & Tienari, 2008). Explanations legitimize when they provide an answer to

'Why?' – "'Why should we do this?' and 'Why should we do this in this way?'" (Van Leeuwen, 2007). These questions can be answered in various ways. For example, stakeholders might explain that the action is beneficial to the group or the larger society (Rojo & van Dijk, 1997; Van Leeuwen, 2007). They might describe controversial practices as morally defensible given existing circumstances. However, claims can also delegitimize social practices, explaining why we should *not* do something and presenting a counternarrative to challenge its validity.

Discourse analysts have focused on examining the various types of discursive strategies that stakeholders use to legitimize and re-legitimize practices (Gulliver, 2010; Maguire & Hardy, 2009; Rojo & van Dijk, 1997; Vaara, 2015; Vaara & Tienari, 2002, 2008; van Leeuwen & Wodak, 1999; Van Leeuwen, 2007). However, while examining the different legitimation strategies that stakeholders use is crucial to understanding how practices and beliefs become institutionalized, it is also important to explore other aspects of these narratives, such as the positionality of focal actors and the evaluative context (Pentland, 1999). According to Hansen (2006) narrative analysts often focus on analyzing aspects of text and talk but do not pay as much attention to context. It is crucial to focus on the context where discursive strategies are developed and employed because context plays an important role in how certain positions become imbued with power.

I explore how the positionalities of four different stakeholder groups – agriculture representatives, government bureaucrats, farmworkers, and advocates – shape the claims they make about the legitimacy of existing pesticide use practices in Ventura County agriculture. Positionality is the social context that shapes how stakeholder's view the world, including stakeholders' values, responsibilities, and personal histories. Stakeholder groups view the world in distinct ways because they are socialized in different families, regions, communities,

professions, and organizations. By focusing on their positionalities, we can better understand why stakeholders buy-into certain legitimizing or delegitimizing claims and how certain positions in the debate about pesticide use become more persuasive or influential than others. This analysis produces a nuanced understanding of how discourses that legitimize existing pesticide use practices are reinforced. I found that no stakeholder group is completely disentangled from the dominant stories and myths that capture our imaginations and dictate our common sense.

Methodology

I draw on ethnographic data obtained from field observations, interviews, and archival research to explore how the positionality of agricultural health stakeholders shapes the claims they make about pesticide intensive agriculture. Field observations allowed me to examine the discourses and (de)legitimation practices that stakeholders use in everyday interaction. Conducting interviews with various agricultural health stakeholders helped me understand how they (de)legitimize pesticide use practices in agriculture. Archival materials also furthered my understanding of the cultural norms and shared discourses of diverse stakeholder groups. I analyzed 1) transcripts from interviews with 91 stakeholders, including agriculture representatives, government bureaucrats, farmworkers, and advocates; 2) field notes from over 200 hours of observations at meetings and events organized by government agencies, community groups, and growers; and 3) the Department of Pesticide Regulation's Guide to Pesticide Regulation in California. Analyzing these data help me generate a clear picture of the various ways that different groups make claims, as well as the similarities and differences across groups.

Data Analysis

The analytical process involved several rounds of iteration between content analysis and reference to the literature. I used these iterations with the literature to identify theoretical tools to structure my analysis. I found that critical discourse studies, practice theory, and narrative theory provided a valuable framework for exploring the patterns emerging from the data. I conducted a critical discourse analysis that explored how stakeholders use discursive strategies to legitimize or delegitimize existing pesticide use practices in Ventura County. I focused my analysis on instances of naturally occurring participant storytelling, as well as breakdowns – or departures from expectation – that occurred in the field, particularly when stakeholders' taken-for-granted assumptions were being questioned or challenged.

In the follow sections of this chapter, I analyze the discourse of four stakeholder groups – agriculture representatives, government bureaucrats, farmworkers, and advocates – as they discuss pesticide use. I consider each stakeholder group's situation in turn. I explain how their practices, roles, and responsibilities support and reinforce their narratives. This analysis illustrates how stakeholders' positionality, actions, and perceptions intertwine. In the final section, I discuss how the logic behind stakeholders' claim-making practices overlap and diverge.

Agriculture's Legitimation of Intensive Pesticide Use

"So much is out of your control": The challenge of farming

When asked what they like least about their work, a grower stated:

> "At times it's all consuming and it…keeps you up at night...We had this big fire that went through the county this year, that was pretty nerve-racking. We go through droughts; we go through labor shortages…You understand that so much of it's out of your control" (interview with large citrus and avocado grower).

With each season, growers are faced with the task of managing uncertainty and risk. Growers invest millions of dollars into their crop knowing that unexpected weather events or disease

could threaten crop production and profitability. In order to achieve their profit goals, growers manage production uncertainty using various risk-mitigation tools. For example, pesticides are used as an insurance tool and are described as being instrumental for avoiding yield issues and crop death. Growers and pest control advisors argue that pesticide use is an appropriate and necessary response to production uncertainty in farming.

In addition to impacting production, failure to control pests can negatively impact crop price. According to growers and pest control advisors, pesticides are used to ensure growers receive the highest price for their product. A pest control advisor, who works for a local pest control firm serving citrus and avocado growers, argues that products with bug damage sell at a much lower price point because consumers will not buy fruits or vegetables with any imperfections:

> "If you get a lemon that has a little blemish on the skin from a bug damage, people just won't buy, *they will not buy it.* The difference between having lemons that are a brand of quality to be sold say at Vons versus the lemons that are going to turn into lemonade… You're talking about the Vons lemons being worth $1,000 and $1,200 a bin whereas the other ones are worth maybe $200 to $400 a bin" (interview with pest control advisor).

The pest control advisor explained that one aspect of his job that he likes most is the feeling of satisfaction when "they're picking the ranch and it's all clean and good looking fruit and I just know they're going to make all kinds of money" (interview with pest control advisor). If growers' crop is downgraded due to pest damage, growers can lose money and may struggle to cover operational costs, such as labor, equipment, seeds, fertilizer, water, and land rent.

A large citrus and avocado grower who I interviewed began his career blending and delivering fertilizer for an agricultural supply company. After going to college to receive a degree in agronomy, he became licensed as a pest control advisor and pest control operator. He worked as a pest control advisor for several years before he was hired as a ranch manager at his

current company and began managing 600 acres of farmland. Today he directs all the farming for the company in Ventura County, managing nearly 3,000 acres of farmland and leasing land to other growers. He refers to himself as a "large citrus and avocado grower." During our interview, he explained that growers view pesticides as pure cost:

> "As a grower, all the things that I have to spend my money on to grow a crop, pesticides would be the last thing I wanna spend my money on…If I could afford more water, I'd put more water on it. If I could afford more pruning to make the trees shape better or more productive, I'd do that" (interview with large citrus and avocado grower).

He explained that the primary reason he uses pesticides is to ensure he can sell his crop in a competitive global marketplace where consumers demand aesthetically pleasing fruit:

> "We sell our product into the global marketplace and it's really consumer driven that the quality of fruit that they expect in the market is, it's pretty, it's kind of sad because it's no more nutritional but it's just aesthetic, right? They just don't want any scars, or any blemishes...If we didn't treat…you would have lower production and you'd have poor quality fruit…Pests like red scale, or red spider mite or some of the different scale pests…they would just kill your tree…You've got everything from the aesthetic fruit quality to you know, then it starts affecting production, and productivity and profitability, all the way to tree death" (interview with large citrus and avocado grower).

Growers and pest control advisors describe how consumers often pick over bins of high-quality fruit at supermarkets like Vons and Ralphs, selecting the pieces with fewest blemishes and the least discoloration. Apart from consumer demand, the grower argues that pesticides are used in orchards to avoid tree death caused by scale pests.

"Government regulation is overbearing": Pesticide use and regulatory burden

Modern pesticide use began after World War II. In the 1940s, chemicals developed as weapons were adapted for use as pesticides in agriculture (Nash, 2004). During the late-twentieth century, growers in California introduced increasing pesticide amounts into their farming practices to control for harmful pests and, as a result, increased their production and profits.

Growers became more dependent on pesticides over time as pesticide-resistant pests developed and as some growers forgot and overlooked alternative pest control techniques.

Since the 1980s, however, an increasing number of pesticide regulations aimed at protecting human health have been adopted. These regulations restrict growers' pest management tools, making it more difficult and more costly to control pest risks. According to a pest control advisor, "since the 1980s it's just been getting harder and harder and harder every year" (interview with pest control advisor). Growers describe pesticide regulations as burdensome and caution against restrictive pesticide regulations:

> "Not that I want to live in the Wild West, but…government regulation gets to be overbearing at times…Just the unrelenting increase of government regulation. Costs go up…a third of my time is sometimes just filling out surveys…Now we have a regulation where we can't spray within a quarter mile of schools…It's unfortunate that the knuckleheads out there that do things extremely stupid, create these regulations that, they just tap down everybody's ability to do stuff. Just makes it more difficult" (interview with large citrus and avocado grower).

At the time of this research, many grower complaints revolved around proposed, and later adopted, buffer zones around schoolsites. In November 2017, new mitigation rules restricted certain pesticide applications around schoolsites on weekdays between 6am and 6pm and required growers to provide neighboring schoolsites with an annual list of pesticides to be used within one-quarter mile.

Prior to adopting these rules, growers argued against their implementation. One of the growers who is impacted by pesticide restrictions around schools is Mr. Johnson (pseudonym), a multigenerational strawberry grower who owns farmland adjacent to a local school. The school was built with the intention that it would be surrounded by farmland; however, its proximity to conventional strawberry fields has become a topic of concern and debate in the community. Mr. Johnson attended and spoke at each government meeting that I observed where pesticide use near schools was discussed. For example, in June 2016, during a Board of Supervisor meeting where

county officials and pesticide regulators discussed elevated levels of the fumigant 1,3-D around Rio Mesa High School, Mr. Johnson stated:

> "There are groups urging a one-mile pesticide free zone around schools. There are over 21 schools affected. This is not workable…In fact, this would roughly affect 54,300 acres out of the 101,000 acres in the county. Effectively reducing the acreage by 53% and revenue by $980 million costing tens of thousands of jobs. Penalizing ag for the school's intrusion into the ag zone will not save open space and agricultural resources" (archive, video transcript, BOS meeting on 1,3-D).

The Department of Pesticide Regulation ultimately proposed restricting pesticide use around schools during school hours and requiring growers to provide a list of pesticides that they planned to use to neighboring schools annually. For growers and pest control advisors, this meant that rather than applying pesticides during workhours when school is also in session, they would need to schedule sprays in the evenings and on weekends.

In November 2016, during a public hearing held by the Department of Pesticide Regulation to receive feedback on these proposed mitigation rules around schools, a grower stated: "This proposal will do nothing to improve the safety of children in schools…The proposed rules will force applicators to apply in the darkness of night…and it falsely assumes that farming is predictable" (public comment from grower at DPR public hearing on pesticide use near schools). Growers argued they would have to predict the pesticides they would use in advance in order to notify school sites on an annual basis. Since pesticide needs vary from year to year based on unpredictable factors such as weather and pest pressures, growers felt that this requirement was inconsistent with the everyday management of farms.

Pest control advisors also argue that increasing restrictions on hazardous pesticides, like fumigants, disproportionately burden growers producing high value crops, like strawberries. When reflecting on the increasing restrictions on fumigants, a pest control advisor stated:

> "I don't know what the growers are supposed to do but specifically the strawberry growers, move to another state or something. I mean they need [fumigants].

> Strawberries are very dependent on clean soil. If you have any, *any* lingering amount of disease in your soil, you'll lose a ton if your crop and it just gets worse every year" (interview with pest control advisor).

Strawberries have a low tolerance for fungal diseases like Verticillium dahliae, a pathogen which can cause strawberries to wilt by interfering with the plants ability to conduct water (Bolda & Koike, 2013). If the strawberry plant is infected, it will likely wilt during hot or dry weather. Growers commonly use soil fumigation, mixing chloropicrin and methyl bromide or chloropicrin and 1,3-Dichloropropene, to kill Verticillium dahliae in the soil before planting. However, fumigants are hazardous to human health and prone to drift away from the application site. Therefore, the Department of Pesticide Regulation has prioritized taking regulatory action to mitigate potential adverse effects of fumigant use. Pest control advisors argue that increasingly strict fumigant regulations make it more difficult for strawberry growers to control for pathogens that can impact productivity and profitability, encouraging them to relocate in jurisdictions with fewer pesticide regulations.

One of the only instances when conventional growers or pest control advisors delegitimize pesticide use is when the government requires pesticide use for area wide management. A pest control advisor lamented, for example, that at times there is no reason to spray – there are no pests to control for, but he must recommend spraying for Asian citrus psyllid "because the county says so" (interview with pest control advisor). He describes how government interference makes his job difficult regardless of whether government is restricting pesticide use or requiring it.

"We are pushing back": Responding to Government Intervention

Growers respond to increasingly strict pesticide regulations by mobilizing the staff of existing trade associations, like the Ventura County Farm Bureau, and by organizing new trade associations and coalitions, such as the Ventura County Agricultural Association and the Ventura

County Coalition of Labor, Agriculture and Business, to promote their common interests. The professional staff of these associations lobby regulators on growers' behalf.

Growers in Ventura County began to organize in 1914 because the newly established Cooperative Extension service required at least twenty percent of growers in each county to organize themselves into a Farm Bureau in order to receive extension services. Today the role of the Farm Bureau includes legislative and political advocacy. Growers also organized the Ventura County Agricultural Association in 1974. Membership to this trade association gives growers access to the association's president, an agricultural labor law attorney. In Ventura County, the president of the Ventura County Agricultural Association is one of the growers' most vocal representatives. In 2010, another trade association, the Ventura County Coalition of Labor, Agriculture, and Business, was formed to challenge pending regulations that growers perceived as threatening (VC CoLAB, 2020).

In Ventura County, trade association representatives serve as the spokespeople for the agricultural sector by participating in hearings and meetings involving government intervention in agriculture. Trade association representatives consistently advocate against additional pesticide restrictions. For example, during a Department of Pesticide Regulation public hearing on proposed buffer zones around schools, the president of the Ventura County Agricultural Association asserted that the measures were unnecessary:

> "[The proposed] regulation is not necessary…It's duplicative…and not supported by sound scientific evidence…DPR did not attempt to measure pesticide exposure in children…In Ventura County there have been no reports of pesticide illness around schools" (public comment, General Counsel for the VCAA).

Trade association spokespeople claim that potential negative impacts on children attending schools adjacent to agricultural fields are unsubstantiated by pesticide exposure measurements or reports of pesticide-related illnesses. During the aforementioned public hearing, the CEO of the

Ventura County Farm Bureau also stated: "I am opposed to problem-solving based on anecdotes, not evidence…DPR states that there is no evidence that the regulation will improve health…There is no problem…There is no evidence of incidents in schools…No reports" (public comment, CEO of the Ventura County Farm Bureau). Trade association spokespeople do not perceive farmworker or advocate testimonies as authoritative and counter their arguments by referring to the expertise of government agencies and portraying the access to and creation of scientific data as a central criterion for expertise. The CEO of the Farm Bureau associates the Department of Pesticide Regulation with evidence-based problem solving and claims the department has no evidence that further restrictions around schools will improve health.

Reinforcing Legitimation through Government Bureaucracy

"We work to preserve balance"

Government bureaucrats describe "finding balance" as being one of the central aims and biggest challenges of their work. Pesticide regulators, for example, explain that they must find a balance between protecting public health and supporting growers. When making regulatory decisions, risk managers with the Department of Pesticide Regulation consider the adverse effects of pesticide use and the economic impact of regulating a pesticide. According to one pesticide regulatory official with the Department of Pesticide Regulation, he must "balance the needs of forty million people plus the environment" (interview with DPR Official).

The County Agricultural Commissioner, who is responsible for regulating pesticide use and enforcing pesticide regulations at the local level, also balances the demands of the growers and public safety. According to the County Agricultural Commissioner website, their mission is "to protect and promote agriculture, while ensuring the welfare of the public, the industry, and the environment" and they "work to preserve a reasonable balance between commerce and

regulatory requirements as [they] address the ever changing climate of agriculture, the needs of the public, and responsible stewardship of the environment" (CAC, 2020). In addition to enforcing pesticide use regulations, the County Agricultural Commissioner also enforces regulations for managing pests, preventing the introduction of quarantined pests, controlling product quality, labeling food for safety, certifying shipments for export, ensuring truth in advertising for organic produce, compiling crop production statistics, and reviewing land use compatibility with agriculture. During interviews with two County Agricultural Commissioners, they explain that there is pressure to make sure that workers and the public are protected, while also ensuring agriculture can function in the county.

The UC Cooperative Extension staff describe a similar pursuit of balance in pest management. According to a UC Pest Management Expert, extension staff seek to find a balance between reducing pest risks and various pest management risks, not only risks associated with pesticide use (interview with UC Pest Management Expert). The UC Statewide Integrated Pest Management Program's mission includes, but is not limited to, increasing integrated pest management programs, improving the effectiveness of pest management, encouraging pest management that is environmentally and economically sustainable, and reducing risks associated with pests and pest management practices (University of California Agriculture and Natural Resources, 2020).

"I represent the interests of everybody": Representing relevant stakeholders

Pesticide regulators portray themselves as neutral actors who seek to balance the needs of diverse stakeholders. At the state level, staff with the Department of Pesticide Regulation, explain that it is important to have multiple stakeholders weigh-in on decision-making and that they are opposed to supporting one stakeholder group over another (interviews with DPR Staffer

and DPR Official). A Department of Pesticide Regulation Official stated that one of his key responsibilities is listening to stakeholders and "figur[ing] out where society [is] saying you need to go" (interview with DPR Official). He explained that he listens to commodity groups; growers and pesticide handlers; public health agencies; farmworkers and farmworker families; professional organizations, like the Pesticide Action Network; and registrants, like Monsanto, Bayer, and Dow Chemical. He describes how he must suppress his own opinions about pesticides, maneuver strong views and changing political climates, and represent many different constituents:

> "The organization has to be political enough to kind of, maneuver through different challenges that each administration brings. So, so, I always tell people DPR is a science-based organization. It's a risk-management based organization, which is like, what me and [another official] do, we look at the science and then we say okay, this is our law, this is our mission, how do we balance that? We're also a political organization…If you have a system pushing one way versus pushing another, you have to operate within that system. And then each, each governor, and the people they surround themselves by, they have their own agenda. And in my mind, 'cause you know I had pretty strong opinions about how things should be done around the world of pesticides, but when I took a, this job, I have to balance the needs of forty million people plus the environment. And so, it chan-- you know, so in my mind that's what you're supposed to do if you have a, a political job that's you know, looking at balancing the whole, you represent the whole view. Other people will say, 'well I come from business,' or 'I come from the activist community' and 'I'm just going to be a government person'…You know. Personally, I don't think that's right. Everyone's different" (interview with DPR Official).

This Department of Pesticide Regulation official previously worked as an organic grower. When he was appointed as an official of the Department of Pesticide Regulation, he initially thought that it was "stupid" because he had farmed over 1,000 acres of different crops without using any synthetic pesticides. The official refrained from explaining how his opinions about pesticide use changed when he took the job, but he does imply that balancing the needs of many stakeholders changed the strong opinions he had.

At the local level, the County Agricultural Commissioner also describes their role in understanding various perspectives and advocating for different stakeholders. For example, the former County Agricultural Commissioner, Commissioner Gonzalez, explained that he makes an effort to engage with different groups: "you need to hear [everybody's] perspective, you need to understand where they are coming from, what are their concerns and fears, in order to understand…I want to work with everybody…by conducting outreach to everybody and hearing everybody and talking with everybody and not just one side or the other" (interview with former CAC). Commissioner Gonzalez argues that he must be neutral and that he tries not to align with the views of one stakeholder group. Commissioner Johnson, the interim County Agricultural Commissioner who succeeded Commissioner Gonzalez, explained that over time County Agricultural Commissioners have started advocating for more stakeholders:

> "When I came to work in 1980 up until now…We were more advocates for growers than we are now. Now we are just advocates for a lot of different parties. We are the navigators for making the boat float, for giving everybody a fair shake at getting the protections they need while still allowing agriculture to operate in a county like this" (interview with interim CAC).

Commissioner Johnson argues that she is willing to advocate for diverse stakeholders as long as stakeholder demands do not threaten to put farms out of business. This leads her to legitimize existing pesticide use practices by referring to the role that pesticides play in ensuring that growers can continue to operate and by describing how farmland conservation benefits diverse stakeholders in the county.

While state and local level regulators described working with and listening to many stakeholders, UC Cooperative Extension agents did not claim to work with diverse groups. For example, when I asked the UC Pest Management Expert if his staff worked in coordination with the Agricultural Commissioners, he explained that they do not typically engage with local regulators because associating with regulation or law could hinder their work:

> "We provide education and training and... we have materials for people to study to be able to pass the licensing exams. But we don't, we don't write the regulations, we don't enforce the regulations. And one of, one of the important things in our role in extension is that we aren't, we aren't, we have to make sure that we're working with our clientele, on education. That they understand that we're not the regulator, we're not the one that's going to give them a fine or tell them they shouldn't be doing something because then it's sort of, puts a barrier to our being able to come and provide this education. So, you know, we try to have some distance from the law. So that they're more accepting" (interview with UC Pest Management Expert).

In agricultural regions, cooperative extension staff primarily engage with growers and pest control advisors. They refer to these agricultural representatives as their clientele. Cooperative Extension staff do not interact regularly with farmworkers or advocates. According to the UC Pest Management Expert, they only have engaged with farmworkers in scouting for invasive pests. The UC Cooperative Extension has trained farmworkers in some instances to recognize what invasive pests look like so that they can help gather data about where the pest populations are located (interview with UC Pest Management Expert).

"Promoting and protecting agriculture is my job": Including agricultural interests

Government bureaucrats, including pesticide regulators and cooperative extension agents, tend to understand the interests of agriculture representatives more than other stakeholders. Government bureaucrats' ability to make sense of growers' perspectives and their tendency to adopt agriculture representatives' arguments as their own is shaped by their personal backgrounds, academic backgrounds, and the nature of their everyday work.

Personal Background

Pesticide regulatory officials have diverse backgrounds and career trajectories. At the county level, individuals must start at an entry level position and be promoted to higher levels of responsibility over time, eventually becoming a County Agricultural Commissioner if that is their aspiration. At the state-level, officials can be "parachuted" into the Department of Pesticide

Regulation without previous experience in pesticide regulation. Often these individuals move between positions in agriculture, environmental regulation, chemical manufacturing, and corporate legal consulting. Pesticide regulators at the local and state level all highlight their background in agriculture, whether as a grower, farmworker, farm-kid, or agriculture enthusiast. Commissioner Gonzalez is one of the only officials to be raised by and to have worked as a migrant farmworker. He is also the only County Agricultural Commissioner who was a member of the United Farm Workers. Commissioner Gonzalez describes how he has worked in agriculture since he was a child:

> "I like to think that I was working in agriculture when I was able to pick up some fruit, plums, off the ground and put them into my parent's basket. They were up on the trees, on the ladders harvesting the plums and I was on the ground…There was no daycare at least for me and so my parents, my mom, would take me to the fields with her…We traveled from place to place harvesting or doing whatever other work there was to do and it was hard at times" (interview with former CAC).

Other pesticide regulatory officials described growing up on citrus ranches or in agricultural regions, owning their own farms, and working as conventional and organic growers. Commissioner Johnson explains how her personal background shapes her point of view and makes it easier for her to work with grower groups:

> "I would say clearly, we have a more comfortable relationship with grower groups in general…because we have a lot of common ground. We know about agriculture and we're generally…basing a discussion on what *is*, not what we wish was. That's a little more comfortable for somebody like me who grew up in farming and just basically knows what the landscape is and how hard it is to farm" (interview with interim CAC).

According to Commissioner Johnson, she has more in common with grower groups and understands their position because of her personal background.

Academic Background

While some government bureaucrats do not have previous experience farming, they learn established beliefs about farming while pursuing an education in areas such as agriculture and

agricultural science. Experts working at land-grant colleges, like the University of California, have educated aspiring growers, pest control advisors, crop supervisors, and agricultural economists, as well as pesticide regulators, and cooperative extension agents. County cooperative extension agents, such as farm advisors, also disseminate knowledge generated from land grant colleges to local growers.

Lisa Blecker, the UC Statewide Integrated Pesticide Management Coordinator for the Pesticide Safety Education Program working through the UC Cooperative Extension received an M.S. in Bio-agricultural Sciences and Pest Management from Colorado State University. She described how her education shaped her career trajectory and her interest in and perspective of pesticide use

> "Somewhere in college I realized I loved plants and plant biology and ecology, and I also really love food and so, it would just sort of like, I was sort of fascinated with like the ecology of agriculture, and that's what sort of led me to Colorado State to do my master's there… I loved pest management because it was just sort of like, it was an ecological thing. You know, it was just like, okay so we have this monoculture and that encourages certain pests, and we can modify the ecosystem to decrease the amount of pests, and I didn't even start thinking about pesticides really.
>
> I studied environmental science, like I don't know why, it didn't occur to me to study pesticides because, I guess, I don't have a strong opinion on them, but it was just kind of like, nah don't do pesticides. I don't know, and it was just...but it became clear like in Colorado, *I mean you can't have like large scale agriculture that feeds a lot of people and not use pesticides. People use pesticides, and that's all there is to it. And so, I don't know, the more you study pest management, pesticides are part of it.*
>
> I took a couple of classes like the environmental fate of pesticides. You know, like what happens when you spray a pesticide, how it degrades in the soil, how it degrades in the air, how it gets taken up by the plant and it was just, I don't know, kind of fascinating and just sort of, yeah that mentorship with my professor and then I, when I graduated I went to work for her colleague at the University of Idaho, it's kind of a small world in pest management and pesticides within the…land grant universities" (interview with UC IPM coordinator for Pesticide Safety Education).

Lisa Blecker describes how her view of pesticides changed as she studied agricultural science at Colorado State. She learned that pesticide use is necessary to feed a lot of people and that pesticide use is inevitable. Commissioner Gonzalez also described how his education in agricultural science gave him hands on experience in monoculture, row crop farming and that he learned how difficult it could be to make a profit in agriculture due to the unpredictability of the market (interview with former CAC).

Nature of work

The County Agricultural Commissioner describes how their job responsibilities encourage them to interact closely with agricultural representatives. According to Commissioner Gonzalez, getting to know agricultural representatives personally helps him enforce pesticide regulations effectively:

> "My job as Commissioner requires me to have a lot of interaction with the farm community…I have to know them, know what they are about, in order to be effective in my job. I really do. The more that I know about them, the better I can do my job…We issue restricted material permits and when we issue those permits we always do it like this, eye to eye, face to face, we want to know that person, we want to know kind of the personality, if this is somebody that we can trust with restricted materials, if this is somebody that is going to follow the regulations, or if this is somebody who is not. We want to know that before we issue them the permit. If there is an investigation, we want to know, this is the person who probably followed the regulations or the type of person that maybe we can't trust that much…So, we want to get to know the people that we grow with" (interview with former CAC).

When referring to "farm community" in this instance, the Commissioner means regulated entities, such as growers or the staff of pest control firms. These regulated entities are the Commissioner's primary stakeholders. In addition to issuing restricted materials permits, the County Agricultural Commissioner staff interact with the agriculture representatives when administering examinations to certify private pesticide applicators, issuing permit and operator identification numbers, collecting pesticide use reports, registering pest control businesses,

conducting pesticide use and training inspections, issuing fines and non-compliance reports, and through the administration of other agricultural programs and activities.

UC Statewide Integrated Pest Management staff, as discussed above, also interact with agricultural representatives at the local level. For example, pest management advisors collaborate with growers to conduct research on pest management priorities in the region, distribute study materials for applicator certification examinations, and distribute educational information to help growers effectively manage pests and other agricultural threats. UC Integrated Pest Management's pesticide safety education specialists also interact with agricultural representatives through train the trainer workshops (interviews with UC IPM Education Specialist and UC IPM coordinator for pesticide safety education). The education specialists co-facilitate workshops that teach participants how to train others in pesticide safety. The workshop participants include licensed pest control advisors and pesticide applicators with commercial agriculture and landscape maintenance companies. Many of the participants attend their workshops to become qualified to train others in pesticide safety, while others are already qualified and are attending the workshop to stay current on regulatory changes or to receive continuing education units. The education specialists use active and collaborative learning techniques, such as small group work and role-play, and incorporate classroom technology, such as clickers, into the workshop in order to model appropriate training practices and to keep participants engaged.

While most bureaucrats' work involves frequent interaction with growers, pest control advisors, and pesticide applicators, the Department of Pesticide Regulation outreach specialist's work puts her in increased contact with farmworkers, advocacy groups, and the public (interview with DPR outreach specialist). The outreach specialist is responsible for conducting outreach in

farmworker communities. She distributes pamphlets and informational guides at informational fairs and communicates with the community through public service announcements on Spanish-speaking radio and television and through speaking engagements at venues that farmworkers frequent, such as the Mexican Consulate and Women, Infants, and Children offices. While the Department of Pesticide Regulation employs nearly 400 individuals, the outreach specialist is the only employee responsible for statewide outreach. She explained that she often declines invitations to attend outreach events because of scheduling conflicts. She spends most of her time traveling between counties (interview with DPR outreach specialist).

"You cannot farm without pesticides": Accepting Established Beliefs

Like agriculture representatives, government bureaucrats share an assumption that the benefits of pesticide use are substantial compared to the costs and that the public concern regarding pesticide exposure is often exaggerated. Officials of key government agencies act as spokespeople for this established belief. A quote from an interview with a Department of Pesticide Regulation official is exemplary of arguments made both publicly and privately:

> "Pest pressures are always changing and they're always evolving, and the pest evolves. You're trying to like, keep up, keep ahead of them so you don't have starvation or a public health disaster or you know, lose the ecosystem services that we're provided if you don't do weed management. But these pests are really innovative and their adaptive. You're always trying to figure out how we're going to make sure we don't all have like birth defects from Zika virus. You gotta figure that stuff out and a lot of the approach is, you know, a lot of people, will use a lot of chemistry to do that. We could do, a lot better job on the nonchemical side but that means we'd have to really change society, how we build buildings, how we do water management and how we eat, all of that." (interview with DPR official).

The official discusses how pesticide use is instrumental in ensuring food production, avoiding starvation, and protecting public health. He also emphasizes that pesticides are used in many sectors of society, including construction and water management, not only in agriculture.

Pressure to conform to established beliefs about pesticide use is apparent in bureaucrats' everyday conversation. For example, agency staff criticize peers who have spoken out against pesticide use. During a Labor Rights Week event at the Mexican Consulate in Ventura County, the following conversation occurred between the Department of Pesticide Regulation outreach specialist and a public agency employee:

> "DPR outreach specialist: There was one woman [commenting at a public hearing] who spoke against pesticide use and now she works at DPR.
>
> Public agency employee: Really?! She doesn't agree with pesticide use but now she works at DPR? [Jaw drops open]. Where does she work?
>
> DPR outreach specialist: She works in the marijuana program.
>
> Kaitlyn (researcher): In relation to pesticide use in growing marijuana?
>
> DPR outreach specialist: Yes. And I thought, this chick *esta bien marijuana* *laughs* [meaning – she's crazy].
>
> Public agency employee: That is crazy. I can't believe she works for DPR now" (field notes from Labor Rights Week, Mexican Consulate).

These bureaucrats are both female and are bilingual Spanish and English speakers. The outreach specialist identifies herself as Latina and as a member of farmworker community. This conversation took place during an outreach event while they were managing informational booths at the Mexican Consulate in Oxnard. Many Mexican nationals visit the consulate to renew important documents; however, very few people approached the booths for information. The Department of Pesticide Regulation outreach specialist spent time presenting on pesticide safety to the consulate visitors as they waited to be served by consulate staff. She asked visitors questions to assess their understanding of pesticide safety and to address any misconceptions they had. While she was not providing information or presenting, she talked to me and other bureaucrats at the event about work and her personal life. The assumptions that most Department

of Pesticide Regulation staff are in favor of pesticide use and that pesticides are necessary in agriculture was implicit in our conversations.

Internalizing Competing Demands: Farmworkers' Situation

"Aguantamos" - We Endure

Harvesters use the term *aguantar* to explain how they keep going when faced with difficult situations. English translations for *aguantar* include endure, stand, put up with, take, bear, hold out, hold on, suffer, ride out, stomach, weather, abide, and stick out. During interviews, harvesters described many conditions they must endure or suffer through while working – headaches, thirst, the urge to use the restroom, skin rashes, eye irritation, dizziness, feeling sick, working long hours, heat, and having their rights disregarded. While harvesters explain that the willingness to endure stems from economic necessity and fear, they associate the inability to endure with weakness. Harvesters describe the ability to endure hardships as a characteristic setting them apart from other groups. For example, one harvester described how white people are not able to endure working in the field. She explained, "once I took an Anglo Saxon to the fields and she was crying like a little girl, she couldn't take it" (interview with Mixtec farmworker). Indigenous harvesters also perceive themselves as being stronger than other farmworkers:

> "The indigenous, we are stronger than the people from the city. When they smell pesticides, their head starts to hurt, and they go to the hospital. Indigenous people are more resistant…Our heads hurt, but we keep putting in effort. You take some pills and you continue. You ignore it, you ignore the pain, instead you put in effort. Time goes by and it subsides. But the people from the city, they are a little more delicate. They feel a bit of pain and they go to the hospital" (interview with Mixtec farmworker).

This harvester describes how indigenous people put in effort – *echar ganas* – while enduring pain. According to harvesters, while having to endure originates from their vulnerable position in

society and the hazards in their workplace, being able to endure and work hard despite adversity requires strength and is a source of pride.

Harvesters describe how they constantly fear not being able to provide for their families. This fear shapes their decisions and willingness to report pesticide-related concerns. During a Labor Forum held by the community organization, Lideres Campesinas, one harvester in attendance explained to a group of other farmworkers and pesticide regulators that she only received pesticide training once during the 10 years that she worked in the strawberry fields. When a public agency employee asked her whether she reported this to her foreman, she stated, "No. I didn't know my rights and I was scared" (field notes from Lideres Campesinas Labor Forum). Another agency employee responded saying how she was concerned that "some [farmworkers] say that pesticide poisoning is part of the job." The harvester speculated why some of her peers may say that: "You arrive here with nothing. You work for your check. Perhaps it is due to fear" (field notes from Labor Forum). Similarly, during an interview, when I asked another harvester which agency they would call to report a pesticide incident they stated, "I don't know who to talk to and if you talk, you're afraid they will fire you and, it's like better to die, or to be there dying" (interview with farmworker). Harvesters often stay silent when they experience symptoms that could be pesticide related. They are willing to endure hardships to support their families financially.

"It's beneficial and it's not": Bearing the burden of competing demands

When production is at its peak, harvesters work by contract, meaning they are paid based on the number of packages they produce in a day. Since many harvesters work very quickly, they can surpass the minimum wage. The harvester's income is dependent on crop production and work speed. Harvesters believe pesticides are necessary for crop production and job security.

One harvester who works in the strawberry crop argued, “Look, here in Oxnard, 70% is farm work. Wherever you are, there are fields…For production, they have to inject [pesticides]” (Spanish interview with farmworker). This harvester is responsible for picking strawberries in the summer and preparing the field for planting during the winter. When there is no work in the strawberry crop, he looks for work in the blackberry crop or in chilis. A Mixtec harvester mentioned, “I am in favor of pesticide use because if they don’t apply pesticides, there won’t be any work” (interview with Mixtec farmworker). After mentioning she was not in favor of pesticide use because “the residue remains on the plant and when you move the plant, the dust rises, enters your eyes, and you get pesticide illness” a Mixtec harvester added that,

> “There is something positive [in pesticide use] because the crop ripens very fast and you can pick more, pack more boxes, and make more money. When they don’t apply pesticides, it doesn’t ripen as quickly, and you don’t make as much money” (interview with Mixtec farmworker).

Harvesters argue that pesticide use is instrumental in ensuring production, speeding up production, producing job opportunities, and increasing income. Similarly, when asked what he liked most about his job, a pesticide handler stated:

> “The work we do generates employment for about 22 crews consisting of 30 to 35 employees per crew. Because of what we do, all those people are working. If we do not apply [pesticides]…the crop can be damaged and there won’t be good production and all those people will have less income too… Many people would be unemployed…So, the better the harvest, the more quantity of crop, the more employment generated for more people” (interview with pesticide handler).

Pesticide handlers take pride in increasing production and lengthening the production season, resulting in more income generation for themselves and their peers. This pesticide handler explains that he works day and night. During the day, he is assigned to tasks such as harvesting, planting, or operating machinery, while in the evening, he is responsible for applying pesticides.

Harvesters are working within operations they do not control. They are aware of alternative farming practices that do not involve intensive pesticide use. However, they recognize

that working in industrial agriculture, where pesticides are used intensively, is how their peers make an income. Harvesters explain that while pesticides are enhancing production for farm owners, they cause negative health outcomes for farmworkers:

> Harvester: "Well, Roman (the United Farm Workers coordinator) told me the other time that we are going to try, we are fighting for them not to apply pesticides, but if you do not apply pesticides, there is no product. There is no product because when it is organic…it doesn't grow and doesn't bear much fruit. So, I don't think that the government will stop because the pesticides and the chemicals that they apply to the fruit or vegetable is what makes it produce more…If a farm produces three or four truckloads of strawberries when it is good, and…if they don't apply pesticides, chemicals, we will produce one truck load."
>
> Kaitlyn: "So, there is a benefit in using them."
>
> Harvester: "It's beneficial, and it's not because all the pesticides cause cancer. My wife died of cancer…Here, of 100 people…20 have cancer…because we eat the same vegetables. If you apply chemicals to the vegetables, the ground receives it, and the plant absorbs it, so it's in everything" (interview with farmworker).

Harvesters link pesticide use to greater crop production and to cancer incidence. A food safety coordinator who inspects different fields daily to ensure that hygiene and pesticide regulations are being followed also described the positive and negative consequences of pesticide use in agriculture:

> "I believe that in reality there are many negative consequences because the act of putting chemicals in the produce for the consumer, when they eat it, in the long term it can cause illnesses. But also, those that are applying, if they do not have good management, perhaps from their protective equipment, if they are in contact so frequently, that can also cause disease.
>
> It does help in the sense that it is the way to control disease and from control comes production and work for the people too. I believe that you have to find ways because it's both [positive and negative]. It's like finding a balance I think" (Spanish interview with food safety coordinator)

The farmworkers that I interviewed reported various adverse health effects and symptoms that they experienced as a result of pesticide use in the workplace, including dizziness, fainting, nausea, vomiting, burning eyes, burning nose, burning throat, stomach ache, feeling week, racing

heart, redness of hands, excessive skin peeling, decaying nails, eye webs, weird taste in their mouth, nosebleeds, gastritis, and birth defects. For example, one Mixtec harvester stated, "the negative thing is that the body receives it and your bones hurt, your head hurts, the pain lingers inside you" (interview with Mixtec harvester). Another Mixtec harvester explained: "If they apply pesticides too close, I get worried that I will get the flu…[One instance] when the pesticide handler sprayed near the harvest…the same day I got dizzy, I started feeling nauseas, and my nose starting bleeding" (interview with Mixtec harvester). The personal suffering that farmworkers experience when working around pesticides leads them to delegitimize pesticide use, particularly when pesticides are being applied in close proximity to their workstations.

Advocates' (De)Legitimation of the Status Quo

"My job is to build and develop power": Empowering the community

Community-based organizations and unions advocate for environmental and social justice for farmworkers in Ventura County. These organizations have been pushing for pesticide reform since the late twentieth century. In the 1960s, for example, the United Farm Workers mobilized national attention around occupational pesticide risk (Tool, 2001). In addition to organizing boycotts to raise awareness around pesticide exposure risks, United Farm Workers also negotiated private contracts to prohibit the use of dangerous pesticides and ensure the provision of personal protective equipment.

In Ventura County, the social justice and community-based organizations that are most active in pushing for pesticide reform are Central Coast Alliance United for a Sustainable Economy, Mixteco Indigena Community Organizing Project, Lideres Campesinas, and United Farm Workers. The advocates who work for these organizations seek to promote economic, social, and environmental justice and to develop community leadership and unity. They push for

improved protections for farmworkers by organizing rallies, marches, and social media campaigns; meeting with legislators and local public officials; and mobilizing the community through workshops, neighborhood meetings, and home visits. Central Coast Alliance United for a Sustainability Economy staff focus on changing policies through political advocacy and community mobilization, while the Mixteco Indigena Community Organizing Project and Lideres Campesinas staff focus on service provision and education. The United Farm Worker coordinator focuses on responding to work-site issues, contract negotiation, as well as political advocacy.

When asked about their work routines, advocates described days occupied by many meetings; even more phone calls; sending emails; writing letters to public officials; visiting community members in their homes; listening to grievances; planning, coordinating and strategizing with each other; posting to their website and Facebook; and writing talking points and op-eds. One community organizer described his job responsibilities:

> "My job responsibilities are to educate, inform the community about immigrant's rights, know your rights, environmental rights, social justice rights, in general human rights…My main goal in my job description is to build and develop power in the community through the community members that are already here. So basically, what I try to do is reach out to them. First, I try to educate them on what we are working on. Then once I educate them on what we are working on, they decide they feel invested on that or they don't. We work with people who want to do something. We are just trying to find those really. So my job is kind of just like searching through Oxnard to find the people who do want to work on everything that is going on in Oxnard…My job is to find the people who have that drive and motivation to do it after work or through people who aren't necessarily working or have time outside of their job to organize and participate in making Oxnard better" (interview with CAUSE community organizer).

Advocates focus on networking, educating, and organizing the local community around issues such as pesticide safety, economic disparity, health inequities, and immigrant rights.

"Farmworkers raised me": Interconnection with farmworker community

Advocates' dedication to protecting farmworkers from the negative health effects of pesticide exposure stems in part from their close relationship with the farmworker community. Of the 16 advocates I interviewed, five were previously farmworkers, one (or more) were raised by farmworkers and worked in the fields as children, and one was a farmworker at the time of our interview. These individuals were not counted as farmworkers for the purposes of categorizing the interviews. However, their first-hand experience with farm work motivates their advocacy work. For example, one community organizer, who is a son, cousin, and nephew of farmworkers, describes how the best part of his job is standing up for his family and community:

> "The best part of my job is that I get to look out for them, that I get to be one of those people that does say something that does speak up and that does stand out because those people are my parents, those people are my uncles, those people are my cousins, those people are my family. They are the ones that raised me. This whole city brought me where I am today, so the best part of my job is that I get to be that kind of beacon of light showing everybody in the city we are here. You can hear them through me. You know? Because they are busy working raising children, and raising more people like me. Because that is who raised me – just farm workers, field workers. I was a field worker, I started working in the field, so like that was my life; that is what created me, and I am happy and feel super grateful that I can do this" (interview with CAUSE community organizer).

Not only are advocates members of the farmworker community, they make a concerted effort to engage with farmworkers and listen to their concerns and interests. Advocates conduct listening campaigns – they visit farmworkers in their homes and listen to their grievances. The Director of the Mixteco Indigena Community Organizing Project describes the grievances he would hear as a community organizer:

> "I think pesticides is a concern…because I was a community organizer and people would always complain, adults or women, would complain about rashes or their eyes itching, or their body is not feeling comfortable" (interview with Director of MICOP).

Advocates hear many testimonies from farmworkers who are suffering from physical ailments consistent with pesticide exposure.

"They are dumping on Oxnard": Struggling against multiple unwanted land uses

Advocates are also engaged in various campaigns to promote environmental justice in Ventura County. They view these struggles as interconnected and see the impact of the injustices as cumulative.

> "You just can't help but make the connection, you just can't because women in the fields work while they are pregnant and then they have a kid and then it is born with abnormalities or down syndrome or you know just anything and it happens it is prevalent in farm workers it just is and you know we do not get any help in the rest of the environmental world either we have had landfills here, toxic waste dumps, multiple power plants, pesticides…We are in the 99th percentile for asthma rates here…It just tells you something. They are just dumping on Oxnard because people here just work. They do not stand out most of the time because they are busy working (interview with CAUSE community organizer).

Pesticides are framed as one of many types of environmental hazards that disproportionately impact the community and increase the risk of adverse health effects for marginalized groups

"Sorry, you really need to change": Interdependency of polarized groups

The primary dilemma for advocates is that they are responsible for promoting change in social practices, but they are not necessarily responsible for implementing the changes they seek. In the case of pesticide reform, desired changes must be carried out by growers interested in maintaining their current pest management practices. Advocates argue that, in relation to growers, they are in a privileged position:

> "So, we are from that standpoint…and I am sure [growers] see it and would agree, that we are sort of in this luxurious, easy place. You know? We are not the ones farming. Right? We have the luxury, the privilege to be on the outside and be like, 'Sorry, you really need to change'…It is really easy to tell a farmer, 'Figure it out.' How to be sustainable, not just today, but 100 years from now. When really, they don't get help" (interview with Maricela Morales, Director of CAUSE).

Advocates empathize with growers and claim that changing farming practices is difficult. They argue that they are asking growers to change while government is not providing resources to support that change.

While advocates oppose the intensive use of hazardous pesticides in agriculture, they still adopt aspects of the dominant discourse that legitimize pesticide use. For example, the Director of Central Coast Alliance United for a Sustainable Economy describes the transition to organic production as difficult in the following interview quote:

> "Farming is a small margin profit industry. It is really hard budget wise, financially, economically it is hard to transition, it takes three years to be certified organic…So, what do you do about the losses? Because your yield is going to be lower as you transition…How do you pay for that? You are not getting it at the marketplace, the government is not giving you a subsidy to transition…So, you have to be really committed as a farmer, to say…I do not know how I am going to do it but I am going to figure it out…We [advocates] recognize it is hard…but the truth is, from our standpoint, we have no choice" (interview with Maricela Morales, Director of CAUSE).

Advocates describe pesticide reform as difficult using the same language and logic as growers and government bureaucrats. They also describe how reducing pesticide use will subsequently decrease profitability and productivity. Some advocates familiarity with regulatory requirements also creates sympathy for compliance difficulties. For example, during an interview, the Ventura County United Farm Workers coordinator showed empathy for agriculture representatives:

> "Like in all works, all kinds of, particularly agriculture, there's so many variables, and so many adjustments that have to be made that the supervisors and the bosses may have started the day with a plan being in compliance but that plan went to hell... And shortcuts are taken, and workers sometimes pay the consequences" (interview with UFW coordinator).

This advocate argues in private that there is potential for non-compliance in *all* work. This implies that non-compliance around pesticide use in agriculture is comparable to non-compliance in other sectors. While advocates empathize with growers, they also claim there is a moral imperative to promote change.

Advocates ability to understand growers' perspectives and include growers' interests in their discourses reflects agriculture representatives' influence in decision-making processes and advocates' attempts to mobilize the support of agriculture representatives. While advocates

primarily engage in adversarial tactics that frame agriculture representatives as opponents, they have learned that some of their goals cannot be achieved without agriculture's support. Therefore, they also aim to find common ground with conventional growers and engage strategically in dialogues and collaboration with them.

Dominant Discourses and Barriers to Change

Agriculture representatives, government bureaucrats, advocates, and farmworkers make claims that either legitimize or delegitimize existing pesticide use practices. Legitimation claims are claims that justify existing pesticide use practices while delegitimation claims challenge the status quo and support pesticide reform. Figure 1 represents the extent to which these different stakeholder groups justify or challenge established practices and the extent to which their claims diverge or overlap with each other (see below). For example, farmworkers make claims that legitimize and delegitimize pesticide use practices. They argue that pesticides help them support their families by increasing yield and creating more work and income during the harvest season. However, they also argue that established practices cause negative health effects for themselves and their families. I found that agriculture representatives and government bureaucrats predominantly legitimize existing pesticide use practices and make similar claims, while advocates consistently delegitimize existing practices but also, in some cases, argue that pesticides are necessary for agricultural productivity and profitability. All stakeholders shared this dominant discourse that pesticides are needed for high yield and high profit – this is represented in the white circle in the middle of the figure.

The belief that existing pesticide use practices are inevitable constrains efforts to reform pesticide use because it stifles innovative ideas for mitigating harm and managing pests. For example, while labor advocates make claims that delegitimize existing pesticide use practices,

they rarely make claims that legitimize alternative practices. In order to change current practices in a way that protects health, there must be more health protective practices for growers to implement. Without creative alternatives, modifying pesticide use practices is perceived as unrealistic.

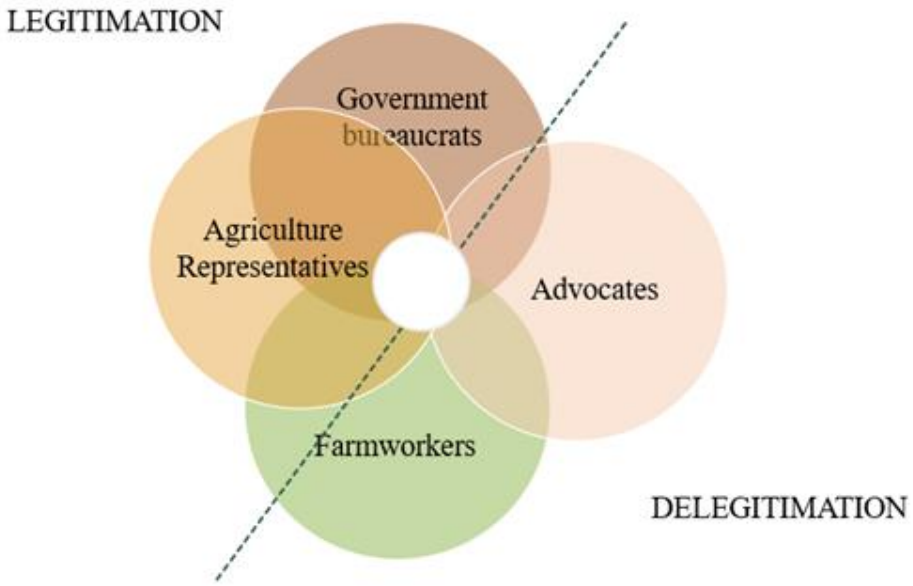

Figure 1.

Another impediment to modifying practices in a way that protects farmworker health is the prominent overlap between the claims that government bureaucrats and agriculture representatives make about pesticide use practices. Overtime government bureaucrats' responsibility for engaging the public in decision-making processes around pesticide use has increased. As a result, bureaucrats have started eliciting the participation of new stakeholders, like advocates and farmworkers, in decision-making around pesticide use. However, due to the nature of bureaucrats' work and their personal and academic backgrounds, the claims they make and the assumptions they adopt about pesticide use largely overlap with agriculture representatives. While government bureaucrats claim to be neutral mediators for diverse

stakeholders, their discourse exhibits a strong bias towards the interests of their primary stakeholders – agriculture representatives. This bias impedes new participants' ability to have an impact in decision-making and can heighten mistrust in the democratic process. While bureaucrats view agriculture representatives' perspectives and dispositions as common sense, they struggle to relate to advocates and farmworkers who bring new perspectives and have different frames of reference. By ignoring actors' unequal access to resources and unequal influence in defining where "society wants us to go," bureaucrats may perceive that they are balancing perspectives when they are not. The fact that government bureaucrats find it easier to relate to and embrace agriculture representatives' claims can skew decision-making processes.

As described above, public debate about the legitimacy of intensive pesticide use often frames farmworkers' health and financial security as competing demands. Many farmworkers legitimize and delegitimize pesticide use. They describe how pesticide use is beneficial because it produces jobs and helps them provide for their families, but also harmful because it causes physical ailments and disease. Agriculture representatives and government bureaucrats also argue against pesticide reform by arguing that current pesticide use practices help keep growers in business and produce jobs for farmworkers. Portraying farmworkers' financial security as reliant on intensive pesticide use impedes the ability of stakeholders, like advocates, to develop health protections for farmworkers. In order to improve farmworkers' well-being, it is important for stakeholders to recognize that farmworkers' financial security and their health are both basic needs and neither should be compromised in pursuit of the other.

Advocates primarily delegitimize intensive pesticide use. They connect to their social capital – i.e. their positive relationship with the media, some public officials, and their numerous allies – to push for pesticide reform. However, despite their dedication to empowering

communities and promoting environmental justice, advocates also mobilize discourses that legitimize existing pesticide use practices. Advocates tend to empathize with growers by mobilizing some of the same language that growers use to legitimize existing pesticide use practices. These legitimation claims become more powerful and persuasive as diverse stakeholders incorporate them into their everyday language.

CHAPTER 3

RHETORICAL STRATEGIES EMPLOYED IN DISGUISING INJUSTICE

In this chapter, I will explore how rhetorical strategies are used to frame wicked problems and how framing processes impact problem-solving efforts. In contrast with "tame" or "well-defined" problems, where "both the definition of the problem and the likely solution are clear to the decision-maker," the formulation of wicked problems and their solutions are both unclear (Head & Alford, 2015; McCall & Burge, 2016). Discrepancies around problem definition and solution identification are associated with scientific uncertainty, institutional complexity, systemic inequalities, and social pluralism (diverse values, priorities, concerns, and beliefs of stakeholders). Relevant stakeholders have different dispositions and considerations that result in disagreement about what counts as a problem and what counts as an appropriate solution (Bueren et al., 2003; Head & Alford, 2015; Koppenjan & Klijn, 2004; Termeer et al., 2015; Weber & Khademian, 2008). Since decision-makers can identify multiple possible solutions that involve different trade-offs between the competing demands and interests of stakeholders, selecting a solution that satisfies all parties is challenging (Frame, 2008; McCall & Burge, 2016; Weber & Khademian, 2008). An optimal solution for one stakeholder group could threaten the interests of another (Carcasson, 2016; Roberts, 2004; Young et al., 2012). Additionally, as stakeholders interact and attempt to resolve wicked problems, they continually reshape their interests and their interpretations of the situation, generating chains of unforeseen and irreversible consequences that extend over time.

Head and Alford (2015) argue that collaboration among stakeholders increases the chance that they will find paths forward "by identifying 'win-win' solutions, which typically depend on contending parties revealing pieces of information about their own situation and preferences." Effective

collaboration demands that relevant stakeholders disclose information and communicate honestly; foster trust and mutual commitment; listen to each other; be open to contrary evidence; and be willing to reconsider their problem definitions and preferred solutions (Blythe & Grabill, 2008; Campbell, 2003; Head & Alford, 2015). However, the often competing and constantly evolving frames through which stakeholders view contentious issues is both a reason why collaboration is necessary to cope with wicked problems *and* a reason why effective collaboration is so difficult to accomplish.

A frame is a "mental lens or story-premise that determines what we see, how we define problems, and what we consider as solutions" (Schön & Rein, 1994). Frames consist of each stakeholder group's understanding of the relevance of different issues; their priorities; their agenda; and the risks and opportunities involved in various choices (Kaufman et al., 2013). Frames help stakeholders make sense of information, interpret social reality, and represent their reality to others. Viewing issues through conflicting frames can cause misunderstanding, disagreement, or intractable controversy (Schön & Rein, 1994; Termeer et al., 2015). Increasing the tractability of controversy can be difficult because stakeholders often see the world through conflicting frames without knowing it - "when frames make sense, they are normally invisible, and we are unaware of alternative ways of understanding phenomena" (Schön & Rein, 1994). These frames can serve particular interests by obscuring or subordinating certain types of reality and rendering certain issues invisible (Harrison, 2006).

While policy literature on wicked problems has identified competing frames as a cause of intractable conflict and debate, the literature lacks nuanced insight into how intractability is reinforced through framing processes. According to Head (2019), unpacking the dynamics of stakeholders' attempts to frame and define wicked problems can help public managers, policy makers, and policy scholars cope with these problems. Understanding "the dynamics of problem framing, and problem definition are important…because the way a problem is defined is very

closely tied to the type of solution that is proposed" (Head, 2019). Examining how problem framing varies across stakeholder groups and evolves in local theatres of public debate can "provide the context for scoping, designing and implementing robust policies" that multiple stakeholders view as legitimate and feasible (Head, 2019).

I draw on convention theory to unpack the rhetorical strategies that different agricultural health stakeholders use to frame intensive pesticide use and to discuss the implications that their problem framing has on public debate and problem-solving efforts. Convention theory is instrumental in deconstructing the discursive practices and strategies that stakeholders use when engaged in conflict over the legitimacy of established practices like intensive pesticide use (Boltanski & Thévenot, 2006). According to convention theorists, many situations, but in particular contested situations, can be "analyzed by their requirement for justification of action" (Boltanski & Thévenot, 2006). When situations are controversial or contested, stakeholders or disputants often struggle over competing interpretations of what is moral, necessary, and appropriate. Actors draw on conventions, e.g. beliefs and principles that are accepted across multiple groups, to justify changing the situation and to justify maintaining the status quo (Kozica et al., 2014). When actors share the same conventions, they can draw on conventions to evaluate different situations and to justify a change in practice or not. However, actors often draw on different conventions, making it difficult to negotiate appropriate actions. While diverse conventions can spur innovation and bring about changes in established practices, they can also create conflict and produce stalemates that benefit the status quo. Exploring how stakeholders draw on conventions to justify their positions, practices, and goals can contribute to understanding why situations remain stable or why they change.

I examine how framing processes contribute to the persistence of environmental injustice by unpacking the rhetorical strategies that agricultural health stakeholders use in conflicts over

the intensive use of pesticides in Ventura County agriculture. I show how framing processes reinforce the inequalities and invisibilities farmworkers experience by obscuring farmworker issues and by systematically suppressing the claims of certain groups. I found that framing processes related to intensive pesticide use and public health pivot around how stakeholders connect their particular interests to models of the public good and how they mobilize evidence to support their public good claims.

A central component of justification in public debate is the demonstration of the general worth of particular interests and preferred solutions (Boltanski & Thévenot, 2006; Moody & Thévenot, 2000). According to convention theorists, stakeholders often demonstrate general worth by connecting particular interests and solutions to a collective good or a universal principle that is perceived as inherently public (Boltanski & Thévenot, 2006; Moody & Thévenot, 2000). Moody and Thévenot (2000) refer to three different models of public good that stakeholders use to scale particular interests to more generalized or publicly avowable conceptions of worth: *1) constituency model, 2) substantive model, and 3) procedural model.* Stakeholders who use the constituency model of the public good base their claims on who supports or could benefit. Typically, the constituency model entails transforming particular interests to "public interests" by connecting it to a large number of supporters or beneficiaries. For example, a stakeholder could argue that protecting open space is supported by most residents in the county. When using the substantive model, stakeholders base their public good claims on universalistic principles (Moody & Thévenot, 2000). For example, the principle of protecting human rights is considered good on its own terms regardless of how many people's rights are being violated. Some stakeholders use the procedural model to argue that the public good is achieved through a procedure, such as balancing or combining the goals of stakeholders in some way. Through deliberative procedures, a solution may be reached that is a "substantive synthesis...of multiple public good visions which not

only conglomerates but also integrates them" (Moody & Thévenot, 2000). In public debate, all sides argue that they are pursuing the public good, however, they mobilize different representations of the public good.

To increase the authority of their public good claims, stakeholders also mobilize different types of real-world evidence (Boltanski & Thévenot, 2006; Lafaye et al., 2000). According to Lafaye et al. (2000), "reality may be engaged in the proof of generalized justification in many ways – e.g. presented as a chart or table of statistics, embodied in a highly recognizable sign, or pointed to in terms of lived experience or displayed emotion." Stakeholders must provide proof that others would consider legitimate in order to persuade others that their positions are legitimate. However, the evidence that is considered legitimate varies based on the type of justification the stakeholder is using. For example, mobilizing expert opinion or scientific evidence would be congruent with justifications that are based on goals such as technical efficiency or productivity, while mobilizing testimonies of struggle as evidence would be congruent with justifications that are based on goals such as promoting solidarity and human rights (Lafaye et al., 2000).

Boltanski and Thévenot (2006) identify a variety of different forms of evidence that support judgement in particular types or modes of justification. Since stakeholders have diverse concerns and interests and social situations are complex, they often combine different modes of justification and, as a result, use different types of evidence to justify their claims. According to Boltanski and Thévenot (2006), these composite arrangements are oftentimes fragile and can also open arguments up to ongoing critique since multiple logics are in play. The diverse types of evidence that stakeholders use to prove their claims can become a major point of debate or contention across groups (Lafaye et al., 2000).

Differences in race, class, and position in society also impact stakeholders' ability to mobilize certain forms of evidence and, as a result, impact their ability to use certain types of justifications.

According to Bourdieu (1986, 1990), those who gain the most from the established order, a group Bourdieu refers to as the "dominant class," frequently engage in "officialization" strategies that transmute "egoistic, private, particular interests into disinterested, collective, publicly avowable, legitimate interests." In moments of crisis and contention, they work to maintain political power and authority by, "manipulat[ing] the collective definition of the situation so as to…mobilize the largest possible group by solemnizing and universalizing [it]" (Bourdieu, 1990:109). In other words, those who benefit from the established order defend existing conditions by extending their arguments to larger collectivities – a strategy that converts economic capital into symbolic capital. Groups that feel disconnected from the established order and marginalized within the larger population tend to extend their arguments to smaller groups, such as their family unit or their particular community.

Below, I discuss the rhetorical strategies that the agricultural health stakeholders, including farmworkers, advocates, agriculture representatives, and government bureaucrats, use in relation to pesticide use practices and health protection. After reviewing and unpacking the argumentation dynamics around pesticide intensive agriculture and health protection, I discuss the impact that these dynamics have on problem-solving efforts.

Methodology

This chapter draws on the analysis of interviews with agriculture representatives, farmworkers, government bureaucrats, and advocates, as well as observations at various venues. In-depth, qualitative interviews allowed me to explore the ways that diverse stakeholder groups interpret pesticide use and how they perceive their role in shaping decision-making around pesticide use. Observations at informational fairs, public hearings, government meetings, and community forums further revealed how stakeholders seek to influence decision-making in real-

time. Analyzing these data uncovered the various ways that groups justify their positions, practices, and goals, as well as the similarities and differences across rhetorical strategies.

Data Analysis

In addition to conducting line-by-line coding of interview transcripts and observational field notes, I focused on instances of breakdown, or "departures from expectation" (Agar, 1986; Feldman, 1995). During breakdowns, when stakeholders feel misunderstood or threatened, they begin justifying their beliefs, positions, and practices. Stakeholders used various rhetorical strategies to recover from breakdowns that threatened their influence over the outcomes of decision-making processes. I examine these rhetorical strategies; explore their similarities and differences; and discuss their impact on communication and problem-solving efforts. Data analysis consisted of several iterations between coding interview transcripts and field notes and reviewing critical discourse studies and convention theory literature. Through these iterations, I found that analytical tools drawn from convention theory were best suited for structuring the analysis of the rhetorical strategies that agricultural health stakeholders use to legitimize their claims.

Health Should Be Protected: Claiming Health is Protected or Not

Agricultural health stakeholders, including farmworkers, advocates, agriculture representatives, and government bureaucrats, articulate competing arguments regarding pesticide use practices and the pursuit of health protection. While all agricultural health stakeholders base some of their claims on the principle of protecting human health, some stakeholders argue that human health is being protected while others argue that it is not. In the debate about pesticide use practices and health protection agricultural health stakeholders argue about 1) whose health

should be protected; 2) what kind of work protects health; 3) how pesticide use impacts health; and 4) whether pesticide use practices should be reformed.

I found that stakeholders use different rhetorical strategies when debating these four questions – they connect to different models of the public good to justify their positions and use different forms of evidence to prove the authority of their justifications. Some examples of different types of evidence that stakeholders use include experiential evidence (or personal experience), evidence of insider status, and scientific evidence (e.g. measurements of productivity). For example, some stakeholders refer to the personal experience of farmworkers to argue that farmworkers and their children are suffering adverse health outcomes. Other stakeholders refer to measurements of agricultural productivity to argue that pesticides are critical to preventing famine.

The impact of conventional pesticide use practices on farmworkers, children, agricultural communities, and society at large has concerned many agricultural health stakeholders. For decades, growers have relied on pesticide use to protect their crop and increase yield and profitability. When defending their pesticide use practices, growers work to connect their interests to the principle of public health and to the well-being of large collectivities – e.g. by arguing that conventional agriculture has promoted a stable supply of nutritious food for the world. However, while growers argue that existing pesticide use practices support the world, other stakeholders mobilize principles of human rights and social justice to bring to light the disproportionate impact that current pesticide use has on the health of Latina/o immigrant communities.

In the sections that follow, I describe the rhetorical strategies stakeholders use to legitimize and delegitimize existing pesticide use practices. I also deconstruct the rhetorical

strategies that stakeholders with symbolic capital (i.e. agriculture representatives and government bureaucrats) use to legitimize the established order and maintain their political power and authority. By deconstructing their rhetorical strategies, I show how these stakeholders use their symbolic and cultural power (Bourdieu, 1986, 1990; Bourdieu & Passeron, 2000) to conceal realities (e.g. social and racial disparity) and disregard evidence (e.g. farmworker testimonies) that would undermine the authority of their public good claims. I highlight how existing inequalities, power relations, and dominant ideologies are hidden, disguised, and, thus, perpetuated through the discursive practices of agriculture representatives and government bureaucrats. Below, Table 3 displays some of the central arguments and rhetorical strategies that are used in the debate over pesticide use practices, and the invisibilities that the framing contest reinforces. Following the table, I provide descriptions of the rhetorical strategies and reinforced invisibilities.

Table 3.

	Whose health should be protected?	**How should health be protected?**	**What is the local health impact of pesticide use?**	**Should pesticide use practices be reformed?**
Delegitimation Arguments and Rhetorical Strategies	Farmworkers and advocates use the substantive model of the public good to argue that vulnerable groups, like farmworkers and children should be protected.	Farmworkers and advocates use the substantive model of the public good and mobilize experiential evidence to argue that recognizing human dignity protects health.	Farmworkers and advocates use experiential evidence and insider status to argue that local, marginalized communities are being harmed.	Farmworkers and advocates use the substantive model of the public good and some scientific evidence to argue that a well-founded suspicion of harm should trigger reform.
Legitimation Arguments and Rhetorical Strategies	Agriculture representatives and government bureaucrats use the substantive and constituency models of the public good to argue that they are protecting everyone.	Agriculture representatives and government bureaucrats use the substantive and constituency models of the public good to argue that they are protecting health by increasing productivity.	Agriculture representatives and government bureaucrats use experiential evidence, insider status, and scientific evidence to argue that they are keeping the local community safe.	Agriculture representatives and government bureaucrats use the constituency model of the public good and scientific evidence to argue for a minimal regulatory response.

(continued)

	Whose health should be protected?	How should health be protected?	What is the local health impact of pesticide use?	Should pesticide use practices be reformed?
Reinforced Invisibilities	Debate excludes experience of vulnerable groups (e.g. farmworkers)	Debate obscures implications for local communities	Debate disregards social and racial disparities	Debate conceals power and ideology

Arguments About Whose Health Should Be Protected

While all stakeholders argue that health should be protected, they make different arguments about whose health deserves to be protected.

Vulnerable Groups Should be Protected

Advocates combine the principle of health protection with the principle of human rights to argue that vulnerable groups, particularly farmworkers, have not been protected but deserve to be:

> "It is a human rights issue. That we are subjecting people…and if these were billionaires, quite frankly, whatever they have access to resources, let them take care of themselves. But on top of that we are talking about the most marginalized of people, who have no resources, it is a human rights issue" (interview with Director of CAUSE, Maricela Morales).

Advocates argue that farmworkers should be protected because they have been disproportionately burdened and discriminated against due to their race and socio-demographic status. Many farmworkers also draw on the universalistic principle of human rights to argue that they have not been treated well and deserve to be protected (see below in reference to pesticide reform arguments). As discussed in the introduction, farmworkers experience many vulnerabilities in the workplace. Dangerous labor conditions; fear of retaliation and deportation; and negative health outcomes result from farmworkers' racialized experience in the US.

All agricultural health stakeholders, from advocates to agriculture representatives, refer to children as a vulnerable group that should be protected. For example, in November 2016, at the public hearing on pesticide use around schools, a farmworker stated:

> "Agriculture is important for the economy…But the health of children is also important…I ask industry to please take heed…Protect the health of our children…Protect children with a 24/7, one-mile buffer zone around schools…We're not here to fight…We're here to protect our health" (farmworker, public hearing on pesticide use around schools).

The potential impact that intensive pesticide use has on children living in agriculture communities has been an ongoing subject of concern and debate in Ventura County. I found examples of all agricultural health stakeholders extending their claims to the principle of protecting children's health. While farmworkers and advocates argue that children in the community have been exposed to the pesticides used in agriculture and have suffered adverse effects, agriculture representatives and government bureaucrats argue that the children in the community are safe and have not been harmed by agricultural pesticide use.

We are Protecting Everyone

Agriculture representatives and government bureaucrats argue that it is important to protect everyone. They tend to use the constituency model of the public good – extending their claims to large groups of people. For example, during a Board of Supervisor meeting on the overuse of 1,3-Dichloropropene, one Department of Pesticide Regulation official argued:

> "Our main focus is protection of human health…it's everyone. It's janitors, it's daycare providers, everyone that is using chemistry, pesticides is what we are looking at and that means that we are looking at all of society" (public comment, DPR official, archive of BOS meeting on 1,3-D).

The official combined substantive models and constituency models of the public good. He mobilized the principle of protecting health and described how the department is responsible for protecting "all of society." As discussed in Chapter 2, pesticide regulators at the state and federal

level often expand conversations about agricultural uses to include public health uses. Pesticide regulators and cooperative extension staff claim that conventional pesticide use protects the health of large numbers of people and multiple groups, including county residents, consumers, modern society, or the world.

Excluding Experience of Vulnerable Groups

While farmworkers and their children are the most directly affected and disproportionately impacted by pesticide exposure, claims that mobilize larger collectivities are persuasive. Extending particular interests or concerns to a large group is a key rhetorical strategy that builds the sign-maker's symbolic capital and credibility. By highlighting the importance of protecting everyone, agriculture representatives and government bureaucrats deemphasize the health disparities that exist in society across race, class, and gender lines. While the argument that everyone should be protected rhetorically includes vulnerable groups, it tacitly excludes their experience. The exclusion of the experience of low-income, communities of color is disguised, either consciously or unconsciously, within the rhetoric of inclusion.

Arguments About How Health Should Be Protected

In addition to mobilizing different constituencies in need of protection, agricultural health stakeholders also highlight different ways to protect health.

Recognizing Human Dignity Protects Health

Farmworkers and advocates mobilize the principle of human rights and refer to evidence from farmworkers' personal experience to explain that farmworkers are being treated as disposable, cheap labor, rather than human beings with inherent rights. During an interview, Mateo and Melvin, two farmworkers who work harvesting strawberries, argued that in order to protect farmworkers, decision-makers must recognize farmworkers' humanity and the sacrifice

that farmworkers make for everyone else. They reflect on their experience in the following dialogue:

> Mateo: "When it's raining, windy, very hot, and everything, we are there working and everything, and we are the most poorly paid. We grow the fruit, lettuce, cabbage, everything that arrives at the markets. The food that arrives at the table of the whole world. It is what they must see, the sacrifice that we make. They pay us very little, the most poorly paid. Look at the sacrifice that we are making to produce all the food that arrives at the store and after the stores, it arrives at the tables of families.
>
> Melvin: Of every person. Of every family.
>
> Kaitlyn: They just buy their fruit and they don't know where it comes from.
>
> Melvin: No. The effort to cut it, to pick it, and poorly paid as he says, poorly paid. The thing is…It is not okay. For that, they need to support the farmworker, us, the worker.
>
> Mateo: It's the same. Here in an office, you will not see. The air doesn't hit you. The water doesn't hit you. They need someone who is interested in helping the farmworker, to leave and to watch, how they are working there, that poor man with the mud up to here, lifting our feet like this and everything (simulating walking through mud)
>
> Melvin: Endure for 12 hours and they still say it's little *laughs* Endure 12 hours and everything, the situation is more difficult" (interview with farmworkers).

Farmworkers claim that decision-makers need to see firsthand how farmworkers work so they can realize their human experience and respect their sacrifice. Similarly, a community organizer with CAUSE argued that if growers were to recognize that farmworkers are human beings, they would be more concerned with farmworker health:

> "Not once did I hear [farmers] concerned about the health about their workers…It would be different if they recognize that human factor in their workers but they sometimes don't…The more of them [who] start realizing that they are working with human beings [who] make their ends meet, [who] pay their bills…the better the workers would be (interview with Raul, community organizer with CAUSE).

Advocates draw on the principle of human rights to argue that farmworkers would be better protected if their humanity was highlighted rather than hidden. Advocates also highlight farmworkers' humanity by referring to farmworker stories.

We Protect Health by Increasing Productivity

Agriculture representatives and government bureaucrats, who argue that everyone's health should be protected, also argue that existing pesticide use practices are instrumental in protecting everyone's health. Their argument relies on two dominant discourses 1) that intensive pesticide use is necessary to achieve productivity in agriculture, and 2) that increasing agricultural productivity is essential to feed the world. During the meeting regarding the overuse of 1,3-D, a trade association representative argued: "We see that this fear and emotion puts our *food supply* at risk. That is what DPR said and also, they said that *hunger is not nice*" (BOS meeting on 1,3-D, COLAB rep). Given the meeting's focus on intensive pesticide use around schools, the trade association representative is implying that intensive pesticide use is necessary for stable food supply. This argument trades off the specific and local marginalized communities, i.e. farmworkers, for the abstract marginalized, i.e. the "hungry." The argument is also based on substantive and constituency models of the public good. The agriculture representative's claims extended particular interests to universalistic principles of (e.g. feeding the hungry) and larger collectivities (e.g. everyone who eats produce). Mobilizing more general and abstract arguments about the worth of existing pesticide uses reinforces dominant discourses about pesticides' role in agriculture productivity and bolsters the idea that increasing productivity is important for protecting health.

Obscuring Implications for Local Communities

While farmworkers and advocates highlight farmworkers' humanity in order to convince decision-makers to enact change and protect farmworkers, agriculture representatives present their actions as selfless and disinterested in order to defend the established order. Focusing on the well-being of the masses obscures the implication of the established order for local communities – the implication being that farmworker communities are treated as a means to an end rather than as human beings with equal rights. Arguing that increasing productivity is necessary to feed the world also obscures the fact that current agricultural production has failed to prevent hunger – a reality we can see if we focus on food access in local communities.

Some advocates have focused on deconstructing the argument that growers feed the world. One advocate, for example, explained that feeding everyone would require redistribution of food and land, not increased production, or intensive pesticide use:

> "Big Ag always says *'to feed the world*' right?...Well *they don't even feed Salinas,* I mean there are a lot of people who don't get basic nutritional needs met because it's not a problem of production, it's a problem of distribution…Big Ag still wants to sell this view that we're going to have to make much more food in California to feed the world when that's not really what's happening now" (interview with Director of CPR, Mark Weller).

Focusing on productivity ignores distribution problems that perpetuate disparities in the allocation of food supplies – disparities that make it more difficult for low-income, communities of color, including farmworker communities, in cities like Salinas or Oxnard to access food.

Arguments About the Local Health Impact of Pesticide Use

Agricultural health stakeholders mobilize different types of evidence when debating about the positive and negative consequences of pesticide use on health.

Marginalized Communities are Being Harmed

Farmworkers often present their testimonies – stories of personal hardships – to argue that pesticides negatively affect their health. They refer to the symptoms and illnesses that they

have experienced and continue to experience when they encounter pesticides at work. Farmworkers gave testimonies in numerous venues. They shared their experiences of pesticide exposure with regulators, growers, and advocates at public hearings; with regulators at informational fairs; with advocates during home visits and neighborhood meetings; with each other in everyday conversation; and with me during interviews. Advocates, who have heard numerous farmworker testimonies, also present farmworkers testimonies as evidence of pesticide harm.

Karina (pseudonym), a farmworker who was working as a strawberry harvester at the time of our interview, argued that when pesticide operators spray pesticides near the fields where she works, "my stomach gets upset" (interview with farmworker). Karina argued that the pesticides were harmful for her health because, "If they didn't cause harm, we wouldn't smell them…I think with time working around pesticides does harm us…When they are spraying, [even if it's far away] my lips go numb and I feel sick to my stomach" (interview with farmworker). Jose (pseudonym), a strawberry harvester who had been working in US agriculture for eight years at the time of the interview, also described feeling pesticide related symptoms whenever pesticides were applied in the fields while he worked:

> "When they spray, apply the spray, your head hurts and you feel this smell. Then you feel the smell and really bad. You start to get a headache, you start to get dizzy, the earth begins to move. You inhale a lot and your throat starts to get a weird taste, a sort of weird smell, and like you feel sort of …Your eyes get red. When your skin peels, you feel like something burning, you feel something, you scratch…When they spray, like I said, the chemical stays here [motions to face] and then the powders…In fact, yesterday I was scratching like that. Because, yeah, it was a little bad'" (interview with farmworker).

Sometimes farmworkers discussed pesticide related injuries that resulted in chronic pain and hospital room visits as well. For example, Ashley (pseudonym), a harvester who has experience picking a variety of different crops, explained that when her husband was picking strawberries,

> "All of a sudden, he started vomiting a lot, he got dizzy, his head started hurting…It got so bad he had to go to the emergency room…He went to the hospital because…his hand became so stiff and he started vomiting pure yellow, like yellow foam" (interview with farmworker).

Similarly, a former ponchadora named Barbara described how she became acutely ill while picking strawberries:

> "My face went completely red and everything. I couldn't breathe. I left my box of strawberries and ran to the ponchadora and she asked me, 'what is happening to you?' [I said], 'I don't know. I feel like I'm short of breath, like I am getting dizzy, my head feels really heavy.' She called for the foreman, the man was named [Carlos] (pseudonym), '[Carlos],' she said, 'Barbara is very red. I don't know what is happening to her. I don't know if it is because of the spray'" (interview with farmworker).

Farmworkers also present their testimonies as evidence that their children have been exposed to pesticides used in agriculture and suffered adverse effects. On November 15, 2016, several mothers described these effects at the public hearing the Department of Pesticide Regulation held regarding proposed regulations that would restrict pesticide use around schools.

Farmworker testimonies are undoubtedly powerful examples of farmworkers' experience and pesticide effects. Firsthand and witness accounts seem like they should be very convincing in the debate about pesticide impacts. However, experiential evidence has structural weaknesses. Without medical diagnosis, it is difficult for farmworkers to prove that their symptoms were caused by pesticides. Even with evidence that a farmworker was harmed by a particular pesticide, the experience of one farmworker cannot be generalized to the rest of the farmworker population. Chronic and delayed-onset diseases, such as down syndrome, asthma, or cancer, are even more difficult to link to pesticide exposure because there are many other potential causes. Farmworkers and their children are exposed to many different environmental hazards and toxins in their communities that could negatively impact their health.

With these weaknesses in mind, it is important to recognize that farmworkers are not the only group to present experiential evidence when making claims about the impact of pesticide use. As I discuss below, agriculture representatives and government bureaucrats refer to their personal experience and insider status as evidence to support the argument that they are protecting the community from pesticide related harm.

We are Keeping the Local Community Safe

Government bureaucrats and agriculture representatives mobilize insider status and scientific data (or lack thereof) to argue that they are protecting the local community from pesticide related harm. In the public debate about pesticide use around schools, growers provided evidence of insider status by explaining that their own children live near the agricultural fields:

> "I am a third-generation strawberry farmer…My family lives near the farm, my family plays near farms. I played near the farm as a child…We work proactively with the schools" (public comment at hearing on pesticide use near schools).

> "Good afternoon. Thank you Chairwoman Long and fellow board members. My name is […] and I'm a third-generation farmer of the ag land behind […school]. I also live on this ranch with my thirteen-year-old daughter and six-year-old son" (BOS meeting on 1,3-D, strawberry grower).

By referring to his children living and playing near the farm, this grower implies that he has a personal stake in ensuring children are protected from pesticide use. In other words, he argued he would not do anything to harm the vulnerable members of his own family. This strategy is effective in developing the grower's credibility because he has direct influence over pesticide use practices on his farm. A trade association staff member also argued that growers care about protecting the community from the dangers of pesticide exposure because they are part of the community:

> "The farming community is very sensitive to these issues as you've heard by the other speakers. They care deeply about the safety of the community and their own

> health and the health of their families are at stake here." (public comment, trade association rep, archive of BOS meeting on 1,3-D).

I found examples of both agriculture representatives and government bureaucrats reminding the audience that they are part of the community and that their health and the health of their families is at stake. Through this argument they portrayed themselves as caring and protective; and they portrayed the county as safe.

In addition to mobilizing insider status, government bureaucrats and growers also refer to scientific data (or lack thereof) as evidence to argue that they are protecting the local community. For example, during the meeting on 1,3-D applications around Rio Mesa High School, a Department of Pesticide Regulation special advisor used air monitoring averages to argue that the students were protected even during the years when air concentrations of 1,3-D surpassed screening levels:

> DPR special advisor: We have been monitoring there since October 2011 and continue through present. We have results through December 2014 which is shown on the table there. Again, none of the air concentrations now exceed our screening levels or our regulatory target. [advances slide]
>
> Supervisor Bennett: Wow! Could you go back please?...So, you say, now the average over 39 months is .14 [DPR Advisor: Yes.] But the average was higher than that.
>
> DPR Advisor: For the first three years? Yes…as we get more monitoring data, we continue to revise our overall average" (archive of BOS meeting on 1,3-D).

During this meeting, one Department of Pesticide Regulation official stated that, "the kids were safe." As discussed below, agriculture representatives refer to lack of evidence of harm as lack of harm to argue for a minimal regulatory response.

Disregarding Social and Racial Disparities

By framing themselves as insiders with similar concerns and experiences as farmworkers, agriculture representatives and government bureaucrats obscure social and racial disparities that

produce very different lived experiences for farmworkers. While growers argue that their children, who live near farms, are not harmed by pesticide use, farmworkers argue that their children, who may or may not live near a farm, are being harmed by pesticide use. How can this be? As mentioned above experiential evidence reveals the experience of an individual while leaving the experiences of others hidden. By portraying the experience of their families as being representative of the wider community, growers disregard how their experiences are different from others' experiences. In particular, this argument disregards disparities in lived experience and level of pesticide exposure that are related to class, race, and position in the farm labor hierarchy.

Growers mobilize a faulty comparison between their own concerns and the concerns of farmworkers. This comparison portrays growers' experience as somehow similar to farmworkers experience and, in so doing, makes their differences invisible. For example, the comparison ignores the fact that growers are in control of and aware of what pesticides will be applied to the land and when they will be applied, while farmworkers are not. Additionally, this argument disregards the reality that, unlike farmworkers, growers do not conduct manual labor that would put them in contact with plants and soil that have been treated with pesticides for long periods of time. Furthermore, the argument does not consider how many farmworkers share a home or apartment with multiple families, including other farmworkers; and how they often do not have their own washing machine, laundry, or separate entrance to avoid tracking pesticides into their home where their children can be exposed. With greater income, growers also have more freedom than farmworkers do to choose which schools their children attend and what medical treatment their families receive. Comparing their experience to farmworkers hides the fact that farmworkers' choices are much more constrained. Another important difference that the

comparison ignores is that farmworkers often feel pressured to work in pesticide treated fields while they are pregnant, which can cause serious harm to their children's prenatal development.

In the next section, I also discuss how referring to scientific data and mobilizing scientific abstractions, another strategy that agriculture representatives and government bureaucrats use to argue that the community is safe, aids in obscuring structural racism, oppression, and dominant ideologies.

Arguments About Whether Pesticide Use Should Be Reformed

Agricultural health stakeholders use different rhetorical strategies to support their position on whether pesticide use practices should change.

Well-Founded Suspicion of Harm Should Trigger Reform

Advocates and farmworkers, who mobilize the principle of human rights when arguing for pesticide reform, argue that slow, methodical accumulation of scientific evidence should not be a prerequisite for action. Rather, they feel that a well-founded suspicion of harm, particularly disparate harm along class and race lines, based on some scientific evidence is sufficient. In other words, advocates and farmworkers adhere to the precautionary approach to risk management which holds that potential for harm, rather than incontrovertible proof of harm, should trigger reform. For example, during an interview, the Director of CAUSE, Maricela Morales stated:

> "These are moms in their twenties, having special needs children, having birth defects…Why? Exposure to pesticides maybe? Right? I mean there have been studies…There are enough research studies that having high levels of pesticides while pregnant affects the child" (interview with Director of CAUSE, Maricela Morales).

Stakeholders, including a UFW union organizer and one public official, argued that the accumulation of scientific data over time was equivalent to treating farmworkers "like canaries in the mine." This metaphor refers to times when coal miners would carry canaries. If the canary

died, that would give them advanced warning that methane and carbon monoxide levels had reached levels that were hazardous to humans. One local public official argued that waiting to slowly gather evidence on health impacts disproportionately impacts traditionally underserved groups and treats those groups as though they are not worth protecting, as though they are canaries in the mine:

> "Yes, there is a lack of information. Like so many things it's usually people that are considered minorities or people of low socioeconomic status that are exposed to dangerous substances. Whole populations become canaries in the mine. One argument is always that there is no evidence that the substance is harmful. But the other argument is that things take time to develop. In essence, disposable people are those we experiment on. The other approach is that we need to protect people and not treat them as incubators" (interview with one public official).

This public official mobilized substantive models of the public good, basing his claims on the universalistic principles of protecting vulnerable groups and promoting social and racial justice. The "whole populations" that he refers to as being "treated like canaries in the mine" are poor, non-whites. As discussed in the introduction, being treated like 'disposable' people is part of Mexicans' racialized experience. One organic pest control advisor acknowledged racial disparities during the public hearing on pesticide use near school when he stated, "When brown lives matter, all lives matter" (organic PCA, public hearing on pesticide use near schools). This adage combines substantive and constituency models of the public good. It succinctly criticizes models of the public good that disregard disparities along racial lines. This comment upset some of the agriculture representatives in the audience, one of whom muttered "no can do" under her breath and left the room in response.

Scientific Evidence Supports Minimal Regulatory Response

Agriculture representatives and government bureaucrats often argue that pesticide reform decisions need to be based on scientific evidence and risk management – i.e. the analysis of the costs and benefits of pesticide reform. These stakeholders tend to adopt a reactive, rather than a

precautionary, risk management approach which requires evidence of harm to precede pesticide reform. During interviews, government meetings, and public hearings, agriculture representatives and government bureaucrats consistently diminished the benefits of pesticide reform, e.g. by highlighting scientific uncertainty and lack of evidence of harm, and consistently highlighted the costs of pesticide use, e.g. by arguing that additional pesticide restrictions could put food production at risk.

For example, during the Board of Supervisors meeting regarding 1,3-D, pesticide regulators with the Department of Pesticide Regulation used charts, air monitoring measurements, photos from experiments, and target concentrations as evidence that the community is not being harmed by pesticide use in agriculture and that pesticide use has a positive impact on agricultural production. In so doing, they justified their minimal response to the overuse of 1,3-D near Rio Mesa Highschool. For example, during the Board of Supervisors meeting regarding elevated air concentrations of 1,3-D near Rio Mesa High School, the Department of Pesticide Regulation's special advisor projected a photo of an experimental strawberry field on the right-hand wall of the hearing room and stated:

Figure 2: BOS meeting archive, screen shot

> "The photo there shows an experimental field actually where in the background there is one of the treatment plots and in the foreground is a control plot. The area of a strawberry field that has not been fumigated and, as you see, it doesn't look very good. This is due to verticillium, a disease common in strawberries if you do not fumigate " (presentation, DPR special advisor, archive of BOS meeting on 1,3-D).

Visual evidence has a fact-like character that makes it particularly effective at supporting the special advisors' claims. The visual bolstered the dominant belief that pesticide use is critical for food production. The special advisor did not present visuals to support his other claims – such as the claim that the high volatility of fumigants increases their potential to drift from the application site. The selective use of visuals was a choice, either conscious or unconscious, that reflected the special advisor's positioning and interests when he designed the presentation. The way he mobilized air monitoring data also reflected his interests. When pressed to use air monitoring data to justify regulatory action, he portrayed the data as uncertain:

> "Well…these are target concentrations; they are not bright lines. And so, if we exceed .14 it doesn't automatically determine that it's unsafe…There's uncertainty and assumptions in all of the work that's being done here. And all of the screening levels and regulatory targets are based on toxicology studies done on animals" (archive of BOS meeting, special advisor)

As discussed in the previous section, he presented the same scientific data as certain when used to argue that the community is safe. This illustrates that scientific data can be presented in different ways in order to support the sign-maker's truth claims.

Concealing Power Relations and Dominant Ideologies

Legal requirements, standards, norms, and expectations reflect the assumption that scientific risk assessment and risk management are appropriate tools to predict and manage risks that may arise from exposure to chemicals (Thornton, 2003). However, there are fundamental issues with this assumption since the uncertainty present in risk assessment is high and the research needed to lower scientific uncertainty is time-consuming and expensive (Hill & Sendashonga, 2003). Assessments are often inadequate for testing low dose effects, for testing combined effects of various hazards (such as exposure to several different chemicals at the same time), and for understanding how receptors and hormones will react to exposure given the complexity and diversity of the human body (Thornton, 2003).

The difficulties associated with chemical testing illustrate the unrealistic demands that are made upon science to characterize the risks of pesticide exposure and to quantify the benefits of proposed changes in pesticide use practice (Ackerman, 2008; Li, 2015; Thornton, 2003). While it is impossible to put a price on the most important benefits of pesticide reform initiatives, the costs of these initiatives tend to be overestimated and the "obscurely technical process" of risk management "can easily conceal a partisan agenda" (Ackerman, 2008). The way claim-makers' ideology and interests shape their interpretation of the data is buried under seemingly neutral academic language and visuals. Scientific abstraction disguises power by making dominant ideas appear objective – e.g. the idea that conventional agriculture is the most productive food production system; the idea that pesticides are controllable; and the idea that pesticide risk is manageable and quantifiable.

As discussed above, advocates also denounce the reactive risk management approach to pesticide research and regulation as inhumane and racially oppressive. The reactive risk management approach requires evidence of harm before action can be taken to mitigate harm. This approach often results in pesticide use practices continuing unchanged until the scientific knowledge about particular pesticide risks have become irrefutable. Delaying regulatory action until more scientific data has been collected benefits the established order and prolongs the harm that low-income, Latina/o communities endure. The alternative risk management principle that advocates and farmworkers mobilize is the precautionary principle. The precautionary principle "promotes the attempt to prevent not only *proven* but also *potential* hazards and encourages the adoption of sustainable alternatives" (Harrison, 2011). The precautionary approach to risk management focuses on preventing harm before it occurs.

Impact of Argumentation Dynamics on Problem-Solving Efforts

As discussed in Chapter 2, the diverse positionalities among agricultural health stakeholders shapes the claims they make. At the same time, the current chapter reveals that the rhetorical strategies stakeholders use – e.g. making universalized and abstract claims – reproduces injustices and power relations by excluding the experience of vulnerable groups; obscuring implications for local communities; disregarding social and racial disparities; and concealing power relations and dominant ideologies.

Agricultural health stakeholder's claims vary in their level of generalization. Some claims are based on firsthand accounts of pesticide related health effects, like vomiting, trouble breathing, and rashes, while other claims are based on potential health outcomes for society at large, like avoiding the spread of disease. Some claims are based on testimonies that reveal incidents of retaliation, like being fired for speaking up, while others are based on universalistic principles, like feeding the world. As claims about protecting human health become more generalized, they move further and further away from the lived experiences of marginalized groups in society. When agriculture representatives and government bureaucrats defend existing conditions by extending their arguments to the largest possible group, they often discount or overlook groups who are harmed by existing conditions.

Agriculture representatives and government bureaucrats are able to generalize their claims more effectively than advocates or farmworkers because they can connect their claims to ideas that have become taken-for-granted and to large collectives who are believed to benefit from the status quo. For example, they connect their claims to the dominant idea that pesticides are necessary to achieve productivity in agriculture and that increasing agricultural productivity is necessary to ensure a stable food supply. It is easier for stakeholders to connect their interests

to established practices and taken-for-granted conventions when they benefit from the established order. It is more difficult to draw from convention when advocating for groups who are marginalized by the established order and seeking to delegitimize the status quo.

Disparities in stakeholders' access to resources impacts their ability to effectively employ some rhetorical strategies in debate. For example, some advocates and most farmworkers lack access to the academic capital necessary to engage with the scientific domain of justification. According to Bourdieu and Passeron (2000), individuals who lack economic capital are unable to transform economic capital into symbolic capital through academic qualifications. Additionally, even though farmworkers and agriculture representatives often make similar claims (e.g. about feeding the world, insider status, or personal experience) those claims do not have the same effect due to differences in class, race, and position in the farm labor hierarchy. For example, since growers have control over pesticide use, when they mobilize experiential evidence and insider status, they portray themselves as sensitive to the issues and protective of the community surrounding their farms. When farmworkers, who do not control farming practices, engage with growers' preferred mode of justification – highlighting their role in putting food on everyone's table – they succeed in portraying themselves as selfless, but they do not extend their interests to large collectivities like growers do.

Framing processes create pressure to argue in ways that universalize claims and extend arguments to more general, abstract audiences, principles, and types of evidence (Boltanski & Thévenot, 2006; Moody & Thévenot, 2000). Stakeholders focus on universalizing their claims in order to gain symbolic capital in the eyes of a broad audience (Bourdieu, 1990; Bourdieu & Passeron, 2000). However, this produces problem definitions that systematically leave out and suppress what other groups have said.

Definitions that are abstract and generalized do not lend well to producing real-world solutions that multiple stakeholders can support. Advocates who base their claims on substantive models of the public good focus on social and racial justice but still argue in abstract terms. They rarely reference specific solutions or projects that could be implemented to begin addressing pesticide related harm. The effort to universalize claims also impedes problem-solving efforts because the implications for local communities are undervalued. If you do not consider what is happening to people in real-world circumstances, it is impossible to understand the problem and explore the specific ways that individuals can begin to cope with the problem on-the-ground.

CHAPTER 4

COPRODUCING A "MIRACLE":

POSSIBILITIES AND LIMITATIONS OF COLLABORATION

Many scholars and practitioners have argued that collaboration between actors with disparate views and experiences can spur the development of new solutions to wicked and complex policy problems, such as environmental degradation, pollution, poor labor conditions, and food insecurity (Bueren et al., 2003; Carcasson, 2016; Crosby et al., 2017; Hartley et al., 2013; B. Head & Alford, 2015; Kallis et al., 2009; Roberts, 2004; Sørensen & Torfing, 2017; Termeer et al., 2015; Young et al., 2012). Government alone cannot produce coordinated solutions to these problems – collaboration among interdependent groups is necessary to leverage multiple perspectives and create joint ownership of new ideas (Bryson et al., 2015; Crosby et al., 2017). Scholars point to cases where collaboration among diverse actors led to new ideas and interventions to tackle societal problems, such as new climate change mitigation policies and labor-market policies (Sørensen & Torfing, 2012); resource management initiatives and partnerships (Foster, 2002; Kallis et al., 2009; Wondolleck & Yaffee, 2012); and ecological restoration efforts (Gosnell & Kelly, 2010). In addition to generating innovative strategies and agreements, working together and engaging in meaningful dialogue has increased trust among participants; led to joint learning and changes in perception; created new norms for solving problems; and increased multi-stakeholder commitment to shared solutions (Bryson et al., 2015; Innes & Booher, 2004).

While there are many benefits of collaboration and evidence that diverse groups need to work together to tackle complex problems, research also indicates that collaboration is challenging (Abelson et al., 2003; Bracht & Tsouros, 1990; Bryson et al., 2015; Bueren et al.,

2003; Crosby et al., 2017). In the absence of the appropriate conditions for success, good intentions can produce unanticipated consequences (Abelson et al., 2003; Foster, 2002; Kallis et al., 2009; Sørensen & Torfing, 2012, 2017). For example, conventional decision-making models and public participation methods in the United States, such as review and comment procedures and public hearings, can deepen mistrust, anger, and polarization across stakeholder groups (Carcasson, 2016; Feldman & Khademian, 2000; Frame, 2008; Hartley et al., 2013; B. Head & Alford, 2015; Innes & Booher, 2004; McCall & Burge, 2016; Ney & Verweij, 2015; Termeer et al., 2015). It is difficult, if not impossible, for decision-makers to incorporate actors' needs, interests, concerns, and values into decisions when government actors maintain control over defining the problem and desired outcomes, designing the decision-making process, and selecting the solution (Arnstein, 1969; Feldman & Khademian, 2000; Innes & Booher, 2004; Nabatchi et al., 2015). When participation is treated as one step in a process designed to achieve predefined goals, the cross-pollination of problem frames, ideas, resources, and knowledge will not occur; and relevant stakeholders outside of government will likely be dissatisfied with the process.

One of the central reasons why it can be difficult to engage in joint action is because conflicts and tensions between relevant stakeholder groups are likely to be present (Bryson et al., 2015). Tensions between groups often involve diverse priorities, languages, convictions, beliefs, values, and concerns. These differences can cause stakeholders to disagree about what counts as a problem and what solutions or actions are legitimate (Bueren et al., 2003; Crosby et al., 2017; Head & Alford, 2015; Koppenjan & Klijn, 2004; Termeer et al., 2015; Weber & Khademian, 2008). While conflict between groups with different positions and experiences can push participants to "revise their beliefs and practices and integrate old and new ideas into innovative

solutions," conflict can also cause collaborations to backfire or to disintegrate (Crosby et al., 2017). Strong facilitative leadership; internal and external legitimacy; and effective conflict management practices are necessary to overcome obstacles (Bryson et al., 2015; Crosby et al., 2017).

Efforts to improve farmworker labor conditions in Ventura County, including the efforts to promote pesticide reform, have sparked conflict and tension among agriculture representatives, advocates, farmworkers, and government bureaucrats. In previous chapters, I discuss the impact that stakeholder groups' responsibilities, values, goals, and means of socialization have on the claims that they make about conventional farming practices. I found that stakeholder groups' distinct positionalities produce contradictory claims and that the rhetorical strategies stakeholders use in public debate often fail to reconcile or resolve contradictions.

As public problems have become increasingly divisive and diverse stakeholders demand access to decision-making processes, improving deliberative processes has become more vital to problem-solving efforts (Bryson et al., 2015; Bueren et al., 2003; Feldman & Khademian, 2000; Innes & Booher, 2004). Scholars have found that inclusive practices, in particular, help bridge differences across diverse groups by making it possible for deliberative conversations to produce innovative ways of acting and thinking (Bryson et al., 2015; Feldman & Quick, 2009; Quick & Feldman, 2011). To tap into the diverse knowledges of stakeholder groups, develop innovative ideas, and increase the legitimacy of decisions, public engagement needs to be coordinated in a way that includes stakeholders in designing the process and defining the desired results (Feldman & Khademian, 2000). Inclusive governance breaks from the idea that the public sector is the only

provider of public service and mobilizes individuals from multiple sectors as co-learners and co-creators.

According to Quick and Feldman (2011), "inclusion practices entail continuously creating a community involved in co-producing processes, policies, and programs for defining and addressing public issues." Creating opportunities for stakeholders to jointly produce the content and process of problem-solving through authentic communication and dialogue can enhance decisions by facilitating connections between diverse individuals, resources, experiences, ideas, and issue streams (Carcasson, 2016; Innes & Booher, 2004; Nabatchi et al., 2015; Quick & Feldman, 2011; Torfing et al., 2019). For these reasons, scholars and practitioners have introduced coproduction as a viable option for the public sector (Torfing et al., 2019).

Public engagement research has examined the objectives, conditions, and outcomes of coproduction (Torfing et al., 2019; Voorberg et al., 2015). This research has not focused on the rhetorical strategies stakeholders use to make claims and how their rhetorical strategies impact the coproduction of problems. Scholars explain that a central component in coproducing problems and solutions is authentic dialogue across participants with diverse views, which "relies on persuasion to induce participant's reflection on and altering of views" (Abelson et al., 2003). I contribute to this literature by exploring how stakeholders make claims and how those claims shape dialogue between polarized groups. To examine this process, I trace the work of a grower-advocate partnership that jointly defined problems and solutions to improve farmworker labor conditions in Ventura County. The growers and advocates in this group had distinct positions, frames of reference, and logics of action. I examine how their diverse positions and claims impacted the way they coproduced problems and shaped the outcomes of coproduction. I

draw lessons from this case and suggest ways that stakeholders can organize their problem-solving efforts when coping with complex, wicked problems.

Methodology

I draw on ethnographic data that traces the collaborative efforts of a group consisting of three growers and four advocates called the Miracle Group. Since nearly the beginning of this group's initiation, I have been welcomed as a guest to conduct participant and non-participant observations of the members' regular meetings and continue to be invited to their meetings at the time of this writing. I observed 15 of the group's meetings over the course of my fieldwork, including 12 of their regular collaborative group meetings, one meeting that the growers held with growers and field supervisors to pitch a frontline leadership program, one meeting that the advocates held with farmworkers to better understanding their concerns and priorities, and one County Board of Supervisor Meeting where the group jointly supported a new program from farmworkers. I also observed the members of the group outside of the context of this collaboration – at fundraisers, advisory committee meetings, outreach events, parties, rallies, and public hearings. During and after meetings, I took notes on the members' practices, conversations, and verbal, as well as non-verbal, interactions. After the Board of Supervisor Meeting, I also transcribed the video archive verbatim.

In addition to conducting ethnographic observations, I conducted interviews and collected archival materials. I conducted formal interviews with three of the advocates; and informal, conversational interviews with the three growers and one of their consultants. I collected various archival materials, including group email communications, meeting agendas and notes, policy proposal drafts, secondary sources shared between members of the group, and news articles. I collected multiple sources of evidence in order to improve the validity of

my findings (Hesse-Biber & Leavy, 2011; Jick, 2012; Yin, 2009). By engaging closely with this group over time, I am now able to effectively interpret and analyze the possibilities and limitations of these polarized stakeholders working together to develop policy.

Data Analysis

I took an inductive approach to data analysis. I began by reading all the data related to the Miracle Group deliberations, including field notes, archives, and interviews. Next, I compiled the data from deliberations around the hotline proposal, the pregnancy leave proposal, and the Integrated Pest Management position; and examined the claims that the different growers and advocates made. I coded the data for instances of rhetorical strategy – instances when stakeholders said something to persuade each other and push the agenda forward. I drew on convention theory to analyze the diverse rhetorical strategies that stakeholders used – see Chapter 3 for discussion of convention theory and rhetorical strategies. When the group members' rhetorical strategies did not fit the categories identified in the literature, I wrote memos about how the participants' claims could be characterized rhetorically. I also wrote memos about how the claims were brought into relation with each other and into relation with particular issues overtime. After coding the data and writing memos, I created a timeline for each issue to trace the use of rhetorical strategies and to document how claims changed as the members reached different points in the deliberation. Finally, I wrote thick descriptions of the coproduction process, focusing on how the growers and advocates' rhetorical strategies interacted and evolved over time. Below, I introduce the background of the Miracle Group collaboration; then I present the descriptions of the coproduction processes for the three proposals; and lastly, I discuss the impact that rhetorical strategies and claim-making have on the coproduction of problems and solutions.

The Case

Origins

In the summer of 2015, the Central Coast Alliance United for a Sustainable Economy (CAUSE) conducted a survey of almost six-hundred farmworkers in Ventura County. The farmworkers told stories of pesticide illness, wage theft, extreme overwork, health concerns, and a culture of fear. In 2016, based on the findings from their 2015 survey, CAUSE created a Ventura County Farmworker Bill of Rights that outlined policy recommendations to address labor issues. CAUSE mobilized allies, including farmworkers, local farmworker advocacy groups, and a few sustainable growers, to bring attention to the Farmworker Bill of Rights. CAUSE and their allies held a press conference to report on their findings and to pressure growers to sign on in support of the recommended policies. The grower community was infuriated with the negative attention that the press conference spurred. The tension and resentment between growers and advocates extend beyond negative media attention, however. These stakeholders have engaged in polarized debates regarding the consequences of conventional farming practices for decades. The media attention deepened these existing divisions between growers and advocates. Conventional growers reported being aggravated by the lack of support that they receive locally and the ever-increasing threat of costly regulatory burdens.

While most growers responded to the Farmworker Bill of Rights and the negative press that it attracted with resentment, several growers responded to the criticism by initiating collaborative meetings with two of the most vocal and organized community groups, CAUSE and the Mixteco Indigena Community Organizing Project (MICOP). The Miracle Group began meeting for the first-time during May 2016. At first, meetings were held in secret at the Ventura

County Farm Bureau office. According to the CEO of the Farm Bureau, these discussions were initiated by a multinational corporation with agricultural operations in Ventura County "out of concern about the increasingly vituperative tone of attacks leveled against the agricultural community by advocacy groups over the past two years, and by frustration over the fundamental misunderstanding and frequent misrepresentation of industry practices often embodied in those allegations" (Krist, 2017)

Working Together

The advocates and growers in the Miracle Group had strong incentives for working together. Growers were motivated by the prospect of shifting away from the confrontational and adversarial dynamic with advocates that resulted in negative media exposure for agricultural businesses. For growers, building trust and engaging in constructive dialogue with advocates created the opportunity to address labor concerns through collaboration rather than litigation. County Supervisors also strongly encouraged advocates and growers to work together around farmworker labor issues, rather than oppose each other. Advocates from CAUSE and MICOP responded to this encouragement by embracing the process of finding common ground and developing mutually satisfactory agreements with receptive growers. They were motivated by the opportunity to produce policy proposals that had significant support from agriculture – a prerequisite for gaining the sponsorship of County Supervisors.

Over time, the Miracle Group members developed an appreciation for their differences. They aimed to leverage their diverse knowledges, resources, and experiences to produce proposals that could respond to the demands of growers and farmworkers. The members also built strong working relationships and trust by sitting side by side; treating each other with empathy and sensitivity; and taking the time to get to know each other personally. These

practices and outlooks were enhanced through the leadership of a professional facilitator who the growers hired. The facilitator walked the group through the collaborative process, helped them cope with tensions as they arose, and boosted morale when agreement seemed implausible.

The facilitator did not have a predefined agenda. Rather, she encouraged the members to jointly create the goals and vision of the collaboration; and jointly produce the issues and solutions they felt were important to pursue together. The coproduction of problems and solutions occurred through ongoing brainstorming and fact-finding sessions, as well as through consultations with constituents and experts. The group maintained temporal openness throughout this process. Even when the group was focusing on pushing through a particular proposal, they always dedicated time during each meeting to discuss new problems they had not brought up before, old problems that had fallen off their radar, or promising interventions they could focus on in the future.

The group discussed various issues and solutions related to wage theft, lack of safety and health inspections, pesticide exposure, language barriers, sexual assault, farmworker housing, lack of resources, and more. Early on in their collaboration the growers and advocates' interests aligned around particular proposals, such as a local ombudsman and bathroom inspections. The local ombudsman proposal, which was eventually named the Farmworker Resource Program (FWRP), aimed to help farmworkers navigate available resources and report grievances about any labor issue to appropriate government agencies. This proposal received the bulk of their attention during the first year of the partnership. The group conducted outreach around the proposal and sought the input of their peers and constituents. Eventually, they reached consensus and jointly recommended the proposal to the County Supervisors. The group was able to reflect

on this as a win and felt comfortable continuing their dialogue about other issues with renewed energy.

Other issues were more difficult for the group to find consensus around. For example, while both groups agreed that pesticide exposure during pregnancy is a serious issue, it was difficult for the group to coproduce the problem and solution. It took two years for the group to identify a path forward. During the second year of their collaboration, the group brought in several experts to gain a better understanding of the problem. After meeting with experts, the group began to talk about the issue in terms of the experts' interpretation of pregnancy leave law and the group members' personal experience. The experts helped the group come to an agreement about the definition of the problem and solution. Ultimately, they agreed to forego designing a new ordinance – the solution the advocates originally proposed. Rather, they supported existing efforts to convince the Employment Development Department to accept the risk of pesticide exposure as a legitimate reason for disability; and agreed to educate workers, doctors, and employers about pregnancy leave law. In December 2019, the Employment Development Department affirmed the new interpretation of disability law. One of the next steps for the Miracle Group is to discuss plans to educate workers, doctors, and employers.

I will give a detailed description of the two problems discussed above, as well as one problem that was dropped from discussion during the first few months of the group's collaboration. The advocates brought up agriculture's intensive use of dangerous pesticides in the original Farmworker's Bill of Rights and proposed adding an Integrated Pest Management position to the County Agricultural Commissioner's office to help growers who want to reduce pesticide use transition to organic farming methods. This idea faded in priority as the group members shifted their focus to enforcing existing laws. In the following section, I discuss the

claims that Miracle Group members made and the rhetorical strategies that they used as they worked to find consensus around these three proposals – 1) the hotline proposal, 2) the pregnancy leave proposal, and 3) the Integrated Pest Management proposal.

Hotline Proposal

"Working conditions prevent farmworkers from speaking up"

During the Miracle Group's second meeting on August 10, 2016, the members reviewed the original County Farmworker Bill of Rights as a group. In this document, advocates with CAUSE argued that "Widespread retaliation or the threat of retaliation for complaining about working conditions or filing a complaint helps to create a culture of fear in agriculture, preventing workers from speaking up about labor issues" (County Farmworker Bill of Rights, 2016). The advocates demanded that decision-makers "Protect workers from retaliation, by creating an anonymous tip hotline and a $5,000 penalty for retaliating against a worker who files a complaint" (County Farmworker Bill of Rights, 2016). During the meeting, an advocate from CAUSE reinforced these claims, arguing that "the biggest barrier for farmworkers is fear of retaliation" (Lucas, 8-10-2016). Advocates use the substantive model of the public good to demonstrate the general worth of the proposal in terms of the universalistic principle of empowering and protecting vulnerable groups. As discussed in Chapter 3, stakeholders demonstrate the general worth of their claims using three different models of the public good: substantive, constituency, and procedural. Advocates provided evidence of the legitimacy of their proposal by portraying labor conditions as oppressive. The proposed solution to oppressive conditions involved the implementation of a hotline and penalties for employers who retaliate against farmworkers who use the hotline to complain about working conditions.

"We need to root out bad actors"

During the August 10, 2016 meeting, growers in the Miracle Group also brought attention to the benefits of a hotline. Unlike advocates, growers did not describe the hotline as a tool to solve oppressive labor conditions in agriculture. One grower argued,

> "We need to root out bad actors, bad supervisors, and bad companies…I think a hotline is a powerful tool. It is a mechanism to root out bad actors…There is a lower cost of doing business for bad actors. Enforcement, thus, benefits good actors" (Michael, 8-10-2016).

While the growers acknowledged that poor labor conditions do exist on some farms, they argued that agriculture, in general, is not bad or oppressive and that "many growers are doing the right thing" (Susan, 8-10-2016). Addressing the poor labor conditions that lower the cost of business for the few growers who are not doing the right thing will benefit everyone else who is. This claim highlights the constituents or actors who would benefit from a hotline – most growers who Michael and Susan argue are doing the right thing (constituency model). Michael and Susan also legitimize the actions of "good actors" by portraying them in a positive light and by portraying others ("bad actors") in a negative light.

At the end of the August 10, 2016 meeting, the group agreed to work together on a hotline proposal, and they agreed to jointly define the problem and solution. Over the course of a year, the group worked together to write a proposal that they could jointly recommend to the County Supervisors.

"Workers are dealing with these issues"

When the collaboration began, Juvenal, an advocate with MICOP, explained, "for Mixtecos there is a language barrier. We need a strategy to reach the Mixteco population. 70-80% of farmworkers speak an indigenous language" (Juvenal, 8-10-2016). Juvenal claimed that overcoming language barriers would benefit the majority of farmworkers (constituency model). Subsequently, early versions of the Farmworker Resource Program proposal included a

parameter that ensured the staff would have indigenous language capacity. In March, 2017, when the group began to struggle to garner outsider grower support, Lucas defended the Farmworker Resource Program by arguing that a large portion of farmworkers would benefit from it, “In our survey of 600 farm workers, we didn't find that all workers were dealing with these issues. But a good proportion of them were. For example, 30% would claim that they are dealing with some of these issues" (Lucas, 3-31-2017). Jake, an advocate from MICOP, argued that the issues did not need to affect most farmworkers to compel change, “The problem doesn't have to be widespread to regulate it" (Jake, 3-31-2017). The advocates used both the constituency model and substantive model of the public good to legitimize taking action to address workplace issues. They argued that most farmworkers would benefit, and that protecting and empowering farmworkers is considered good on its own terms, regardless of how many farmworkers are dealing with workplace issues.

“He would support the proposal if it had significant support from agriculture"

On March 3, 2017, during a regular Miracle Group meeting, a grower mentioned that she had met with one of the County Supervisors and talked to him about the hotline proposal. She reported to the group that the supervisor “said that he would support the proposal if it had significant support from agriculture” (Susan, 3-3-2017). An advocate responded by stating, “That is why we are here” (Lucas, 3-3-2017). The Miracle Group’s deliberations were spurred and shaped by the claims of County Supervisors. The advocates anticipated from the outset that they would need to garner the support of agriculture representatives and, ultimately, frame proposals around the constituency model of the public good in order to persuade decision-makers to sponsor their proposal.

From September 16, 2017 until May 29, 2017, the group focused on framing the problem and solution in a way that would attract outside growers. They adapted their claims to accommodate the needs and concerns of growers and conducted outreach with agriculture representatives to obtain their support. Before they met with outside growers, the Miracle Group members discussed how to present the proposal as a win-win for employers and employees, how to maximize flexibility and minimize government involvement, and how to allow ongoing input from growers and farmworker advocates in the design and implementation of the hotline office. The growers in the Miracle Group used their expertise to anticipate the kinds of concerns and reactions their peers would have with different problem definitions. They suggested making changes that responded to growers' position – particularly growers' experience of "audit and regulation overload" (Michael, 9-16-2016) and their ongoing effort to stand as a united front against expanding regulations and government intervention.

For example, the Miracle Group shifted some of the proposal's focus from enforcement and penalties for growers, towards direct resolution of problems. The advocates' original proposal focused on implementing a hotline to help farmworkers navigate government and report violations anonymously to appropriate agencies. As the proposal evolved, the ombudsman's role expanded to include, not only "inform[ing] farmworkers about their existing legal protections," but also "resolving issues directly with employers rather than new regulations, penalties, or investigation" (FWRP fact-sheet, created for outreach). In order to make the proposal more palatable to growers, the group emphasized that the hotline would benefit farmworkers and their employers:

> "By promoting Ventura County as a first-choice destination to work in agriculture with a strong commitment to the highest standards, we can help address our labor shortage. A severe labor shortage as a result of declining immigration has and will continue to be one of the largest threats to the agricultural sector. To remain

> viable in this new context, agriculture will have to adapt by attracting the agricultural workforce to our geographic region and maintaining the local community's desire to work in our industry. We believe that Ventura County is already one of the better places to work in agriculture. Pursuing and publicly promoting initiatives to demonstrate our local ag community's commitment to the highest standards for farmworkers will be critical to our future success. One of the roles of a local farmworker resource program would be to promote and advertise the positive initiatives of local companies to attract workers to the industry (FWRP factsheet, created for outreach).

The Miracle Group tried to persuade outside growers to accept the hotline proposal, now called the Farmworker Resource Program, by highlighting how diverse constituents would benefit from the program (constituency model). They also worked to legitimize the program through a procedural model of the public good, claiming that input and oversight from a diverse set of actors, including farmworker advocates, employers, and the County Agricultural Commissioner, would ensure that the program is effective, necessary, and "considered fair by both workers and employers" (FWRP fact-sheet, created for outreach).

Throughout September 2016, the Miracle Group members were confident that if they highlighted the shared benefits of the proposal during outreach with growers (constituency model) and highlighted the importance of collaboration and grower input (procedural model) that they would receive broad support from agriculture representatives for the Farmworker Resource Program. However, the group failed to persuade the trade associations to support the program and failed to gain the support of individual growers through one-on-one meetings. On March 31, 2017 Susan reflected on their outreach meeting with the Farm Bureau saying, "growers are very conservative. They do not want more government" (Susan, 3-31-2017). This claim is based on the group's ability to create buy-in from growers. Similarly, on May 10, 2017 Susan reflected on the one-on-one outreach meetings with outside growers saying, "What I think Lidia, Michael, and I failed to understand is the strength of grower opinion…the reluctance to have any government and the suspicion of the goals of the initiatives even if they are framed as helping

them" (Susan, 5-10-2017). In May 2017, right before the deadline for recommending their proposal to the County Supervisors, the Miracle Group realized that they could not count on broad support from other agriculture representatives. While growers could not "think of a way that [the program] would harm them," they did not want anything done through government (Lucas, 5-10-2017). At this point in the Miracle Groups' deliberation, opposition also began to organize when the President of the Ventura County Agriculture Association sent a letter to growers throughout the county criticizing the program.

"It might make it impossible for me to have credibility moving forward"

Growers were hesitant to jointly recommend a proposal that their peers widely opposed. This became more apparent as opposition began to form against the Farmworker Resource Program and the budget deadline was rapidly approaching. Their reluctance had nothing to do with whether they agreed with the details of the proposal but rather was related to the anticipated reaction of other agriculture representatives. Within the "ag community," growers often base the worth of their actions and positions on evidence of their insider status. Their credibility within the tight-knit community is tied to their ability to remain in good standing with their peers. When asked if she would publicly support the proposal, a few days before it was scheduled to be published, Susan stated,

> "I have big reservations about doing it because as soon as this gets published, I know that opposition will organize itself and whether or not it passes there is going to be a lot of negative feeling in the ag community and speaking personally it might make it impossible for me to have credibility going forward…I surely feel that going forward next Tuesday is dangerous…My main goal is for this whole program not to burn and crash. I don't what to be party to making this impossible for us to make this happen now or in the future" *(anticipating grower response)* (Susan, 5-10-2017)

Susan mobilized anticipated grower response as evidence to support her position. She argued that the group's inability to garner grower support would limit their success and hurt their credibility in the future. On May 17, 2017, Lidia made a similar argument:

> "If we push this through without other ag support…People would say, 'who made you the representatives of ag. You don't represent me'…If we push this, we will have so much opposition that we will never get support for anything else we do together" (Lidia, May 17, 2017)

Historically, growers who have failed to stand as part of a united front against increasing government intervention and new regulations, have been ostracized by their peers and labeled as "crazy." Portraying individuals who support new programs in a negative light is one strategy that growers have historically used to delegitimize those programs. Lidia, Susan, and Michael mobilized the anticipated grower response as evidence to support their argument that publicly supporting the Farmworker Resource Program without the support of other growers would impact their credibility and take a toll on their ability to persuade their peers in the future.

"She said it was all talk and talk and talk"

When asked if the Miracle Group collaboration would be in jeopardy if the growers in the group decided not to support the Farmworkers Resource Program, an advocate with CAUSE explained that it would:

> "Maricela [Director of CAUSE] actually didn't want us to do this in the first place." She has been in collaborations like this in the past and says that is was all "talk and talk and talk and I worry that, going back to her, and seeing that this is falling apart in the last minute…That the people that we had built trust with over the course of a year or more that they pulled out at the last hour then, I fear that she would want to pull out and pull back to a more adversarial dynamic…We built everything up until now and placed a lot of trust in this collaborative…in you Susan, and Lidia and Michael and it would be terrible to see all that we have worked on in the past year collapse and fall apart" (Lucas, 5-10-2017)

In the meetings following the Miracle Group's failed outreach attempts with outside growers, the advocates and growers predominantly based their claims on procedural models of the public

good and on the anticipated response of relevant outside stakeholders. For example, in the quote above, Lucas mobilized the anticipated response of his supervisor, Maricela Morales, to support his position. Lucas also supported his position by critiquing collaborative procedures. As discussed in Chapter 3, the procedural model is mobilized when stakeholders argue that the public good is achieved through a particular procedure. Lucas highlighted the advocates' ability to walk away from the collaboration and adopt a more adversarial, and perhaps more effective, procedure for pursuing protections for farmworkers. These rhetorical strategies were persuasive in the context of the group's deliberations since the members valued the group and had incentives to continue collaborating.

The growers in the Miracle Group defended the collaborative procedure by arguing that their ability to garner the support of their peers had been compromised due to time pressures. They also based their claims in procedural models of the public good, explaining that one of the outside growers' biggest complaints was that the larger ag community had not been consulted about the program earlier. Outside growers and trade association staff had argued that relevant actors in agriculture, such as the Agriculture Policy Advisory Committee (APAC) and the County Agricultural Commissioner, were not given an opportunity to provide their input about the program. On May 17, 2017, the growers argued against pushing the program to meet the external budget deadline and requested more time.

Advocates responded to this request by mobilizing the substantive model of the public good. Lucas stated, "We have been very flexible. The place where flexibility ends is when the goal post keeps moving. We have a saying. 'Justice delayed is justice denied,' which is the mentality of advocates" (Lucas, 5-17-2017). Lucas, basing his claims on the universal principle

of promoting social justice, explained that while acting with urgency and taking advantage of windows of opportunity promotes social justice, inaction supports social injustice.

Not wanting to jeopardize the opportunities that would come from continued deliberation with advocates and still hoping to at least neutralize the opposition before they supported the proposal, the growers in the Miracle Group requested one to two more weeks to communicate with their peers and recommended passing the program as a line-item in the budget which would remove most of the details and parameters that the group had agreed on but would keep the possibility of a proposal alive. It would also give other growers a greater opportunity to shape the program in the upcoming months. Advocates agreed to a short delay. They also agreed to an open-ended proposal on the condition that the compromise succeeded in garnering support, or at least reducing vocal opposition.

However, advocates did not want the group to lose sight of the central goal of the Farmworkers Resource Program – allocating resources to *farmworkers*. On May 29, 2017, when the growers in the Miracle Group reported that they were finally successful in ratcheting down some of the agriculture representatives' opposition by advertising a revised, open-ended proposal and meeting with their most vocal critic, advocates demanded that certain parameters be reinstituted in the proposal to ensure farmworkers benefited from the program:

> "Placement in the HSA [Human Service Agency] and indigenous language capacity...Those two things, I would really like to see in the final draft...for the farmworker population, the agency that they have the most contact with is HSA...it should be housed in a location that is most available and trusted by farmworkers...Those are our bottom lines and it is the fear that those two bottom lines will be lost" (Lucas, 5-29-2017).

Growers responded to advocates' concerns by arguing that they had put a lot of work into getting their peers to understand the open-ended proposal and that they could not support a proposal that did not reflect the revision they had advertised:

> "I cannot support that we go back to the original proposal because we have been putting ourselves out there and done a lot of work helping the growers understand what we are doing. So, if we go back with the same proposal, then they will say, 'See, told you so. They don't want to collaborate. They are pushing a political agenda.' Last time we got together we were talking about making this more flexible, adding a line item amount. As we discussed at the last meeting" (Lidia, 5-29-2017).

Growers argued that going back on their word would not be in good faith. The subsequent deliberation was based on finding a middle option – between a proposal with many parameters and a line-item proposal – that everyone could agree with.

"Ag leaders say this program is a win-win"

To produce a middle proposal, the facilitator helped the group discuss their core concerns and needs. The advocates argued that the "program must have technical and language capacity, and must be housed in a location accessible and trusted by farmworkers" (constituency model) and the growers argued that "agriculture must have a role in shaping the program" (procedural model) (Facilitator, Meeting Notes, from 5-29-2017). The group agreed on a proposal that asked for $200,000 from the county for a Farmworker Resource Program, housed in a county agency most trusted by farmworkers, with Mixteco language capacity, and an open program that will be shaped by an advisory committee made up of an even number of growers and farmworker advocates.

The group responded to advocates' fears about leaving the proposal open-ended and relinquishing control over the parameters of the proposal by reinstituting two important parameters: 1) that the program would be "housed in a county agency most trusted by farmworkers, and 2) that the program would have "Mixteco language capacity." Prior to agreeing on the inclusion of these two parameters, advocates had wanted to specify placement in the Human Service Agency, while the growers wanted to leave the placement completely open-ended. Once advocates explained that they wanted to place the program in the Human Service

Agency because it was the agency most trusted by farmworkers, the group was able to compromise. They specified that the program would be placed in an agency trusted by farmworkers but left the decision about which agency was most trusted open to further discussion. This language was specific enough to alleviate advocates' concerns and was open-ended enough for growers to give their input about placement.

The group was also able to reconcile advocates' demand for urgency; and growers' demand for slowing down and conducting more outreach. By agreeing to jointly recommend the compromise proposal at the County Board of Supervisors Meetings, the advocates could see that the growers were willing to make forward momentum. On the other hand, by describing the program as "open" and stating that it would be "shaped by an advisory committee made up of an even number of growers and farmworker advocates," the growers could see how their peers could have a role in shaping the program over time.

Several hours after the meeting adjourned, Lucas sent the group a draft of the compromise proposal which everyone in the Miracle Group approved. In the new proposal, the group defined the problem by stating:

> "Ventura County seeks to be a model of thriving modern agriculture, adapting to meet 21st challenges and needs, with broadly shared benefits for consumers, agricultural employers and agricultural workers *(constituency model -mutual gain)*. It is in the interests of agricultural employers to create excellent working conditions to attract a reliable and productive workforce and in the interest of farm workers to sustain viable and successful agricultural employers in our region *(constituency model -interdependency)*" (Compromise Proposal, 5-29-2017).

The group recommended responding to the problem with the following solution:

> "Consequently, during the budget cycle we are adopting this month, we recommend the Board of Supervisors directs the CEO to set aside $200,000 to fund a Farmworker Resource Program in Ventura County.
>
> This program must include expertise in both agricultural labor law and indigenous language capacity and be located in the county agency most accessible to and trusted by farmworkers *(constituency model - farmworkers)*.

> The Farmworker Resource Program will have the following goals: building trust and relationships with local farm workers, employers, advocates and related agencies, promoting Ventura County as a first choice destination to work in agriculture, and informing farmworkers about their existing labor protections and seeking resolutions to workplace issues. This is not an enforcement agency and will seek direct informal resolutions whenever possible between employers and employees when issues arise *(constituency model - mutual gain)*.
>
> The CEO's office will facilitate an advisory committee of eight for the design, creation, monitoring and evaluation of the program. The committee shall include 4 representatives appointed by the Farm Bureau and 4 representatives appointed by the Mixteco/Indigena Community Organizing Project (MICOP) *(procedural model)*" (Compromise Proposal, 5-29-2017).

The final proposal combines constituency and procedural models of the public good. The group argues that the Farmworker Resource Program will benefit many constituents, including farmworkers, employers, and consumers; and that growers and farmworker advocates would work together to design and implement an effective and accountable program based on their different expertise. While advocate's made numerous claims that were based on the universalistic principles of protecting vulnerable groups and promoting social justice throughout the deliberation process (substantive model), any language that might reflect those principles was largely absent from the proposal the Miracle Group sent to the County Supervisors and from the comments they made publicly at the Board of Supervisor meeting on June 6, 2017 when the program was passed. The group members agreed that vulnerable groups need to be protected and that social justice needs to be pursued; however, they felt that terms like injustice were too controversial.

The group used diverse claims and rhetorical strategies to co-produce the problem and solution. The verbiage of their final problem definition reflected the members' simultaneous efforts to advocate for farmworkers, reduce grower opposition, and gain the County Supervisors' support.

Pregnancy Leave: Pesticide Exposure as a Disability

"This is especially dangerous"

During the Miracle Group's second meeting, the group began discussing the proposal in the County Farmworker Bill of Rights that called for "Protecting pregnant women from pesticide exposure by mandating job status protected unpaid pregnancy leave" *(substantive model)* (County Farmworker Bill of Rights, 2016). In this proposal, advocates explained that,

> "Farmworker women often work during pregnancy because they cannot afford to lose their job. However, exposure to many pesticides is linked to serious reproductive health issues. This is especially dangerous given the Central Coast's heavy levels of fumigant pesticides in the strawberry industry" (County Farmworker Bill of Rights, 2016).

Advocates used the substantive model of the public good to legitimize their proposed solution – "job status protected unpaid pregnancy leave." They based their claims on the principle of protecting vulnerable groups and allude to scientific evidence linking pesticide exposure to adverse reproductive health outcomes. They explain that agriculture's use of pesticides that are reproductive toxins, combined with farmworkers' job insecurity, put pregnant farmworkers at risk.

"Anything saying ordinance will be rejected by industry"

While growers agreed that it is dangerous for pregnant women to work in fields where pesticides are applied, they were not convinced that the advocates' suggested approach was appropriate. As seen in the deliberations around the Farmworker Resource Program, one of the growers' central arguments is that outside agriculture representatives will not support government intervention. The pregnancy proposal spurred this line of argument as well because the proposal called for a new county ordinance that growers would need to abide by. During their second meeting, in August 2016, Susan, an avocado grower, explained, "Anything saying ordinance will be rejected by industry" *(anticipating grower response)* (Susan, 8-1-2016). The

growers argued that even if the proposal seemed reasonable and responsible to them, their peers would push back against more regulation. They predicted that the reaction would cause delays in implementation. In September 2016, Michael, a strawberry grower, said,

> It takes a "long time to wait for an ordinance…wait, wait, wait…because a grower wants a study to see if ordinances will be high impact…The proposal sounds reasonable…In my personal perspective…it sounds responsible… [However], others will think of the economics of this, not just the direct cost but indirect cost of implementation…[Growers will] push back against more regulation" *(anticipating grower response)* (Michael, 9-16-2016).

The grower emphasized that he agreed with the advocates' suggestions by describing their proposal as reasonable and responsible. In March 2017, he even mentioned that he planned to implement the proposed policy voluntarily within his own company (Michael, 3-6-2017). At the same time, Michael delegitimized the mandatory ordinance by explaining that his peers would push back against it and that their reaction would delay the groups' efforts. The growers frequently referred to the anticipated response of outside agriculture representatives when deliberating with advocates about what problems and solutions to pursue.

In March 2017, Michael began their monthly meeting by telling the group they had reached a point when the growers needed to be honest about what items they are able to go after. The advocates worried that the growers may have decided that they were not able to go after the pregnancy leave proposal. Jake, an advocate with MICOP, responded by saying that he was " hoping for a miracle…a miracle for this miracle group" but he was "really worried about discussing the items that the growers might not be willing to pursue." Particularly, he was worried about the pregnancy leave proposal – "very worried they might end up not going through with that" (Jake, 3-6-2017). Jake expressed dread in anticipation of the discussion about what items the growers could pursue.

Michael assured Jake that they would continue to talk about the pregnancy leave proposal. For the remainder of the meeting, Michael did not refer to any items he would not be able to pursue. However, he did mobilize the procedural model of the public good to explain why it is important for them to rethink the pregnancy leave proposal's approach and "decide if an ordinance is the way to go" (Michael, 3-6-2017). For example, he said: "We have limited political bullets. If we want an ordinance, will the county even do it then?" (Michael, 3-6-2017). Michael also concludes that particular discussion about the pregnancy leave by stating, "We'll continue down this path until we find consensus" (Michael 3-6-2017). This claim is based on the procedural model of the public good since it focuses on the importance of reaching consensus through deliberation and highlights that it will take time for growers and advocates to agree on a solution. The group worked to understand the problem and to identify a solution for over two years.

"Women have to wait…to take the leave"

Juvenal, an advocate and previous farmworker, argued from the onset that current pregnancy leave law does not protect women during the early months of pregnancy, when pesticide exposure is the most dangerous. He argued that based on his personal experience "women have to wait until the sixth or seventh month to take the leave, when heavy lifting is dangerous. Doctors don't always sign off on additional leave" *(experiential evidence)* (Juvenal, 8-10-2016). On September 16, 2016, Juvenal reiterated that "when a woman goes to the doctor and asks for a note…The doctor says, 'no, no until six or seven months when you can't work'" (Juvenal, 9-16-2016). Juvenal argued that there is a gap in the current system because pregnancy leave does not cover the whole pregnancy. For Juvenal, "the question…is how growers can give an additional two to three months if some women want to get off work earlier." He explained,

"My wife wanted to stop in the first or second month and her doctor said no" (Juvenal, 7-24-2017). Juvenal's argument was based on his own testimony (experiential evidence) and on the universal principle of protection – women should have the right to additional protections from pesticide exposure early in their pregnancy (substantive model).

"Maybe Bring in an Attorney"

While the growers recognized that pregnant women are at risk for pesticide exposure and agreed that there may be a gap in their eligibility for pregnancy leave, they argued that the group did not know enough about pregnancy leave law to understand how the proposed ordinance would impact growers and pregnant women. During the group's second meeting, Lidia, a strawberry grower, said, "Farms have to respect pregnancy leave. They have to respect this…It is not hard to keep jobs for pregnant women. (But) legally, you can't ask women to provide pregnancy tests" (Lidia, 8-10-2016). Lidia explained that her company already provided women unpaid job protection when they left on pregnancy leave and that it was not hard to do. However, she pointed out that it is against the law to ask women to provide a pregnancy test (law as evidence). Michael also argued, "We can't force women not to work" (Michael, 8-10-2016).

In February 2017, Lidia suggested they consult with an attorney to ensure that mandating job status protected pregnancy leave early in a woman's pregnancy would not put the employer at risk or impact the woman's eligibility for pregnancy leave later on: "[There is a question of] how to ensure the employer is not at risk and the women are protected and eligible for leave...Maybe bring in an attorney" (Lidia, 2-13-2017). By the end of March 2017, Lidia's company attorney and CAUSE's attorney had talked over several conversations. Lucas reported back to the group that "on the employer's side, they want a doctor's note…some proof…It is a problem of not receiving medical attention" (Lucas, 3-31-2017). After consulting with their

lawyers and having their lawyers consult with each other, the group mobilized expert opinion as evidence that the problem was related to the type of medical attention women were receiving (or not receiving) from their doctors.

"I hear you saying this is the way it should be, but it isn't the way it is"

The Miracle Group did not dialogue about the pregnancy leave proposal for several months while they were pushing the Farmworker Resource Program forward. After their success jointly recommending the resource program, they returned to their discussions about pregnancy leave. Having identified that part of the problem was farmworker's inability to obtain a doctor's note permitting additional leave early in pregnancy, the group had many questions for health care providers. Juvenal invited a health educator, who worked at a clinic where many farmworkers receive care, to attend their meeting and answer questions. On November 17, 2017, Lucas introduced the health educator to the problem the group was grappling with. Lucas explained that there is heavy pesticide use in agriculture which can impact the reproductive health of pregnant farmworkers. He mentioned that pregnant farmworkers are at high risk because they can't afford to take time off early in their pregnancy when pesticide exposure is the most dangerous (Lucas, field notes, 11-17-2017).

The growers and advocates agreed that farmworkers should have the option to avoid pesticides exposure while pregnant by extending pregnancy leave. Therefore, they wanted to understand why pregnant farmworkers have difficulty extending leave to the early months of their pregnancy. The group had many questions for the health educator: Are patients requesting time off? Are they requesting reasonable accommodation? Would working in the field with pesticides be a reason for accommodation? What if someone requests leave because they do not want to be exposed? How long can they be off? Can that expand to the whole pregnancy? Would

it be regular medical leave? Do you conduct education with employers? (Miracle Group, field notes, 11-17-2017)

After meeting with the health educator and debriefing, the group integrated her expert opinion into their discussion of the problem and possible solutions:

> Facilitator: "The farmworker must be provided leave if a pesticide is a danger."
>
> Lidia: Even if a doctor put them on leave early, it's under paid leave. If there is a high risk, the employee is put under paid leave."
>
> Lucas: "Then we need to educate doctors."
>
> Susan: "Farmworkers and growers as well" (Miracle Group, field notes, 11-17-2017).

The group learned that, in a normal pregnancy, short-term disability insurance kicks in at 32 or 34 weeks. However, if the pregnancy is high risk and there is a medical reason, short-term disability insurance can be extended. With this information, the group began to use pregnancy leave law as evidence to support shifting their proposed solution from unpaid to *paid* pregnancy leave. After speaking with the health educator, the group was still unsure about how the extended short-term disability insurance worked and whether working in the field with pesticides was considered a reason to extend the insurance. They were also unsure who was responsible for defining high risk.

The group decided that they needed to talk to someone knowledgeable about leave during the early part of pregnancy. Lidia explained, "It would be helpful to have someone from the County who is knowledgeable about the leave component…Early piece of the pregnancy. I have more questions about leave during the early part of the pregnancy" (Lidia, 11-17-2017). Susan also asked the group what pregnant farmworkers, as a group, were concerned about, "Do women worry during the pregnancy? What are women concerned about?" *(constituency model)* (Susan, 11-17-2017). At this point, Jake offered to conduct some research in his capacity as a primary

physician, “Do you want me to ask how common it is to ask for time off?” *(constituency model)* (Jake, 11-17-2017). Lucas reminds the group that it is not necessarily about how many women ask for the time off, but the principle of choice: “It’s about having the choice. In Scandinavia they get time off, full pay for nine months” *(substantive model).* When concluding their discussion, the group assigned Jake to do some research at his clinic. He was assigned the task of talking to other doctors about the following questions: “How often do patients ask for time off? How often do doctors grant it? How long is the maximum paid leave? How does early leave affect later leave? Do high risks extend the paid period? Who defines high risk?” (Facilitator, Meeting Notes, 11-17-2017).

In January 2018, Jake sent the group a short report on the information he had collected. In his report, which he titled “Pregnancy Leave in California – What the Law Requires,” he included an overview of two state-run programs for income replacement and two state laws pertinent to job protection; a summary of two Miracle Group proposals he suggested based on his research; and a reference section. In his reference section, Jake cited a phone conversation with Iris (pseudonym), an expert at the Center for WorkLife Law; follow up emails with Iris; two articles about “growing family benefits”; and two recommended resources on “writing effective pregnancy accommodation notes” and “talking to your boss about your bump.” Jake used the authority of these sources and laws as evidence to the argument that the Miracle Group should “Educate area providers, growers, and farmworkers about existing laws” and “Consider [an] ordinance guaranteeing pregnant/postpartum farmworkers job protection for up to 12 months (9 months of pregnancy + 3 months of “bonding” time).” He also referred to expert opinion when questioning whether the guarantee of job protection for 12 months would be appropriate when he added: “Iris pointed out that no other area of employment has these guarantees” (Jake, report on

pregnancy leave, 2018). After receiving Jake's report, the Miracle Group continued to mobilize Iris's expertise by inviting her to attend their meeting.

When Iris joined the group via conference call in May 2018, Jake introduced her to the group: "We are a small group of growers and advocates. We have been working together for two years to make Ventura County the best place to work and live" *(procedural model).* Jake touted the success of the Farmworker Resource program and said, "Since the creation of that program, we have moved on to other projects including protecting pregnant farmworkers" *(previous success)* (Jake, 5-25-2018). Jake also presented Iris with the group's main question for her, "One of the main questions is that we understand…short term disability provides income for people who qualify for disability. We are curious what you think about proposing to add pregnancy as a condition that qualifies for [short-term disability insurance]. Have you seen this tried before?" (Jake, 5-25-2018). Lucas added, "It would be strictly for workers that could be exposed to harmful substances like pesticides" (Lucas, 5-25-2018).

Iris argued that "pregnancy is already a condition under [short-term disability insurance]" and because "somebody who is pregnant has a condition" and "because exposure to pesticides during pregnancy…is very dangerous, the argument is that they are already [eligible]" (Iris, 5-25-2018). While Iris argued that pregnant women who are exposed to pesticides are already eligible for short-term disability insurance, the Miracle Group members explained that pesticide exposure during pregnancy is not being treated as a condition for short-term disability insurance in practice. Jake and Juvenal shared their personal experience giving and receiving medical attention. Jake explained, "In my experience, you need to cite back pain…I have been told that I need to include a 'disability'" (Jake, 5-25-2018). Juvenal agreed with Jake and shared his experience,

> "Yes, the doctors say that it is not a disability…You have to be bleeding or have back pain that would not allow you to do heavy lifting…My wife, when she asked for disability, the doctor asked if she was bleeding or [something else] and said that 'until then, no disability'…Pain or a lot of pesticides and you don't want your baby exposed, they say, 'no'" *(experiential evidence)* (Juvenal, 5-25-2018).

Susan combined Iris' expert opinion with Juvenal and Jake's experiential evidence by arguing that what *should be* does not coincide with the way things *are.* Susan argued that toxic exposure during pregnancy is not being recognized as a disability: "I hear you [Iris] saying that this is the way it should be, but this isn't the way it is" (Susan, 5-25-2018).

Iris went on to explain that if her interpretation of the law is correct, but this interpretation is not upheld in practice, that she would advocate for educating healthcare providers and updating the short-term disability forms doctors use to certify pregnant women for disability:

> "Let's say the law is as I interpret it. If this is the law and it is a little confusing. This is a disability. We need to educate healthcare providers directly rather than trying to get a new reg on the books. We can look at the forms that the agency is using and update the forms. They are confusing. It's important to educate healthcare providers…If we have a clarifying law passed saying we need to add to the law, that can be interpreted that it is not already part of the law. Don't ask to add something to the law if it already is part of the law. It creates a record and can make it more difficult to get rights" *(substantive model – human rights)* (Iris, 5-25-2018).

Iris anticipated that attempting to add a clarifying law would negatively impact efforts to strengthen human rights. As the group aligned around a solution that did not require new laws or ordinances, Michael stated, "If we could clarify that [short-term disability insurance] did in fact cover that period of pregnancy be all you need…would solve the issue that we set out for…I can't imagine employers not being (onboard) *(anticipated grower response)* (Michael, 5-25-2018). Michael legitimized the emerging solution by anticipating a positive response from outside growers.

"Accepting pesticide exposure as a legitimate reason for disability"

After meeting with Iris, an expert in pregnancy law, the Miracle Group formulated their problem definition by mobilizing her expertise and their personal experience with the situation on-the-ground. In the Facilitator's Meeting Notes, she explains the problem:

> "According to Iris, current [short-term disability insurance] should cover pregnancy as long as the patient is 'unable to do normal customary work.' In theory, a worker who is regularly exposed to pesticides should be covered *(expert opinion).*
>
> Experience by Jake and Juvenal is different. Doctors believe they need to list a specific symptom such as nausea or back pain in order for the patient to qualify for [short-term disability insurance] *(experiential expertise).*

The group agreed to solving the problem by, "clarify[ing] that [short-term disability insurance] did in fact cover that period of pregnancy" (Michael, 5-25-2018); educating "health care providers, workers, and employers…[through] training, webinars, and printed materials for all stakeholders" (Meeting Notes, 5-25-2018); and "granting recognition to the companies who are consistently advocating for the workers [by making] the pregnancy piece…part of the criteria [for an employer of choice program]" (Jake, 5-25-2018). The group connected their claim to the substantive model of the public good – mobilizing the universal principle of choice. When a visitor at the Miracle Group meeting asked the members if their goal was to "reduce exposure…by getting people out of the field if they are pregnant and for [short-term disability insurance] to provide for women out of work," one of the growers responded, "for women to have that choice" (Susan, 5-25-2018).

Moving forward with their proposed solution, the group investigated the official interpretation of eligibility by communicating with the Employment Development Department. In 2019, after communicating with the Employment Development Department and collaborating with the California Rural Legal Assistance, a group that was also pushing the department to address these issues, the Miracle Group added an additional measure to their formulation of the

solution: to ensure the Employment Development Department will accept pesticide exposure as a legitimate reason for disability by accepting new ICD-10 codes for early pregnancy (Meeting Notes, 3-29-2019). An ICD-10 code "is the standard diagnostic tool for epidemiology, health management and clinical purposes. It is used for medical code lookups…to classify diseases and other health problems recorded on many types of health records" (ICD-10 Coded, 2020). The group reported on September 12, 2019 that the Employment Development Department was accepting codes that classify pesticide exposure during pregnancy as a reason for disability. They stated that their "next step is to do education for workers, doctors, and employers" (Meeting Notes, 9-12-2019).

Integrated Pest Management Position

"Help growers…transition away from harmful pesticides"

In addition to ensuring women could take time off from fieldwork early in pregnancy, advocates also called for transitioning away from pesticide use. In the original County Farmworker Bill of Rights (2016), advocates used the constituency model of the public good to justify this transition. They described the problem in relation to growers' desire to reduce pesticide use and their lack of resources to do so: "Many growers interested in reducing their use of harmful pesticides need resources and information to help them make the transition, and the county can help facilitate this process" *(constituency model)* (County Farmworker Bill of Rights, 2016). They also frame the solution in relation to growers' wants by asking public officials to, "Help growers who want to transition away from harmful pesticides or reduce their use by adding an Integrated Pest Management position in the County Agricultural Commissioner's office" (County Farmworker Bill of Rights, 2016). The claims that advocates used to legitimize efforts to help growers transition away from pesticide use stands out because advocates

highlighted how these efforts would benefit growers who wanted to change their practices, *not* how transitioning away from pesticide use would protect farmworkers. Advocates portrayed pesticides as harmful without directly referring to farmworkers as the group being harmed.

"Laws are already strong"

In response to this proposal, one grower argued that it is not just a few growers who do not want to use pesticides, but that no one wants to use them. He also argued that pesticides are necessary, despite growers' desire to reduce pesticide use. According to Michael, "No one wants to use chemicals. The issue is cost and consumer expectations" *(constituency model)* (Michael, 8-10-2016). Michael also based his claim on the demands of a larger group of consumers who, as explained in Chapter 2, expect unblemished produce at a low price.

In addition to highlighting the necessity of pesticide use, growers portrayed efforts to increase Integrated Pest Management as unnecessary and duplicative. In August 2016, Michael explained that pesticide use "is a shrinking industry" and that, "for larger growers, IPM is widely used." He anticipated the response of an expert to bolster his claim, stating, "[The CEO of the Farm Bureau] would say this is already happening" *(anticipated expert response)* (Michael, 8-10-2016). In September 2016, growers continued arguing that an Integrated Pest Management position would be duplicative. Lidia, for example, explained that growers already had support with Integrated Pest Management: "In Santa Paula, Associates Insectary helps with IPM…IPM is the reliance on multiple ways to suppress pests" (Lidia, 2-13-2016). She used expert opinion as evidence when arguing that there was "need for an ag inspector… [The Ag Commissioner says we need to be] enforcing current laws" (Lidia, 9-16-2016). In addition, Michael argued that existing laws and market forces were already transforming growers' pesticide use, "Laws are already strong…Consumers are pushing us every day to be more organic" *(law as evidence).*

Michael emphasized that laws and consumer demand cause changes in pesticide use are substantial and ongoing.

"Ensuring farmworkers are protected from pesticide violations"

On February 13, 2017, the Miracle Group discussions regarding the reduction of pesticide use by investing in an Integrated Pest Management position ended. At this meeting, the advocates presented a new version of the Farmworker Bill of Rights that focused on law enforcement, rather than changes in farming practice - they portrayed pesticide violations, not pesticide use, as the problem. The new proposal asked public officials to, "Enforce existing pesticide laws by hiring an additional inspector in the Agricultural Commissioner's office focused on ensuring farmworkers are protected from pesticide violations that would endanger their health" (County Farmworker Rights Policy Proposal, 2017). While advocates framed their initial proposal around the benefits to growers, they based the new proposal on the protection of farmworkers *(substantive model)*. When discussing the new proposal, Lidia argued once again that the proposed solution was duplicative: "[The County Agricultural Commissioner] already made a request to supervisors for an inspector biologist…He already asked for this…Is it necessary to include this here?" (Lidia, 2-13-2017). Lucas explained, "this section of the proposal supports [the Commissioner's] ask" (Lucas, 2-13-2017).

This last exchange between Lidia and Lucas concluded the group's deliberation around pesticide reform concerns and the proposal for an Integrated Pest Management position was dropped from the Miracle Group's agenda. While advocates responded briefly to growers' claims, efforts to jointly define the problem animating the Integrated Pest Management proposal ended abruptly. Advocates presented very few claims to convince growers to collaborate around pesticide reform. This issue stands out because at least one of the growers felt that other

agriculture representatives would support efforts, like the Integrated Pest Management position, that did not call for a county ordinance. On August 10, 2016, Susan stated, "Anything saying ordinance will be rejected by industry. Industry can support an ombudsman, inspection for clean bathrooms, and adding an IPM position to the Ag Commissioner" *(anticipated grower response).* While the group deliberated around the ombudsman proposal and the proposal for bathroom inspections seriously for many months, the Integrated Pest Management position did not receive the same attention and did not result in the same co-learning experiences.

Advocates' subsequent pesticide reform efforts

During a personal communication with Lucas in June 2020, he reflected on why the Integrated Pest Management proposal was dropped,

> "There was an odd consensus between local growers who felt like information/education on IPM was available enough but the real problem in pesticide reduction for them was more financial and logistical challenges and local pesticide advocates who also felt like information/education on IPM wasn't enough but wanted to focus on more regulatory solutions like banning chlorpyrifos. I would say this was a place where both sides weren't interested enough in an incremental compromise solution to build consensus on those efforts" (Lucas, personal communication, 6-15-2020).

The Miracle Group members dropped efforts to reduce pesticide use from the agenda at the same time that advocacy groups began coordinating new pesticide reform efforts. In early 2017, CAUSE; Californians for Pesticide Reform; and the Abundant Table, a local sustainable farm, began meeting to recruit a full-time intern to work on pesticide issues in Ventura County. In November 2017, the new intern held his first pesticide reform coalition meeting at the CAUSE office in Ventura. At this meeting, the coalition discussed local strategies to contribute to the state and federal level campaign to ban the hazardous insecticide chlorpyrifos. Lucas, who was in attendance, told the group that growers and the County Agricultural Commissioner do not view pesticide use as a problem: "The growers and the CAC say that everything is fine" *(anticipated*

response). Lucas argued that "to convince people that pesticides are a problem, we need to have individuals with comparable credibility arguing that point" *(expert opinion)* (Lucas, pesticide reform coalition meeting, 11-16-2018). Lucas's reflection on the growers' claims resembles comments that Maricela, the Director of CAUSE, made during an interview in September 2016, when the Miracle Group first started meeting. Maricela argued,

> "We quite frankly feel offended on behalf of farmworkers because it is like we are willing to hear you [growers] out on your vulnerabilities, we are willing to hear that you do need help, we are absolutely, you don't even have to ask us, we know that [transitioning away from pesticide use] is a long-term process, we are not asking you to do it overnight, or to do it in one-year, we want to help you with the transition, we want to advocate along with you, to get resources. Okay, so we are doing all of that, and what we hear from them is that there is just no problem.
>
> [They say], 'Thank you, but we know that there is just no problem, so we are even offended that you are saying that it is a problem, even though you are telling us that you are willing to work with us on a problem, be patient, collaborative, there is not even any need for that, we are offended that you are saying that it is a problem...Just the fact that you are saying, it is making us look bad. You are making us look like we are responsible, like we don't care, um when we are following the law, when we are feeding you. This is what we need to do to feed you.' I mean that is really the tone, it really is in public" (interview, Maricela, 9-17-2016)

Maricela also described how the claims that growers make to delegitimize pesticide reform offends advocates. She explained that growers argue that current pesticide use is not a problem; and that they use the constituency model of the public good ('this is what we need to do to feed you') and mobilize law as evidence ('we are following the law') to delegitimize efforts to reduce pesticide use. The Miracle Group members did not take time to negotiate the use of these claims as a group. However, through their coproduction of the pregnancy leave proposal, they did come to agree that current pesticide use puts pregnant women at risk. This agreement would be a good foundation for talking about how to reduce the use of reproductive toxins, like chlorpyrifos, in agriculture.

Impact of Argumentation Strategies on Coproduction

In Ventura County, advocates and growers typically treat each other as opponents, rather than collaborators or co-learners. During debate, stakeholders often listen to opposing claims in order to critique those claims, not to build mutual understanding or to collaborate around shared concerns. In the absence of coproduction, stakeholders talk past each other and define problems in ways that can never be reconciled or resolved. When growers and advocates collaborated in the Miracle Group, they engaged with each other's claims and used the dynamic of the group to create proposals together. Instead of talking past each other, Miracle Group members looked for ways to align and connect their claims to form proposals that could receive enough multi-stakeholder support to be enacted.

To understand how the Miracle Group made claims and how claim-making shaped the coproduction of problems and solutions, I analyzed the group's deliberation around three different proposals. I found that when making claims in a small group setting, growers and advocates continued to draw from their distinct experiences, positions, values, and commitments. While they expressed their different frames of reference through very different claims, they were able to create joint proposals by negotiating the use of those claims in relation to specific projects. By focusing on the details of specific projects, growers and advocates were able to come to agreement on problem definitions – an accomplishment that seemed impossible from a higher level of abstraction.

For example, by focusing on the details of the hotline proposal, the group was able to push the proposal forward even when their public good claims seemed to be in direct opposition. While the hotline proposal did not seem controversial at the outset, it became controversial and required a lot of deliberation as the group approached the county's budget deadline. The group

reached a stalemate with the hotline proposal when they began to base their claims on procedural models of the public good that seemed impossible to reconcile. Growers argued that in order to produce successful proposals, they needed more time to engage their peers in the deliberation, while advocates argued that in order to promote social justice, they needed to take immediate action. The group was able to push the hotline proposal forward by negotiating the use of these different public good claims. After engaging with the other sides' claims and expressing empathy, the group was able to brainstorm ways that they could keep the proposal alive. They identified versions of the proposal that the growers felt comfortable supporting immediately and they identified ways to give growers more time to shape the proposal.

The Miracle Group deliberation revealed that the coproduction of content and process were interconnected. Growers and advocates often claimed that they agreed with the content of a proposal but disagreed with the process or approach for advancing it. To reconcile their different claims the group had to be creative. While coproducing the hotline proposal, the group reconciled their procedural public good claims by identifying the omissions and inclusions in the proposal's content that responded to their different procedural concerns. The Miracle Group's deliberation revealed that constituency models of the public good (based on who benefits from or supports an intervention) and procedural models of the public good (based on how an intervention is designed and who is involved) can work together.

When the group brought their distinct frames, claims, and rhetorical strategies into relation with each other and into relation with specific projects, they also created flexibility in surprising ways. For example, while the growers were skeptical of the pregnancy leave proposal at the outset, the proposal became less controversial as the group negotiated the use of different forms of evidence to support their problem definitions and preferred solutions. The advocates

mobilized their personal experiences with receiving and providing medical attention as evidence to support their preferred solution – a county ordinance guaranteeing farmworkers job status protected pregnancy. The growers sought to mobilize expert opinion (e.g. by consulting with lawyers and physicians) in order to corroborate their apprehensions about the advocates' original proposal. Integrating these two forms of evidence – expert opinion and personal experience – helped the group coproduce a new problem definition and propose a new solution that all stakeholders were quick to agree upon. The solution evolved from unpaid pregnancy leave with job status protection into paid pregnancy leave. The final problem definition was based on the principle of improving human rights (e.g. the right to choose and the right to protection); and did not require new laws, regulations, or a public comment period where outside growers could organize opposition.

While both advocates and growers had strong incentives for working together, growers often had an advantage in deliberation. Growers' position in society allowed them to mobilize some types of evidence more effectively than the advocates could. For example, while growers often pointed to their inability to get buy-in from other growers as evidence to support their positions, advocates did not refer to their ability to get buy-in from farmworkers. Anticipated lack of buy-in from farmworkers did not have the same effect as anticipated lack of buy-in from growers.

Many of the growers' claims were also based on their ability to walk away from co-defining proposals. Growers argued that if the group could not come to an agreement about particular proposals, the advocates were free to move forward on those proposals alone. This same line of argument was not available to advocates who were engaged in the partnership with the explicit goal of gaining grower support. Nonetheless, advocates worked to level the playing field by referring to the anticipated response of their supervisors and basing claims on their ability to walk away from the collaboration. Advocates

argued that if growers were unwilling to support the proposals they had worked on collaboratively, that they would return to a more adversarial dynamic. Since growers had an incentive to maintain open lines of communication with advocates over time, this claim was persuasive.

However, negotiating the use of different frames, claims and rhetorical strategies was not enough to address all the asymmetries and challenges related to public debate around farmworker issues. While the Miracle Group members recognized concerns related to human rights and agreed that farmworkers were often treated unfairly, they also omitted language that would reflect social justice principles from their proposals. Part of their coproduction process revolved around identifying the language that would help garner outsider support, particularly from growers, and the language that would spur more opposition. When growers referred to the anticipated response of outside growers, the advocates often responded by agreeing to omit terminology from the proposals that would receive a negative response. In this way, the group accepted the logic of farmworkers and their representatives, while also continuing to render basic social justice issues invisible to intended audiences. The fact that the language in the proposal was authored and supported by growers and advocates further reinforced those harmful invisibilities discussed in the previous chapter.

This chapter showed how competing groups worked to resolve a conflict that is local in origin but also part of a larger conflict among competing interests. While the advocates and growers in the Miracle Group were both constrained by larger interests (e.g. outside peers and state-level associations), they also leveraged those larger interests by referencing them during deliberations. Despite the unequal advantage that growers had, advocates were able to leverage the threat of intervention and more intrusive adversarial actions to pressure growers into moving the proposals in directions they were not inclined to. Knowing that growers feared regulation

more than anything, advocates used the veiled threat of additional regulation and negative media attention to push growers to acknowledge farmworkers' concerns, especially regarding the need for a local hotline and for expanding pregnancy leave options. The growers used the argument that their peers and the state-level associations of which they were a part would not support more government intervention to justify their resistance to the more ambitious solutions advocates proposed. Neither the advocates nor the growers could be overly demanding or rigid during deliberations – advocates knew that the growers would not abandon their allies at higher levels and growers feared regulation and negative media attention. If the group had not been able to reach an agreement, increased adversarial tactics and additional government intervention at higher jurisdictions would become more likely. The group members' ability to leverage these constraints allowed them to depoliticize a serious dispute in order to reach mutual agreements that could improve farmworker health while also protecting their livelihoods.

The group failed to engage in meaningful coproduction efforts around the Integrated Pest Management proposal that was included in the original Farmworker Bill of Rights. I learned from my observations and interviews outside of the group meetings that advocates took offense to growers' unwillingness to engage in efforts to transition away from pesticide use – not just Miracle Group growers, but growers in general. Ultimately, advocates were not interested in engaging in an "incremental compromise solution" around integrated pest management and pesticide reform and used alternative tactics to push these efforts forward. These alternative tactics have been important for getting issues on the agenda and gaining momentum around demands for change. As we saw with the hotline and pregnancy leave proposals, however, good faith conversations with "opponents" are also important. The group has an opportunity to revisit pesticide reform issues with the foundation gained through the group's coproduction of the

pregnancy leave proposal and their agreement that pesticide use negatively impacts the reproductive health of farmworkers.

Unfortunately, conversations often break down when stakeholders make opposing claims and do not engage in reconciliation and coproduction – the process of bringing distinct claims in relation to one another; building compatibility across those claims; and restoring friendly relations among groups. This difficult work is necessary to address wicked problems because they aid in garnering the support of relevant stakeholders; and gaining a better understanding of the problem and the various obstacles that stakeholders need to overcome to cope with it.

CHAPTER 5

CONCLUSION

When compared to the general population, farmworkers suffer disproportionate pesticide-related health risks (APHA, 2007; Busby & Eckstein, 2009; Cunningham-Parmeter, 2004; J. D. Flocks, 2012; Lucas & Allen, 2009) and their views about pesticide use and its related health impacts are often marginalized in public debate (Harrison, 2006). Pesticide-related health disparities are caused, in part, by the agricultural industry's reliance on pesticide use to increase productivity and profitability. Many commonly used pesticides in California are associated with immediate and chronic adverse health effects. Children in farmworker communities are particularly at risk for adverse pesticide exposure effects, such as birth defects and neurological harm.

Environmental justice advocates have worked to mitigate environmental health disparities and to promote the meaningful involvement of local communities around environmental decision-making (Faber, 2008; Freudenberg & Steinsapir, 1991). Environmental justice struggles for pesticide reform have pressured pesticide regulators to implement mitigation measures and restrict hazardous pesticides; and have persuaded chemical manufacturers to remove dangerous pesticides from the market (Freudenberg & Steinsapir, 1991; Guthman & Brown, 2017). In Ventura County, environmental justice advocates acted in support of the statewide campaign to ban chlorpyrifos by leading social media campaigns; organizing protests, rallies, and marches; meeting with legislators and local public officials; and holding neighborhood meetings and workshops. Advocates and farmworkers in Ventura County also pushed pesticide regulators to restrict pesticide use around schools by speaking at public hearings, submitting public comments to the Department of Pesticide Regulation, and holding

public hearings with the media (field notes, 2017). During public hearings and community events, farmworkers shared personal stories of pesticide exposure and pesticide-related injury and illness. Advocates with CAUSE and MICOP also deliberated with local growers to advance proposals for a local hotline to help farmworkers navigate resources and for expanded pregnancy leave options early in pregnancy.

Even small steps to reform pesticide use practices and improve access to healthcare, such as updating the interpretation of pregnancy leave law, involved serious disputes among stakeholders who hold distinct worldviews. While advocates and farmworkers (who are part of advocacy coalitions across the state and have a positive relationship with the media and several County Supervisors) mobilized their allies to push for reform, local growers (who control farmworker wages, own farmland, and have greater access to expensive legal representation) organize and pool their resources in efforts to push back against additional reforms that could put their livelihoods at risk. Due to the uncertainties, value conflicts, competing demands, and asymmetrical power relations that characterize this wicked problem, even small decisions and steps forward can spur intense debate among relevant stakeholders.

Through a qualitative, ethnographic case study of Ventura County, California, this dissertation explored how stakeholders' diverse positionalities, claims, and rhetorical strategies around the legitimacy of pesticide use practices impacts public debate and problem-solving efforts. The text and talk that public debates produce, while often perceived to be "just talk," have substantive impacts on organizing, reform, and policy-making efforts – stakeholders' discursive practices can contribute to stabilizing or transforming the status quo. According to Fischer and Forester (1993), policy making entails "a constant discursive struggle over the criteria of social classification, the boundaries of problem categories, the intersubjective

interpretation of common experiences, the conceptual framing of problems, and the definition of ideas that guide the ways people create the shared meanings which motivate them to act" (p.2). In the 1950s and early 1960s, for example, DDT was perceived as safe, necessary, and effective for controlling pests in agriculture and there were not any environmental regulations restricting its use (Maguire & Hardy, 2009). However, after Rachel Carson published *Silent Spring* in 1962, counter-narratives that challenged the safety, necessity, and effectiveness of DDT began to circulate among scientists, advocates, politicians, and the public. Carson's problematizations sparked the delegitimization of DDT use and its removal from the market in 1972. Legitimacy struggles regarding pesticide use practices continue in the twenty-first century with some stakeholder groups working to legitimize established practices and others seeking to delegitimize and change them. For example, Harrison (2006) shows how agriculture representatives and pesticide regulators frame pesticide exposure in ways that promote minimal regulatory response, while advocates employ counter-frames to achieve small steps towards improved protections.

In this chapter, I summarize my analyses of how agricultural health stakeholders' positionalities, claims, and rhetorical strategies shape problem-solving efforts in Ventura County. First, I briefly review the method of analyses, findings, and conclusions from the preceding empirical chapters. Then, drawing from the empirical analyses and findings, I discuss how the study informs our understanding of pesticide-related health disparities as an environmental justice problem and informs problem-solving and pesticide reform efforts. Finally, I review the limitations of the study and discuss my research agenda and suggestions for future research.

Summary of Empirical Analyses and Findings

The aim of this dissertation was to explore the discourse of agricultural health stakeholders who seek to either challenge or defend established pesticide use practices. The

study explored the following research questions: 1) How do local stakeholders' positionalities, claims, and rhetorical strategies around the legitimacy of existing pesticide use practices impact public debate and problem-solving efforts? 2) How do the interests and concerns of farmworkers and their representatives become obscured and disregarded in public debate?

To answer these questions, I conducted in-depth qualitative interviews, as well as participant and non-participant observation. I interviewed 91 agricultural health stakeholders, including 51 farmworkers, 16 advocates, 5 agriculture representatives, 13 government bureaucrats, and 6 others (e.g. physicians, lawyers, and an epidemiologist). I conducted over 200 hours of observations at a variety of different venues, such as outreach events, government meetings, public hearings, health fairs, and collaborative working group meetings. In addition to interviews and observations, I also collected numerous archives, including brochures, regulatory guides, training videos, meeting notes, meeting agendas, and written proposals.

I employed an inductive approach to analyze the positionalities and discursive practices of four different agricultural health stakeholder groups – farmworkers, advocates, agriculture representatives, and government bureaucrats. While I began the analysis of my field notes and interview transcripts with an expectation that farmworkers' concerns and interests were not dominating public debate about intensive pesticide use, I did not have preconceived notions about the types of discursive practices I would find or the argumentation dynamics I would illuminate. I did not have preconceived ideas about how the positionalities and the discursive practices of these stakeholders would shape public debate or problem-solving efforts. I identified the discursive practices and unpacked the argumentative dynamics and their impact by systematically analyzing – i.e. reading, coding, memoing, mapping ideas, creating timelines and tables – the transcripts and field notes and working towards a theory generated from the data.

The coding process consisted of coding the data line-by-line and identifying themes in the data, and then using focused-coding, memoing, and idea mapping to interpret how the themes weaved together into topics that enrich our understanding of public debate around pesticide use in Ventura County agriculture.

Below, I summarize the analyses and findings of the three empirical chapters which cover 1) how positionality shapes claim-making, 2) how rhetorical strategies reinforce injustice, and 3) how positionality and rhetorical strategies impact coproduction efforts across polarized groups.

How Positionality Shapes Claim-Making

In the Chapter 2, I identified the claims that the four stakeholder groups make in order to legitimize or delegitimize conventional pesticide use practices in agriculture. I found that agriculture representatives and government bureaucrats predominantly legitimize existing pesticide use practices. They engage in the dominant discourse that presents pesticides as necessary for increasing agricultural productivity. Advocates consistently delegitimize existing pesticide use practices but also, in some cases, buy into the dominant discourse that pesticides are necessary for agricultural productivity and profitability. Farmworkers both legitimize and delegitimize pesticide use practices. Farmworkers argue that pesticide use helps support their families by increasing yield and, thus, creating more work and income during the harvest season. However, they also delegitimize existing pesticide use practices by arguing that pesticide exposure has caused negative health effects for themselves and their families. To varying degrees, all of these agricultural health stakeholders, from farmworkers to agriculture representatives, adopted the dominant discourse that pesticides are necessary for increasing agricultural yield. This belief makes it difficult for stakeholders to imagine innovative mitigation measures and approaches to pesticide management.

I also found that agriculture representatives and government bureaucrats make similar claims about pesticide use practices. While government bureaucrats, who are responsible for regulating pesticide use, seek to balance the needs and interests of various stakeholder groups, they tend to relate to agriculture representatives' positions more easily. Government bureaucrats can relate to agriculture representatives more easily for several reasons. For example, many bureaucrats are recruited from the agricultural industry and have managed farming and pest control in the past. Additionally, most government bureaucrats in the pesticide management or regulatory field share the same or very similar academic qualifications as agriculture representatives and are in close contact with agriculture representatives in their everyday work. Cooperative extension agents, for example, explained that it is only on rare occasions that they work with farmworkers or pesticide regulators, and they do not engage with advocates – they consider agriculture representatives to be their primary clients.

Advocates and farmworkers also tend to make similar claims because they have similar backgrounds and experiences. Many labor advocates in Ventura County have previously worked as farmworkers and have family members who are farmworkers. In fact, some farmworker are advocates – even if they are not staff of community organizations, they volunteer for community organizations and attend rallies, community meetings, and fundraisers that community organizations organize. While government bureaucrats and growers tend to make claims about pesticide use that are more general or abstract, farmworkers and advocates' claims often reflect a more personal, first-hand experience with pesticide illness and injury. Since farmworkers work in the fields and are exposed to pesticides regularly, they bear the brunt of pesticide risks and often have personal experience with how pesticides are being used and the consequences of those practices.

How Rhetorical Strategies Reinforce Injustice

In the Chapter 3, I explored the rhetorical strategies that stakeholders employed to frame concerns about pesticide use practices and health protection. Rhetorical strategies are the methods that stakeholders use to prove the authority of their claims. I found that agricultural health stakeholders prove the general worth of their claims by connecting their particular positions and interests to different representations or models of the public good. Additionally, stakeholders mobilize different forms of evidence to support the authority of those public good justifications.

I examined how these rhetorical strategies impact stakeholders' ability to deliberate around pesticide-related health disparities by deconstructing the rhetorical strategies of agriculture representatives and government bureaucrats – the dominant stakeholder groups who defend the status quo. I found that their rhetorical strategies reinforce established pesticide use practices by obscuring implications for local communities; excluding the experience of vulnerable groups; disregarding social and racial disparities; and concealing power relations and dominant ideologies. Agriculture representatives and government bureaucrats use their symbolic capital and connection to the status quo (Bourdieu, 1986, 1990; Bourdieu & Passeron, 2000) to systematically disregard the evidence that farmworkers and advocates mobilize and to conceal the realities that they highlight – e.g. farmworkers lived experience and exposure to pesticides. On the other hand, differences in class and race, and disparities in access to resources decrease farmworkers' and advocates' ability to challenge the evidence that dominant groups mobilize. I also found that although all the agricultural health stakeholders mobilize the principle of public

health – i.e. they all claim that their positions were the best for protecting health – their claims are, nonetheless, contradictory.

How Positionality and Rhetorical Strategies Impact Coproduction

The contradictory claims identified in the previous chapter are difficult to reconcile. Chapter 4 shows how collaboration and coproduction across diverse groups can bridge some of these difficulties. This chapter explored how the growers and advocates who collaborated as members of the Miracle Group overcame their diverse frames of references and contradictory claims to coproduce proposals aimed at improving farmworker labor conditions. I explored the opportunities and limitations of them working together to create change.

At times, the public good claims of the growers and advocates were in direct opposition. However, they were able to satisfy those different claims by bringing the different representations of the public good into relation with each other and by focusing on the details of specific projects. For example, both stakeholder groups' contradictory procedural claims were integrated into the content of the final proposal for the Farmworker Resource Program. When the groups brought their preferred forms of evidence (e.g. personal experience and expert opinion) in relation to each other and in relation to the pregnancy leave proposal they were able to produce new problem definitions and new solutions that each side could support.

By working together, the Miracle Group was able to overcome some of the challenges related to coping with wicked problems. However, coproducing problems also reinforced some of the invisibilities mentioned in Chapter 3. While the members of the group recognized that farmworkers are not always treated well, for example, they did not include language that would reflect a social justice frame in their proposals. Terms such as "justice" or "inequality" were absent from the proposals they coproduced. Therefore, basic concerns about health disparities

remained invisible in the growers' public comments and became invisible in advocates comments.

While growers often had an advantage in deliberation and advocates compromised with them, the collaboration still resulted in growers supporting proposals that they were not inclined to. Advocates leveraged the threat of government intervention and more adversarial actions to pressure growers to act on particular proposals. They moved the agenda forward around some important issues that would not have had the same success if they did not work together and engage in authentic dialogue. The group was also successful in learning together. Their deliberations led to a better understanding of the problems and some new solutions.

Contributions of Study and Implications for Problem-Solving Efforts

Through the analysis of stakeholders' positionalities, claims, and rhetorical strategies about the legitimacy of existing pesticide use practices, I have uncovered several implications for problem-solving efforts that will contribute to public policy literature on the wicked problems of environmental justice. In this section, I discuss how the study advances the literature, as well as implications for addressing power asymmetries in public debate, reconciling contradictory claims in public debate, and informing the deliberations of multi-stakeholder collaborations.

Contributions to the Literature

Process-Based Approach

Many of the contributions of this dissertation stem from shifting from a static approach to theorizing, which is common in environmental justice and wicked problems research, to a process-based approach. For example, rather than studying discourses and coping strategies as discrete entities, I focused on how discourses and coping strategies are used, and how they evolve as stakeholders enact them in public debate and problem-solving efforts. This shift is

important because discourse and coping strategies take on meaning through their production in everyday practices and that meaning can change and evolve in different contexts.

Wicked problems literature argues that there are no definitive or best solutions to wicked problems and that many potential solutions can lead to new problems (Conklin, 2006; Rittel & Webber, 1973). Taking a process-approach to studying wicked problems allows us to explore how stakeholders enact strategies in different contexts and how strategies change over time and through engagement as stakeholders cope with the challenging characteristics of wicked problems – i.e. competing interests, uncertainties, power asymmetries, and value conflicts. The power asymmetries that underpin pesticide-related health disparities are particularly difficult to overcome. Chapter 3 shows how agriculture representatives use resources (such as their control over farmworker wages and over pesticide use practices) to enact rhetorical strategies that reinforce power asymmetries and invisibilities in order to promote regulatory inaction.

Many environmental justice scholars contribute the persistence of environment justice issues to wealth and resources amassed by a few actors at the expense of marginalized groups (Camacho, 1998; Hewlett, 2000; Rosenbaum, 2014). In the case of agricultural practices, agriculture representatives, such as growers and lobbyists, have been portrayed as having influence over decision-making processes, while farmworkers and their families are often described as having little ability to influence outcomes in their favor. By taking a process-based approach, I discovered that in the context of collaboration, growers and farmworker advocates were able to produce joint proposals to improve farmworker health by maintaining some existing power disparities. I showed that although both advocates and growers' actions were constrained, they could leverage those constraints as sources of influence within their deliberations. For example, while growers' fear of regulation limited the type of proposals the groups could agree

upon, that fear could also be used by advocates to push the agenda in directions that the growers were not inclined to go. Advocates, knowing that growers fear regulation more than anything, used the threat of increased government intervention and adversarial actions to push growers to acknowledge farmworkers' concerns regarding the need for expanded pregnancy leave options and a hotline. The group members mobilized resources in diverse ways in order to depoliticize a serious dispute and protect farmworker health while also securing their livelihoods.

This approach also helped uncover how debates about content and procedure could be brought into relation with each other in order to reconcile contradictory claims between groups. Procedural justice scholars have argued that procedural justice can replace a focus on who gets justice (Tyler, 1988, 2003). However, I found that procedural arguments and arguments about who gets what were interconnected in deliberations between growers and advocates. During Miracle Group deliberations, growers and advocates often agreed with the content of proposals but disagreed on the procedure for advancing it. The group explored how changes in the content of the proposal could respond to their contradictory procedural concerns. In this case, I show how procedural arguments and constituency arguments worked together to produce proposals that satisfied different groups.

Employing Critical Discourse Analysis

The study contributes to understanding the challenge of addressing power asymmetries in public debate and the challenge of resolving local disputes that are part of larger conflicts. While I study a local environmental justice conflict, decision-making 'levels' beyond Ventura County intrude upon stakeholders' discursive practices and impact the outcomes of public debate. Employing critical discourse analysis to deconstruct stakeholders' discursive practices allowed

me to uncover how stakeholders influence public debate and deliberation by mobilizing different scales, levels of generalization, and decision-making levels.

Harrison (2006), an environmental justice scholar, found that pesticide regulators and agriculture representatives in California push down the scale of pesticide drift incidents by framing pesticide drift incidents as isolated 'accidents.' This discursive representation of pesticide drift justifies a minimal regulatory response and shifts focus to incidence response rather than large scale solutions. Harrison (2006) describes how farmworker advocates have worked to push up the scale of pesticide drift discourse in order to legitimize more ambitious regulatory actions at higher decision-making levels. My study expands on this research by showing how stakeholders mobilize scale and generalization in diverse ways to legitimize their positions and preferred outcomes.

While Harrison (2006) found that agricultural representatives and government bureaucrats push down the scale of pesticide exposure incidents, I found that these same stakeholders mobilized larger scales to generalize the benefits of pesticide use practices. For example, they argue that producing enough food is critical to feeding the world. Representing pesticide benefits, such as increased food production, as universal obscures racial inequalities and reinforces power asymmetries. I also found that in the context of debates of pesticide benefits, advocates countered universalized claims by pushing the focus down to the local level. For example, advocate describe how many local communities in agricultural regions are food insecure despite high production levels. These findings support scholars who argue that scaled-discourse has material consequences and that stakeholders can produce scaled-discourse in ways that defend their positions and interests (Delaney & Leitner, 1997; Marston, 2017; Swyngedouw,

1997). However, my study also uncovered how rhetorical struggles over scale can produce more polarization and contention among groups and create claims that are difficult to reconcile.

Wicked problem scholars argue that collaborative approaches are necessary for coping with problems that are characterized by contention and uncertainty (Carcasson, 2016; B. Head & Alford, 2015; Roberts, 2004; Termeer et al., 2015; Young et al., 2012). Through collaboration, it is theorized that polarized stakeholders can acknowledge each other's point of view and improve their prospects of reaching agreements about how to proceed (Campbell, 2003; Carcasson, 2016; Head & Alford, 2015; McCall & Burge, 2016; Ney & Verweij, 2015; Schön & Rein, 1994). In tracing the Miracle Group deliberations, I contribute to understanding how stakeholders cope with wicked problems in the context of collaboration. I found that the stakeholders serving the Miracle Group did not generalize or universalize their claims in a group setting. In other words, they did not claim that their position would benefit large constituencies. Instead, they leveraged larger interests and conflicts in ways that depoliticized the dispute. For example, the growers serving in the Miracle Group claimed that the larger interests would not agree with proposals that would require government intervention. They referenced these larger interests to justify their own resistance to the advocates more ambitious suggestions. By referencing the constraints created by larger interests, both growers and advocates were able to depoliticize a local dispute that is part of a larger, highly divisive conflict. These strategies still omitted basic issues, like racial inequality. However, rather than concealing these issues implicitly, as growers did during public hearings and government meetings, the Miracle Group made explicit decisions to omit terms, like justice or inequality.

Boundaries of deliberative strategies. The study also contributes to our understanding of the boundaries of deliberative strategies for coping with wicked problems. I found that the

Miracle Group's deliberations were both enabled and constrained by growers' fear of government intervention. The group was able to coproduce proposals when advocates were willing pursue proposals that minimized government involvement and maximized flexibility. When advocates proposed policy solutions, however, they found themselves at odds with grower attitudes. Therefore, in the context of this local environmental justice dispute, engaging in deliberation may be harmful when pursuing new initiatives and policy solutions are necessary to protecting farmworkers' health. Advocates leveraged these constraints to advance proposals that both groups could support through deliberation, while continuing to pursue intrusive solutions using adversarial tactics. Certain campaigns that pushed for high level policy change, such as the successful campaign to ban chlorpyrifos, were never discussed during Miracle Group meetings.

Implications for Practitioners

Addressing Power Asymmetries in Public Debate

Positionality shapes the claims that people make and the types of rhetorical strategies they can use. At the same time the claims that people make – e.g. increasingly general and abstract claims – also reinforce injustices and power relations. As discussed above, stakeholders' claims become imbued with power when stakeholders transform their economic capital into symbolic capital (Bourdieu, 1986, 1990; Bourdieu & Passeron, 2000). Dominant groups, like agriculture representatives and government bureaucrats, use their symbolic capital in public debate about pesticide use to produce legitimation claims that appease other groups by appearing disinterested or altruistic.

Dismantling the status quo can be uncertain, it involves changes that those who benefit from the status quo will caution against. Those who are arguing to uphold the status quo have an easier time extending their interests to society as a whole due to taken-for-granted assumptions

that the status quo is the only way or the best way to accomplish certain societal needs. For example, some government bureaucrats argue that intensive pesticide use is the way we have been able to "feed" ourselves and that much more research is needed for alternative pest control methods to be viable. Moving away from the status quo involves risks. It may be easier to imagine the risks of changing the status quo than it is to imagine alternatives to the status quo.

For this reason, it would be helpful for stakeholders who seek to reform established pesticide use to reflect on their own assumptions about pesticide use and to do the creative, imaginative work necessary to propose concrete ways to make change. Advocates admit that their pesticide reform campaigns are, for the most part, negative. They focus on the negative consequences of conventional pesticide use but do not elaborate as much on the possibilities and benefits of mitigation measures. It is also important for advocates to recognize the other side's legitimation strategies to develop their own politically savvy strategies to compel change. For example, in reviewing the rhetorical strategies employed in debates about pesticide use practices, I found that advocates and farmworkers missed opportunities to strengthen their positions and interests. For example, they did not generalize the negative impact of pesticide-related harm or the benefits of mitigation measures to larger groups, such as consumers. These are practical ways that advocates and farmworkers can strengthen discourses that challenge the status quo.

Additionally, since stakeholders, like farmworkers and advocates, do not have access to economic capital (particularly in the form of land or property ownership), it is important for them to continue to connect to their social capital in order to influence public debate. Advocates and farmworkers often have more leverage using adversarial tactics, such as organizing rallies, marches, and press conferences, because they have power in numbers and in their positive relationship with the media.

When discussing the origins of the Miracle Group, I showed how advocates were able to mobilize positive and negative attention to their cause, and to draw conventional growers to the table (even if they were drawn by frustration) by advertising specific initiatives and proposals aimed at improving farmworker health; publishing the results from a survey of 600 farmworkers; organizing numerous allies in the community; and partnering with powerful allies in the media. The advocates had more success at influencing the agenda and promoting dialogue with powerful stakeholders when they highlighted specific issues, advertised specific solutions, and tapped into their social connections in the local community and beyond. Advocates were also able to influence the production and implementation of problems and solutions by building relationships with several influential growers who employ many farmworkers in Ventura County. While the growers had an advantage in deliberations, advocates often leveled the playing field and successfully pushed the coproduction of solutions forward during Miracle Group meetings when they referred to their ability to organize their allies and to use adversarial, rather than collaborative, tactics to make progress on farmworker issues.

Reconciling Diverse Frames and Claims

Scholars have argued that stakeholders can find common ground (Boltanski & Thévenot, 2006; Patriotta et al., 2010) and transform the status quo (Harrison, 2011) through abstraction – e.g. by mobilizing and institutionalizing meta-frames or higher-order principles. Harrison (2011) studied the ways diverse notions of justice shape the way stakeholders address pesticide drift incidents in California. Like Harrison, I found that stakeholders mobilized diverse frames to influence public debate. Harrison reflects on the weaknesses and strengths of different notions of justice for addressing environmental inequalities and argues that institutionalizing the principles

of environmental justice and precaution within the state's regulatory arena is necessary for transforming the status quo and addressing agricultural health disparities.

My study also finds that principles of environmental, social, and racial justice have been neglected and disregarded in the frames and legitimation claims of dominant groups, including pesticide regulators. However, I did not find that stakeholders can reach common ground through abstraction. I conceptualize the mobilization of principles as one aspect of the argumentation dynamics used by agricultural health stakeholders to influence local debates about the legitimacy of pesticide use. By focusing on the mobilization of principles as a rhetorical strategy, I produce a nuanced understanding of this strategy's impact on problem-solving efforts at the local level and of the possibilities for enhancing the discourse of local agricultural health stakeholders. For example, I found that when stakeholders adopted the common principle of protecting public health in debates about intensive pesticide use, their argumentation dynamics and diverse positionalities produced contradictory claims about whose health should be protected; how health should be protected; what the local health impact of pesticide use is; and whether pesticide use practices should be reformed. I found that dominant groups have an upper hand in mobilizing abstraction and generalizations to justify and rationalize their positions. In other words, abstraction serves the status quo. Since stakeholders' rhetorical strategies are shaped by their positionalities – their personal background, experiences, job responsibilities, and values – they can be resistant to change. Even if all agricultural health stakeholders adopt the principle of environmental justice or precaution in public debate, diverse stakeholders may still produce contradictory claims. Agriculture representatives and government bureaucrats may mobilize these principles in combination with other models of the public good to justify established pesticide use practices.

Reconciling contradictory positions and creating opportunities for "non-conventional" interpretations of pesticide use to be included in public debate requires non-conventional decision-making approaches. My study findings echo scholars who argue that wicked problems require approaches, such as collaborative and reflexive governance, that take multiple perspectives and values into account (Carcasson, 2016; Head & Alford, 2015; Roberts, 2004; Termeer et al., 2015; Young et al., 2012). Through a collaborative process of reasoning, stakeholders with different perspectives can begin to acknowledge other points of view; evaluate alternative solutions; reconsider their current perspectives; and improve their prospects of understanding the nature of the problem and reaching agreement about what to do (Campbell, 2003; Carcasson, 2016; Head & Alford, 2015; McCall & Burge, 2016; Ney & Verweij, 2015; Schön & Rein, 1994). Collaboration among diverse stakeholders can promote innovative ideas (Hartley et al., 2013; Roberts, 2001, 2004) and can spur action since decision-makers are more likely to implement a solution when multiple stakeholder groups have coalesced around it (Young et al., 2012).

I found that in the absence of collaboration and coproduction, agricultural health stakeholders' argumentation dynamics produce diverse claims that are contradictory and difficult to reconcile. Through collaboration and the coproduction of problems and solutions, however, the advocates and growers of the Miracle Group were able to negotiate the use of stakeholders' diverse rhetorical strategies in relation to the details of particular proposals.

Informing the Deliberation of Collaborative Groups

My study contributes to public engagement scholarship on inclusion and coproduction (Quick & Feldman, 2011; Torfing et al., 2019; Voorberg et al., 2015) by exploring how co-creators make claims and how their rhetorical strategies shape the coproduction of problems and

solutions. During the coproduction process, stakeholders were able to negotiate the use of rhetorical strategies in ways that overcame stalemates and produced flexibility. The group setting also altered participants' preferred strategies. For example, growers' tendency to mobilize the constituency model of the public good in debate gave way to procedural models of the public good – rather than focus on how many people benefitted, they focused on what procedure would be most effective. Since the group was talking about specific projects; and were seeking support from specific groups and benefit from specific groups, they were less prone to extend their claims to include larger and larger groups of people. As a result, they were also more likely to refer to their own situations and what the real deal breakers were for them – even if those deal breakers were removed from the collective good.

I also uncovered that the group setting produced new rhetorical strategies – such as referring to the anticipated response of stakeholders outside the group. While advocates and growers both used this strategy, growers in the Miracle Group referred to the group's ability to create buy-in from other growers frequently. They often argued that they agreed with advocates' claims and positions but that some aspects of their claims were too controversial to mobilize growers' support. While this line of argument helped the group produce proposals that multiple stakeholders would support, it also reinforced blindness to basic issues that are deemed controversial – e.g. racial disparities. I uncovered some evidence that integrating the experiential evidence of farmworkers into coproduction processes can challenge reinforced invisibilities. There was only one advocate from the farmworker community in the Miracle Group. The proposal that was created with the most input from this advocate (the pregnancy leave proposal) highlighted farmworker experience and produced a solution that was informed by farmworker experience. Growers often disregard the experience of farmworkers in public debate. Including

more members of the farmworker community as co-creators and partners may encourage collaborative groups to integrate the farmworker experience – including farmworkers' racialized experience – in their problem definitions and solutions.

Limitations and Future Research

There are several limitations to my research that provide direction for future research. One limitation is that I did not recruit as many agriculture representatives for interviews as I did farmworkers, advocates, and agriculture representatives. I explored the claims and rhetorical strategies of growers, trade association staff, and pest control advisors primarily by conducting observations at public hearings, lectures, and government meetings; and collecting various archives. In the future, I plan to interview more agriculture representatives, particularly strawberry growers, and pest control advisors, to gain a deeper understanding of their perceptions of pesticide use and their dispositions towards pesticide reform. I would also like to explore how pesticide use practices change on-the-ground as public debate continues and pesticide regulations in California become more stringent.

In Chapter 2, I showed how stakeholders' diverse positionalities shape the claims that they made about pesticide use practices. Future research can explore how agriculture representatives and government bureaucrats, in particular, transform their economic and social capital into symbolic power – or the power to influence the way we think about and understand the world – through rhetoric (Bourdieu, 1986, 1990; Bourdieu & Passeron, 2000). In other words, future scholarship can bring to light the various resources (e.g. salary, land, legal authority) that these stakeholders have and explore how they exercise these resources to influence the way others view the world.

One of the limitations of Chapter 3 is that I did not take literature on race and racialization into account when conducting my research. In the later stages of writing and data analysis, I realized that this body of work, particularly in relation to colorblindness or colorblind ideology (Bonilla-Silva, 2013), would have enriched my analysis of how farmworkers' racialized experiences were disregarded, as well as how racial injustice and oppression were obscured, in the process of making abstract claims. In the future, I plan to make a unique contribution to public administration literature by extending my analysis to engage racial ideologies like colorblindness. Engaging with racial ideology will allow me to further explore how claims made in public debate create a race neutral process that reinforces racial inequality while maintaining the status quo. This approach will also allow me to consider how dividing stakeholders into groups, e.g. by analyzing the discourses of all farmworkers and all agriculture representatives, may obscure the racial dynamics within these groups.

Additionally, in Chapter 4, I found that the growers and advocates in the Miracle Group gained leverage by referencing larger interests. However, I did not interview members of larger interest coalitions to substantiate Miracle Group member claims. Therefore, in addition to interviewing more local agriculture representatives, I also plan to interview stakeholders in larger interest coalitions, such as distributors and state-level associations. I will compare the aspirations of these individuals with those expressed by local stakeholders in order to identify opportunities for change and to gain a better understanding of the constraints that impact negotiations within local environmental justice disputes.

While my findings show that coproduction resulted in several successful joint proposals to enhance farmworker labor conditions, such as the hotline proposal and the pregnancy leave proposal, critics could argue that these successes or "wins" are not big enough to solve large,

wicked social issues like intensive pesticide use and pesticide-related health disparities. Weick (1984) argues that small wins can create a pattern of success that "attracts allies and deters opponents." Achieving success on issues that are less controversial can produce momentum for deliberating around other problems and solutions that are controversial. I have some evidence that the Miracle Group built on their successes to tackle more difficult issues. After the Miracle Group succeeded in coproducing the hotline proposal, for example, they moved forward on deliberations around more controversial proposals, such as the pregnancy leave proposal. Additionally, while coproducing the pregnancy leave proposal, the group agreed that using hazardous pesticides in agriculture puts pregnant farmworkers at greater risk for adverse health outcomes. This agreement could help launch conversations about reducing the use of pesticides that cause reproductive toxicity. In the future, I plan to explore whether the Miracle Group's successes created substantial changes in the lives of farmworkers and, if they did, how the coproduction process contributed to that change.

The study also found that the rhetorical strategies Miracle Group members used during coproduction efforts reinforced existing invisibilities that marginalize farmworker experience. For example, while the Miracle Group recognized that farmworkers were treated unfairly and that pregnant farmworkers were at greater risk for pesticide-related injuries and illness, they did not reference those injustices or disparities in the proposals that they coproduced. This finding uncovers a limitation in the ability for collaboration and coproduction to enhance efforts to cope with wicked problems. It is important to examine how stakeholders can draw on the strengths of coproduction while also addressing its limitations. Future action research could examine how different rhetorical interventions challenge or enable the reproduction of invisibilities during the coproduction of proposals related to farmworker issues. I uncovered evidence that the

meaningful inclusion of farmworker community members can produce problem definitions and solutions that highlight farmworker experiences. Future studies could explore how this intervention impacts coproduction and whether it provides a means for overcoming the existing disregard for the concerns, interests, and realities of farmworkers and their families in public debate about pesticide use.

This study examined how claims and discursive practices shape problem-solving efforts. One critique of studies that focus primarily on claims or discourse is that discursive and non-discursive materials guide actions and produce meaning (Hansen, 2006). Some non-discursive materials that could shape public debate include artifacts, mundane tasks that stakeholders do not discuss, mannerisms, implicit feelings, rituals, ideology, and the layout or decor of a conference or hearing room. While I recorded these details in field notes and interview reflections, I found that focusing on the discursive practices of public debate afforded multiple opportunities to improve our understanding of intensive pesticide use as an environmental justice problem and to inform problem-solving efforts. For example, I uncovered argumentation dynamics that bolster dominant claims and legitimize the status quo; I revealed how dominant groups mobilize abstractions and generalizations to obscure farmworker experiences and realities and render social injustice and power relation invisible; and I discovered how rhetorical strategies shape deliberation efforts and impact the outcomes of coproduction.

I found that entrenched discourses and argumentation dynamics are difficult to overcome. Efforts to reconcile differences and build trust among stakeholders can disregard non-dominant claims and ignore basic issues. I have identified some possible strategies for increasing the authority of non-dominant groups – such as connecting to social capital, proposing specific projects to solve specific problems, seeking out allies with economic and symbolic power, and

incorporating farmworker input into coproduction efforts. In the future, I plan to deepen this exploration of the strategies stakeholders can use to legitimize non-dominant claims. What will it take for dominant groups to listen to and consider the testimonies and experiences of farmworkers? How can principles of social and racial justice become part of the dominant discourse?

The findings and limitations of the study inform my research agenda and highlight new directions of inquiry. In the future, I plan to examine how influential stakeholders transform their economic and social capital into symbolic capital; explore how stakeholders' claims create a racial neutral process that reinforces racial inequality; and study the impact of the Miracle Group's collaborative work. In addition, I plan to identify opportunities for change by comparing local stakeholders' aspirations with those expressed by larger interest group coalitions; and by conducting action research to discover how the suggested rhetorical interventions challenge or reinforce the inequalities and invisibilities that farmworkers experience. As stated above, examining how non-dominant claims related to human rights and racial disparities can receive a place of authority and consideration in public debate is of critical importance.

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